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IN PRESS AT THE JOURNAL OF EXPERIMENTAL SOCIAL PSYCHOLOGY

Re-assessing the incremental predictive validity of Implicit Association Tests

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Declaration of Conflicting Interests: This research was partly supported by Project Implicit. Jordan Axt is Director of Data and Methodology for Project Implicit, Inc., a nonprofit organization with the mission to “develop and deliver methods for investigating and applying phenomena of implicit social cognition, including especially phenomena of implicit bias based on age, race, gender, or other factors.” Nicholas Buttrick has also been employed as a Trainer by Project Implicit. There are no other potential conflicts of interest with respect to authorship or the publication of this paper.

Abstract

Indirect measures of attitudes or stereotypes, such as the Implicit Association Test (IAT), assess associations that are relatively automatic, unintentional, or uncontrollable. A primary argument for the IAT's use is that it can predict relevant outcomes beyond parallel direct measures, such as self-report (a claim referred to as demonstrating incremental predictive validity). Prior work on this issue relied primarily on least squares linear regression analyses, which are unable to correct for measurement (un)reliability and may then seriously inflate false positive rates in claims of incremental predictive validity. Properly accounting for the impact of measurement reliability requires using Structural Equation Modeling (SEM). In a pre-registered analysis, we investigated 10 IATs and 250 outcomes variables ($N > 14,000$), and found that 69.6% of outcomes were reliably correlated with the IAT. Among outcomes that were associated with both the IAT and self-report, the IAT showed incremental predictive validity in 58.6% of cases using least squares linear regression analysis and 59.2% of cases when using SEM, with the two analytic approaches reaching the same conclusion 91.4% of the time. Though the two analysis strategies largely converged, discrepancies were large enough to suggest a non-trivial percentage of conclusions drawn from least squares linear regression will be erroneous. As only SEM properly accounts for measurement reliability, it should be adopted in future analyses. To facilitate that goal, we provide tools for researchers to complete SEM analyses on tests concerning the incremental predictive validity of the IAT.

Word count: 245/250

Keywords: Implicit cognition, attitudes, stereotypes, Implicit Association Test, structural equation modeling

Re-assessing the incremental predictive validity of Implicit Association Tests

To understand why people hold a particular belief or opinion, it makes sense to ask them. Self-report measures, which are dependent on largely intentional and controlled responses, are the most common form of psychological assessment (Robins, Sherman & Tracy, 2007). Indeed, measures of self-reported attitudes (associations between an object and an evaluation) and stereotypes (associations between a group and a characteristic) reliably predict relevant behavior (Bogart et al., 2004; Kraus, 1995).

However, individuals' beliefs or behavior may also relate to factors that people are unwilling or unable to self-report. In these cases, researchers rely on more indirect measures, where attitudes or stereotypes are inferred from outcomes such as variation in word choice (Maass, Salvi, Acruri & Semin, 1989; Sekaquaptewa et al., 2003) or speed of categorization (Fazio, Jackson, Dunton & Williams, 1995; Greenwald, McGhee & Schwartz, 1998). Compared to performance on direct measures of attitudes and stereotypes (i.e., self-report), performance on indirect measures is less influenced by conscious goals (De Houwer, Teige-Mocigemba, Spruyt, & Moors 2009), is less intentional (Moors & De Houwer, 2006), requires fewer cognitive resources (Gawronski & De Houwer, 2014), and occurs more automatically (De Houwer & Moors, 2007). Here, we refer to the outcomes of direct measures as explicit attitudes or stereotypes, and the outcomes of indirect measures as implicit attitudes or stereotypes.

The most common measure of implicit attitudes or stereotypes is the Implicit Association Test (IAT; Greenwald, McGhee & Schwartz, 1998). In an IAT, participants categorize stimuli associated with an attribute (e.g., words that are either positive or negative) as well as stimuli related to specific categories (e.g., images of Black and White people) as quickly as possible. In

critical blocks, participants categorize items from all four sets of stimuli using just two keys (e.g., categorizing White people and positive words with one key, Black people and negative words with the other key). In other critical blocks, the pairing between words and images is switched (e.g., categorizing Black people and positive words with one key, White people and negative words with the other key). The standardized difference in average reaction time between responses in the two types of blocks is used to infer the strength of implicit associations between those categories and attributes. IATs can be used to measure implicit attitudes (e.g., how strongly Black and White people are associated with the concepts of positivity and negativity) as well as implicit stereotypes (e.g., how strongly Black and White people are associated with the concepts of Safety and Danger).

The notion that IATs assess a distinct construct from self-report measures is widespread (e.g., Aberson & Gaffney, 2009; Banaji & Heiphetz, 2010; Gawronski & Bodenhausen, 2011; Ito et al., 2015; Peris, Teachman & Nosek, 2008; Strack & Deutsch, 2004). Accordingly, meta-analyses investigating the relationship between IATs and self-report measures, using a variety of inclusion and exclusion criteria, have produced only modest estimates in the correlation between the two measures, ranging from $r = .13$ (Kurdi, Seitchik et al., 2019) to $r = .24$ (Hofmann, Gawronski, Gschwendner, Le & Schmidt, 2005). Likewise, structural equation modeling (SEM) suggests that the IAT and self-report are best modeled as representing distinct but related implicit and explicit constructs (Bar-Anan & Vianello, 2018; Nosek & Smyth, 2007).

The IAT is the most commonly-used measure of implicit social cognition (Nosek, Hawkins, & Frazier, 2011), and has been completed by millions of people (Xu, Nosek, & Greenwald, 2014). One primary reason for its popularity is the belief that the IAT can predict

important outcomes above and beyond self-report measures. These claims are known as *incremental predictive validity*, which is the belief that a measure predicts a certain criterion while controlling for another measure. Aside from representing distinct constructs, claims of incremental predictive validity for implicit attitudes or stereotypes (i.e., the outcome of indirect measures) can be found throughout prior work. In one study, self-report items and an IAT assessing Jewish stereotypes each independently predicted hypothetical funding decisions for a Jewish student group (Rudman & Ashmore, 2007). In another, both an IAT and a self-report item assessing attitudes regarding physical attractiveness independently predicted favoritism towards physically attractive applicants in a hypothetical academic admissions task (Axt, Nguyen & Nosek, 2018). Meta-analyses have produced similar conclusions, with one investigation of 32 studies concerning Black-White interracial behavior finding that both IATs and self-report measures predicted variance in behavioral outcomes beyond that explained by the other (Greenwald et al., 2009).

Challenges with demonstrating incremental predictive validity

Most previous claims of incremental predictive validity for implicit attitudes or stereotypes have relied on ordinary least squares (OLS) linear regression analyses, meaning researchers enter the measure of implicit attitudes (e.g., an IAT) and a parallel measure of explicit attitudes (self-report) as simultaneous predictors of an outcome variable. If the IAT's coefficient reliably differed from zero, it was inferred that the IAT provided incremental predictive validity. This analytic approach is very common throughout social science research (Brackett & Mayer, 2003; Brooks & Brady, 1999; Falk, Berkman, Whalen & Lieberman, 2011; Kteily, Bruneau, Waytz & Cotterill, 2015).

One critical assumption in these OLS analyses is that the statistical conclusions based on the individual *measures* (e.g., performance on a Black-White evaluative IAT) can be generalized to their latent *constructs* (e.g., the latent construct of Black-White implicit attitudes). However, this assumption is problematic when measurement error is present, as even a small amount of measurement error can create the potential for high Type I error rates in claims of incremental predictive validity. This observation has been made repeatedly throughout the social science literature (e.g., Kahneman, 1965; Shear & Zumbo, 2013; Zinbarg, Suzuki, Uliaszek, & Lewis, 2010), most recently by Westfall and Yarkoni (2016). Yet, despite these warnings, researchers have continued to use OLS analyses to investigate incremental predictive validity in studies using the IAT (e.g., Axt, Ebersole & Nosek, 2016; Cha et al., 2016) and other implicit measures (e.g., De Jong, Wiers, Braak & Huijding, 2007; Payne et al., 2010).

To illustrate how measurement error complicates least squares linear regression analyses for claims of incremental predictive validity, consider an example provided by Westfall and Yarkoni (2016) of predicting the number of swimming pool deaths per day in a city from the amount of ice cream sold. A factor that we will want to account for in this prediction is daily temperature, as temperature is likely positively associated with both the amount of ice cream sold and the number of people who visit swimming pools. To control for the impact of temperature, we may run a linear regression predicting number of swimming pool deaths from both the amount of ice cream sold and daily temperature. In a perfect world, with perfect measurement of both the amount of ice cream sold and the daily temperature, this OLS analysis would show that only daily temperature predicts swimming pool deaths (i.e., there is no independent role of ice cream sales in predicting swimming pool deaths).

However, suppose that instead of a perfectly accurate measure of daily temperature, we only had people's subjective self-reported ratings of daily heat. These subjective ratings would have some validity — people do report feeling hotter when it is warmer out — but they would be imperfect and introduce noise into our measure of daily temperature. Because ice cream sales are correlated with daily temperature, this related variable could then capitalize on the error introduced by using an imperfect measure of temperature, and could in turn become a significant predictor of swimming deaths given a large enough sample and using an OLS analysis. In this case, researchers may falsely conclude that ice cream sales incrementally predict swimming pool deaths above and beyond daily temperature, but this conclusion would be due entirely to issues stemming from measurement error.

No measure is without error. While IATs have shown relatively high internal reliability (e.g., Cronbach's α of = .93, .86, .82 for IATs dealing with politics, race, and self-esteem in Bar-Anan & Nosek, 2014), there is still enough error in both IATs and self-report measures to create the possibility that previous work relying on OLS analyses incorrectly concluded that either form of measurement demonstrated incremental predictive validity for their latent constructs. Moreover, this issue may be a particular concern for the IAT. As Westfall and Yarkoni (2016) note, Type I error rates in claims of incremental predictive validity are highest when measures have moderate reliability and studies have large sample sizes, conditions which characterize a large portion of research arguing for incremental predictive validity of various IATs (e.g., Axt, Ebersole & Nosek, 2016; Greenwald et al., 2009; Redford, Howell, Meijs & Ratliff, 2016). For instance, in conditions where 1) implicit attitudes are unrelated ($\rho = 0$) to an outcome, 2) explicit attitudes are weakly related ($\rho = .2$) to the same outcome, 3) the explicit and

implicit constructs are moderately correlated ($\rho = .3$), and 4) the two measures assessing implicit and explicit attitudes have high internal reliability ($\alpha = .80$), the Type I error rate of falsely concluding that an IAT independently predicts the outcome variable is 10.1% when $n = 300$, 17.1% when $n = 500$, 29.5% when $n = 1000$, and 99.4% when $n = 10000$ (calculated through jakewestfall.org/ivy/). In other words, it becomes a near certainty for there to be a false positive claim of incremental predictive validity once sample sizes are sufficiently large.

The most effective means of addressing this issue is through latent variable approaches such as structural equation modeling (SEM), which can properly account for measurement (un)reliability. In addition, SEM analyses control the Type I error rate much more effectively than multiple regression as measurement error increases (Westfall & Yarkoni, 2016). While Westfall and Yarkoni (2016) directly mention the IAT as one research area that may suffer from a high rate of false positives in claims of incremental predictive validity, they conducted no archival or novel analyses using IAT data to address this issue. One notable attempt to answer this question comes from a recent meta-analysis concerning the relationship between the IAT and intergroup behavior (Kurdi et al., 2019). Here, SEM analyses found that the IAT reliably predicted relevant outcomes even after controlling for parallel explicit measures. However, the authors note that this finding should be treated as tentative, since information required to complete the SEM analyses (i.e., estimates of internal reliability) were available in only 20% of the IATs included in the meta-analysis. Completing the SEM analysis then required using an imputation approach, randomly sampling from the available data to assign values to the unavailable data. As a result, the conclusions from the Kurdi et al. (2019) analysis depend on the assumption that estimates of internal reliability were missing at random, and there are plausible

reasons for why this assumption may have been violated (e.g., researchers could have been more likely to report internal reliability when values were high versus low). The present work then looks to build on these preliminary results by using a large sample, pre-registered analyses, and a wide range of topics and outcomes.

Overview of the present research

Establishing incremental predictive validity of the IAT has great theoretical and practical importance, yet previous analyses have relied on an analytical approach that could produce an alarming rate of Type I errors. To address this issue, we used SEM to analyze data from more than 14,000 participants, who completed 10 of the most popular IATs along with parallel self-report measures to investigate whether the IAT incrementally predicted 250 self-report outcomes. Specifically, we analyzed whether these measures uniquely predicted 1) support for relevant public policies (e.g., legalization of gay marriage); 2) beliefs concerning target group members (e.g., whether the average female high school student can complete a calculus course); 3) interpersonal motivations concerning target group members (e.g., motivation to to be non-prejudiced towards obese people); 4) anticipated behavioral responses in interactions with target group members (e.g., expected nervousness that would be experienced if sitting alone in a room with a Black person); and 5) degree of contact with target group members (e.g., having a childhood friendship with an Arab person).

These outcome variables were selected due to their conceptual relevance and possible relation with meaningful outcomes. For instance, voting intentions can be associated with support for specific policies (e.g., racial profiling; Bianchi, Hall & Lee, 2018) or more general beliefs about groups (e.g., whether Black people are lazy; Payne et al., 2010). Similarly, quality

of interaction with members of certain groups can be related to reported intentions (e.g., anticipated comfort around Black people; Britt et al., 1996), interpersonal motivations (e.g., importance of appearing non-prejudiced towards Black people; LaCrosse & Plant, 2019), or previous group contact (e.g., becoming more familiar with outgroup members; West & Turner, 2014). We prioritized access to a large online sample to allow for a well-powered analysis, compared to an investigation that used more unobtrusive measures of behavior but would have needed to be smaller in scope to achieve satisfactory statistical power. One consequence of this approach was reliance on criterion variables that exclusively used self-report, and we review the strengths and limitations of this decision in the General Discussion.

A note on causation

Predictive validity is concerned with verifying relations between measures and constructs; it is agnostic on how measures or constructs causally relate to one another. For instance, it may be that implicit and explicit attitudes or stereotypes causally shape policy support (e.g., changes in attitudes create changes in policy beliefs), while the reverse may be true for measures of prior contact (e.g., experiences with members of certain groups change implicit and explicit attitudes or stereotypes). Regardless, the question of whether changes in criterion are caused by (or cause) changes in implicit or explicit attitudes and stereotypes is not relevant for establishing predictive validity; rather, analyses are concerned with assessing whether variation in implicit and explicit attitudes or stereotypes can be used to *understand* variation in the selected outcomes.

Method

Disclosures

Preregistration. We refined all analysis scripts on a sample of the data, then preregistered our scripts for completing analyses on the rest of the dataset at <https://osf.io/v4kcb/>.

Data, Materials, and Online Resources. All data, materials, and analysis scripts are available at <https://osf.io/6d7xp/>.

Reporting. We report how we determined our sample size, all data exclusions, all manipulations, and all measures in the study.

Ethical Approval. This research was approved by the University of Virginia Institutional Review Board for the Social and Behavioral Sciences, Protocol #2002035800.

Participants

Participants were volunteers from Project Implicit (<http://implicit.harvard.edu>) who selected the “Featured Task” from the site’s home page. Participants were randomly assigned to one of 10 topic conditions. Each topic condition contained an IAT, five self-report items (for use as an explicit measure), 25 outcome measures, and a 13-item demographics questionnaire (from which we only analyzed data concerning gender, age, race, and country of residence).

Analyses were limited to participants who provided eligible IAT data and completed the five items used to create the explicit measure. The minimum planned sample size was $n = 1043$ per topic, which provided more than 90% power to detect a small correlation of $r = .10$ between any two study measures. There were delays in finding a replacement featured task, so data collection continued until the new featured task was ready. As a result, the minimum sample size for any statistical test reported here was $n = 1333$, which provided more than 80% power to detect a correlation of $r = .08$, and 80% power to detect an effect as small as $f^2 = .006$ in a linear

regression with two predictors with $\alpha = .05$ ¹. See Table 1 for sample size and demographics for each topic. Across tests, sample sizes vary due to missing data.

Measures

Participants completed an IAT, a five-item measure of explicit attitudes or stereotypes, twenty-five self-reported outcome variables, and a demographics questionnaire, in randomized order.

IATs. Participants completed one of 10 seven-block IATs (Nosek, Greenwald & Banaji, 2007; see online supplement at https://osf.io/9z5x6/?view_only=a83fe6211c1b48bc8ac7b02268f94f24 for procedure and stimuli information). These IATs assessed either implicit attitudes (e.g., a “Sexuality IAT” measuring implicit evaluations of Gay versus Straight people) or implicit stereotypes (e.g., a “Weapons IAT” measuring strength of implicit associations between Black and White people with guns versus objects). IATs were selected based on their overlap with existing datasets (Xu, Greenwald & Nosek, 2014) and prevalence in the psychological literature; for instance, the IATs studied here had identical or highly similar versions used in 57% of studies in a recent meta-analysis focusing on the IAT in an intergroup context (Kurdi, Seitchik et al., 2019).

¹ We recognize that using an α level of 5% does not properly adjust for the increase in the Type I error rate that follows from the many statistical tests reported here. We decided to use $\alpha = .05$ not only to mirror many prior claims of incremental predictive validity of the IAT in the research literature, but also since we were primarily concerned with the degree of correspondence between SEM and OLS approaches rather than the statistical significance of any individual test. That said, we caution against over-interpreting the results of the correlation between any IAT and a single outcome given the number of tests that we conducted.

See Table 2 for a list of the categories and attribute labels used in each IAT. Participants were excluded from analysis if more than 10% of responses during critical blocks were faster than 300ms (Nosek et al., 2007).

Explicit attitudes and stereotypes. Explicit attitudes or stereotypes were assessed using five items. For explicit attitudes, the first item assessed relative preference for target group members (e.g., -3 = “I strongly prefer old people to young people, +3 = “I strongly prefer young people to old people”; Axt, 2018). The second and third items were seven-point thermometer measures assessing degree of liking for each target group. For instance, participants reported on average how much they liked old people (-3 = Strongly dislike, + 3 = Strongly like) followed by how much they liked young people. The fourth and fifth items were sliders assessing positivity toward each target group; for instance, participants reported how negative or positive their feelings were towards old people (-100 = Extremely negative, 0 = Neutral, 100 = Extremely positive) and then towards young people.

For explicit stereotypes, the first item assessed relative strength of association between target group members and attributes (e.g., -3 = “I strongly associate Black people with safety and White people with danger”, +3 = “I strongly associate Black people with danger and White people with safety”). The second and third items were seven-point thermometer measures assessing which group was more likely to engage in stereotype-related activities (e.g., one item asking degree to which Black versus White people were more likely to commit a violent crime and another item concerning which group was more likely to respect existing laws). The fourth and fifth items were sliders assessing the degree to which each stereotyped attribute was associated with one group over another; for instance, participants reported how strongly they

associated safety with White versus Black people (-100 = Strongly Black, 0 = Neutral, 100 = Strongly White) and then how strongly they associated danger with White versus Black people. See the online supplement for full wording and response options of explicit measure items.

Outcome variables. Participants completed 25 items, five each for each class of outcome variable: policy support, intergroup motivation, anticipated behavioral or emotional reactions during intergroup contact or interactions, prior intergroup contact, and group-related beliefs.

When possible, we used items that had previously been included in prior Project Implicit Demo Website datasets for the same topic (Xu, Nosek, & Greenwald, 2014) in an effort to maximize similarity with prior data. We also adapted relevant items from existing measures (e.g., Fraboni, Salstone, & Hughes, 1990; Yucker, Block, & Young, 1970) and adapted relevant items across domains when applicable (e.g., an item concerning acceptability of private companies discriminating based on weight from Yucker, Block, & Young, 1970 was adapted to assess acceptability of discrimination based on age, sexual orientation, and disability). If we could not find enough suitable items from prior measures, remaining items were created. The one exception was for intergroup motivation, where all items were adapted from the Internal Motivation to Respond Without Prejudice scale (IMS; Plant & Devine, 1998). See Table 3 for wording, response anchors, and number of response options for each outcome variable, and see online supplement for source of each item when possible.

Analysis Strategy

IATs were scored with the *D* algorithm (Greenwald, Nosek, & Banaji, 2003), such that higher values meant stronger associations between the categories and attributes listed first in Table 2. Explicit measures were calculated by taking an average of the following standardized

variables: 1) the single-item measure of relative preference or stereotypic association, 2) a difference score from the two thermometer items, and 3) a difference score from the two slider items. Explicit measures were scored to produce positive correlations with the IAT. See Table 2 for IAT descriptive statistics as well as internal reliability (Cronbach's α) for each IAT² and explicit measure. All measures showed moderate levels of internal reliability (median IAT α = .80, median self-report α = .73). See the online supplement for descriptive statistics for all explicit attitude or stereotype items.

Item-Level Regression Analyses

We first tested for incremental predictive validity in the IAT using least squares linear regression. Notably, these tests were *limited to the 174 outcomes that were reliably correlated with both the IAT and the explicit measure*³. We considered a zero-order correlation between the IAT and the outcome measure as a precondition for claiming the IAT has incremental predictive validity (i.e., it does not make sense to test whether the IAT predicts an outcome beyond a parallel explicit measure if both measures fail to predict that outcome by themselves). For each OLS regression, we tested for incremental predictive validity by constructing a model that predicted the outcome variable from both the corresponding explicit measure and IAT. Binary outcomes were modeled using logistic regression. Incremental predictive validity was demonstrated by showing that these models fit better than models which only predicted the outcome measure from the explicit measure, in a model-selection framework at $p < .05$.

² For these analyses, Cronbach's α was calculated by using the same four parcels that made up the latent implicit variable.

³ Only three items (age_policy4, genderscience_policy5, and religion_motivation_2) were reliably correlated with the IAT but *not* the explicit measure. Analysis conclusions do not substantively change when only including items reliably correlated with only the IAT.

Item-Level Structural Equation Analyses

For comparison, we next tested for the IAT's incremental predictive validity using structural equation modelling. We constructed a model that predicted each outcome measure (entered as a manifest variable) from both the explicit and implicit attitude or stereotype measure. All measures were standardized prior to entry. For this model, we constructed separate latent variables for the explicit and implicit measure (Nosek & Smyth, 2007). Each explicit construct contained three indicators for the latent variable, which were the three components used to calculate the aggregate explicit variable used for the OLS analyses. For the implicit construct, trials from the four critical blocks of each IAT were divided into four quarters. We computed a *D* score for each quarter (drawing data from each block of the IAT), and used those scores as indicators for the latent variable (e.g., Nosek & Smyth, 2007).⁴

The latent implicit construct was identified by fixing the path to the first IAT quartering at 1, and the latent explicit construct was identified by fixing the path to the explicit preference item at 1. The implicit and explicit attitude measures were allowed to covary. Thresholding was added to any models with binary outcome measures. See Figure 1 for a sample path diagram. This model was compared to a model with the pathway from implicit measure to outcome measure constrained to 0. Since the two models are nested within one another, a likelihood ratio test is distributed as chi-square with one degree of freedom and can be used to test the significance of the difference in fit of the two models. Incremental predictive validity was demonstrated by a significant reduction in model fit when the implicit pathway was removed.

⁴ As a robustness check, we reran the analyses using a parcelling strategy that assigned IAT trials to quarters at random. The two approaches produce estimates for the path from latent implicit construct to the outcome measure that correlate $r(248) = .988$ [.98, .99]

The main text reports analyses of tests where the outcome was treated as a manifest variable (i.e., treating each single item as its own outcome). The online supplement contains analyses where outcomes are modeled as latent variables with five indicators (e.g., the five measures of beliefs related to Black people creating a latent outcome). We prioritized the manifest approach for two reasons. First, our outcome items were not necessarily chosen to measure larger latent constructs and frequently assess conceptually distinct beliefs; for example, the policy items about religious attitudes contain opinions about Jewish doctors being required to work on Christmas as well as whether the US government should create a federal holiday honoring Holocaust victims. This is demonstrated by the relatively low internal reliability of these measures and the relative misfit of the latent-variable measurement models (see Table S1 & S2 in the online supplement). Second, this approach most closely mirrors how such outcomes are treated in this literature, as one recent-meta analysis concerning the effectiveness of interventions to change implicit associations found that 67% of behavioral outcome measures relied on just a single assessment (Forscher, Lai, et al., 2019).

Figure 1. Sample path diagram for the SEM analyses.

Results

Correlational analyses

IATs and parallel explicit measures were all positively and reliably correlated (see Table 2; median $r = .18$). Using a strict $p < .05$ cutoff, 174 (69.6%) of the outcome variables were reliably correlated with the IAT D score, with a median absolute-value correlation of $r = .074$ across all items (see Table 4 for correlations between each outcome variable with both the IAT and explicit measure). There was considerable variability across topics in the number of outcomes related to the IAT. For some topics, the vast majority of outcomes were reliably related to the IAT (e.g., 24/25 outcomes in sexuality), whereas for others, fewer than a quarter of outcomes were reliably related to the IAT (e.g., 6/25 outcomes in gender-career). These differences across topics may be partly explained by variation in the degree to which outcome measures were related to one another; for example, the median correlation among outcomes for the sexuality topic was $r = .32$, compared to $r = .13$ for gender-career. See the online supplement for the full correlation tables and Table S8 in the online supplement for the median correlations by IAT,

We found that the SEM path loadings for the latent variables were acceptable, with unstandardized loadings on the implicit latent factor ranging from 1.02 to 1.29 (median = 1.14), and unstandardized loadings on the explicit factor ranging from 0.88 to 1.55 (median = 1.23) See Table S3 in the online supplement for all loadings by IAT.

Incremental Validity Analyses

Of the 174 outcome variables that had a significant zero-order correlation with the IAT, least squares linear regression analyses showed evidence for incremental predictive validity of the IAT for 102 items (58.6%), while SEM analyses showed evidence for 103 (59.2%), a non-significant difference: $X^2(1) = 0.0049, p = .94$. The two approaches reached the same

conclusion on 159 of the outcome measures (91.4%). This agreement in incremental validity decisions was statistically reliable, in that incremental validity decisions based on regression analyses significantly predicted SEM decisions, $z = 8.65$, $p < .001$, Nagelkerke $R^2 = .73$, AUC = .912. The direction of disagreements between the two methods was closely split; OLS analyses showed evidence for incremental predictive validity of the IAT where SEM analyses did not for 7 outcomes, and SEM analyses showed incremental predictive validity where OLS analyses did not for 8 outcomes. See Table 5 for OLS and SEM output related to the IAT for each outcome measure, and see the online supplement for full model outputs.

We next analyzed the correlation between the standardized coefficients from the IAT in the linear regression analysis with the path coefficient for the implicit construct in the SEM analysis. These two coefficients correlated strongly $r(172) = .98$ [.976, .987], $p < .001$ ⁵. A paired t-test indicated that the betas produced by SEM analyses ($M = -0.01$, $SD = 0.11$) were not significantly different from those produced by OLS analyses ($M = -0.01$, $SD = 0.07$), $t(173) = -0.41$, $p = .69$, and all outcomes had 95% confidence intervals from OLS and SEM approaches that overlapped. However, the 95% confidence intervals around those betas generated by SEM analyses ($M = 0.18$, $SD = 0.02$) were significantly larger than those generated by OLS analyses ($M = 0.10$, $SD = 0.01$), $t(173) = 56.29$, $p < .001$, $d_z = 3.76$ [3.34, 4.17]. See Figure 2.

⁵ We find a similarly strong correlation for the items that did not correlate with the IAT, $r(74) = .86$ [.78, .91]. Across every item, SEM and regression betas correlated $r(248) = .97$ [.965, .979]

Figure 2. Estimated betas by outcome, with 95% confidence intervals. Points in red indicate OLS estimates, while points in blue indicate SEM estimates.

To create a measure of effect size that is easier to compare across studies, we turned all betas into semi-partial correlations, which measure the correlation between a predictor and an outcome after accounting for shared variance with other predictors, using the formula of Cohen, Cohen, Aiken, & West (2003). Across our outcomes, the effect size for the implicit predictor was conventionally small: mean absolute SEM $sr = .093$ [.087, .10]⁶, median absolute SEM $sr = .10$, mean absolute OLS $sr = .057$ [.052, .061], median absolute OLS $sr = .05$.

Moderator analysis of agreement between OLS and SEM

We first examined whether the degree of agreement between SEM and OLS analyses varied across IATs or outcome classes (policy support, belief, etc.). To do so, we fit a logistic

⁶ Confidence intervals calculated from 10,000 bias-corrected bootstrap replications

model predicting the binary incremental predictive validity of the IAT for each outcome generated by an SEM framework from the binary incremental predictive validity of the IAT generated by a least squares linear regression framework, interacted with the specific IAT from which the estimate was generated and the class of the specific outcome. We found that neither the IAT nor the outcome class moderated the relationship between SEM and linear regression-based predictive validity decisions (three-way interaction: $X^2(19) = 0.00, p = 1.00$; interaction by IAT: $X^2(9) = 0.00, p = 1.00$; interaction by outcome form: $X^2(4) = 0.00, p = 1.00$). See Table 6 for the incremental validity decisions by modelling type and IAT, and Table 7 for incremental validity decisions by modelling type and outcome class.

Comparing incremental predictive validity across topics and outcomes

In a second moderator analysis, we investigated whether within both the SEM and OLS analyses, the strength of the relationship between the IAT (or implicit construct) and the outcome varied across topics or outcome class. To do so, we fit a linear regression predicting the absolute values of the betas generated by SEM analyses from the absolute values of the betas generated from the least squares linear regression analyses interacted with the topic from which the estimate was generated and the form of the outcome. We found evidence that the strength of the betas differed across IATs, $F(9, 86) = 7.60, p < .001$, and that betas were modelled differently by OLS and SEM approaches both across IATs, $F(9, 86) = 2.91, p = .0048$, and across outcome classes $F(4, 86) = 4.93, p = .0013$, relationships which were moderated by a three-way interaction, $F(27, 86) = 1.82, p = .019$. Tukey-corrected pairwise tests suggested that betas were generally stronger in the Weapons IAT, with a tighter relationship between OLS and SEM estimates than other IATs, especially for policy items. See Table 8 for betas aggregated across

IATs, and Table 9 for betas aggregated across outcome classes. In the online supplement, we report the results of additional modelling approaches, including an SEM-based approach to testing incremental predictive validity that accounts for the interrelationship of outcome measures, and analyses looking at the incremental prediction of latent classes of outcomes (e.g., an aggregate measure of all policy items for a specific topic). See Table 10 for a guide to the online supplement.

General Discussion

Previously, claims were made that the incremental validity of the IAT was at risk of inflated Type I error rates due to an analysis strategy, least squares linear regression, that cannot control for measurement reliability (Westfall & Yarkoni, 2016). Properly accounting for measurement reliability requires using latent variable approaches like SEM. A comparison of SEM and least squares linear regression analyses of 250 outcome variables across 10 of the most popular IATs and parallel self-report measures found that the IAT showed evidence of incremental predictive validity in 41.2% of linear regression analyses and that the implicit construct demonstrated incremental predictive validity in 41.6% of SEM analyses. Limiting analyses to only those 174 outcomes that were reliably correlated with the IAT, these rates were 58.6% and 59.2%, respectively.

The two analytic approaches produced largely similar conclusions concerning the strength of the association between the IAT or the implicit construct and each outcome variable. The correlations between standardized coefficients was $r = .98$ among all outcome variables, and $r = .97$ among outcomes reliably correlated with the IAT. In addition, the high rate of agreement (91%) between the two analytic approaches in finding evidence (or not) of incremental

predictive validity for the IAT or implicit construct suggests that SEM and least squares approaches largely arrive at the same conclusions. However, it would be inappropriate to conclude that it does not matter whether to use OLS or SEM in analyzing IAT data, as only SEM can properly account for measurement reliability. Though SEM approaches require more data and produce significantly more imprecise point estimates, the present analyses suggest that approximately one out of every 10 conclusions drawn from OLS would be incorrect. In short, we believe that many researchers should be compelled to update their analytic practices if failing to do so resulted in approximately 10% of their claims being incorrect.

We found that the effect sizes for the incremental predictive validity of implicit attitudes were conventionally small (mean absolute SEM $sr = .093$ [.087, .10], OLS $sr = .057$ [.052, .061]) and were far smaller than the conventionally medium effect sizes for explicit attitudes (mean absolute SEM $sr = .35$ [.33, .37], OLS $sr = .23$ [.21, .24]). However, these effects are of a comparable size to those previously estimated for that IAT and other outcomes related to intergroup behavior, as a recent meta-analysis (Kurdi et al., 2019) estimated a partial correlation for the IAT, controlling for explicit measures, of $r = .09$ [.07, .11]. At the same time, even small effects can substantively contribute to meaningful disparities so long as they impact many people (Greenwald, Banaji & Nosek, 2015). However, as the outcomes in this study were not chosen to be representative of the larger literature in which the IAT is used to predict relevant outcome measures, the effect size estimates should be treated with some caution.

Interpreting the IAT's rate of incremental predictive validity

Across 10 of the most commonly used IATs, we tested 250 outcomes that we believed could plausibly be predicted by IAT performance. At a correlational level, the IAT was reliably

associated with 174 of these outcomes and, using SEM, the implicit construct (i.e., the IAT) incrementally predicted 102 of these outcomes beyond parallel self-report measures (i.e., an explicit construct). To us, it is not straightforward how to best interpret either the 69.6% (174/250) rate of predictive validity (i.e., a reliable correlation between the IAT and an outcome) or the 41.6% (104/250) rate of *incremental* predictive validity (i.e., an SEM model finding that the implicit construct was reliably associated with an outcome beyond self-report) across all outcomes, and this interpretation is only further complicated by the possibility of inflated Type I error rates considering the many statistical tests reported here.

On one hand, the rate of incremental predictive validity using SEM was certainly well above 5% (i.e., the false positive rate), meaning these data provide the first evidence that the IAT can and does consistently predict relevant outcomes beyond parallel explicit measures after accounting for measurement error. Given the serious weaknesses outlined by Westfall and Yarkoni (2016) concerning least squares linear regression, the high rate of agreement (91%) between SEM and OLS was not a given; it was very possible that the evidence of incremental predictive validity provided by least squares linear regression could have been entirely or mostly due to issues related to measurement error. If that were the case, results would have shown a much more marked difference in rates of incremental predictive validity between SEM and OLS. Instead, it appears that the IAT can indeed be a useful measure in independently predicting many important outcomes, like policy support and group-related beliefs, though again the effect sizes concerning the predictive validity of the IAT both by itself and when controlling for explicit attitudes were relatively small.

Moreover, the findings reported here may be a conservative estimate on the rate of the IAT's incremental predictive validity, given that all of the outcome measures were self-report and therefore shared common method variance (Podsakoff, MacKenzie, Lee & Podsakoff, 2003) with the items used to assess explicit attitudes and stereotypes. From this perspective, the IAT could be expected to have even higher rates of incremental predictive validity when using outcomes that do not rely on self-report, an issue we return to below.

At the same time, the perhaps modest rate of incremental predictive validity found here may seem incongruent with the prominence that the IAT, and implicit measures more generally, holds in psychological research. For many domains, the IAT showed very low rates of incremental predictive validity; for instance, SEM analyses found that the gender-science IAT incrementally predicted only 3 of 25 outcomes, and the weapons IAT incrementally predicted only 8 of 25 outcomes. Furthermore, the *most* outcomes any IAT incrementally predicted was the race IAT, which incrementally predicted 15 of 25. Such results highlight the possibility that certain IATs suffer from methodological weaknesses, or redundancy with explicit attitudes or stereotypes, that severely limit the potential to demonstrate incremental predictive validity (e.g., Zitelny, Shalom & Bar-Anan, 2017), and that even IATs demonstrating relatively high rates of incremental predictive validity may still fall short of doing so across a wide range of relevant outcomes (Gawronski, 2019).

In total, we do not feel that these results provide an unambiguously positive or negative verdict on the incremental predictive validity of the IAT. Rather, this work finds consistent evidence that the IAT can independently predict certain outcomes, but there is substantial variability in when this occurs. To that end, we hope that this work spurs additional investigation

into when and why IATs do versus do not independently predict certain outcomes. Such work may very well conclude that there are many instances where the IAT, or implicit measures more generally, are unlikely to be of value in predicting relevant outcomes, and researchers will need to be more deliberate on deciding whether to include such measures in their own work.

This analysis capitalized on large datasets (median n per model = 1568) to provide precise estimates of the association between the IAT and self-report measures with a variety of outcomes across a range of topics. However, it is worth noting these data do not represent a random or representative sample of IATs, self-report measures, or outcomes, and as such we strongly caution readers against using our results as a “point estimate” of the degree to which the IAT is either correlated with or shows incremental predictive validity towards relevant outcomes. Our conclusions are certainly constrained by the topics and outcomes we chose to study, and below we discuss possible important moderators on the likelihood of finding evidence for incremental predictive validity.

It is certainly possible that claims about incremental predictive validity may change when investigating different topics or outcomes. For instance, political attitudes is a domain marked by comparatively strong correlations between implicit and explicit measures (e.g., $r = .59$ between IATs and self-report variables concerning evaluations of Democrats versus Republicans and $r = .56$ for liberals versus conservatives in Nosek, 2005). In areas like political attitudes, which may have naturally greater correspondence between implicit and explicit constructs, results of SEM and multiple regression analyses may be more likely to diverge (see Frieze et al., 2012 for claims of incremental predictive validity for implicit political attitudes on voting behavior using least squares linear regression).

Similarly, while these results benefit from covering a wide range of topics and outcomes, the data are not well-suited for making comparative claims of differences in the strength of IAT-outcome variable associations or the prevalence of incremental predictive validity across various domains or outcome types. For instance, we found little evidence of variation in the IAT-outcome association across classes of outcomes (e.g., measures of behavioral intentions versus intergroup contact) or across topics (e.g., religion versus race). However, such analyses are likely of limited value given relatively low power (i.e., there were only five measures of any outcome class in each domain, and only 25 total outcomes in any domain). In short, our results provide the strongest evidence that IATs incrementally predict a variety of outcome variables across a range of topics, but specific investigations of whether the existence of incremental predictive validity or the strength of the IAT-criterion association varies across topics or outcomes will require either a more focused data collection or meta-analytic estimates from a greater range of studies (e.g., Greenwald et al., 2009; Kurdi, Seitchik et al., 2019).

Finally, the degree to which the IAT demonstrates incremental predictive validity is likely influenced by a number of factors. One clear possibility comes from conceptual correspondence, meaning similarities in measures' topic and level of specificity, between any outcome variable and the IAT. Past work finds that increasing the level of conceptual correspondence between an outcome and an IAT generally increases, and never decreases, the strength of the correlation between the two measures (Irving & Smith, in press), and a similar investigation has found that more direct measures of explicit racial attitudes produce stronger correlations with a racial attitudes IAT (Axt, 2018). Correspondence between outcome and IAT may moderate the effects reported here, though this dataset may be less than ideal for such an

investigation since outcome measures were selected with the hopes of *maximizing* the correlation between outcome and IAT, thereby possibly suppressing variance on the dimension of correspondence. Regardless, our open data and materials make such an investigation possible for interested researchers, and follow-up research may look to complete similar analyses on items selected to be high or low in conceptual correspondence.

Limitations of Self-Report and the IAT

One notable limitation in this work is the exclusive use of self-report for all outcome variables, a choice that was made in order to allow for a large sample and a wide variety of topics. While self-report can be a generally strong predictor of actual behavior (Armitage & Conner, 2001; Kormos & Gifford, 2014), it is possible that results could differ when investigating outcomes that did not rely solely on self-report. For example, the degree to which the IAT shows incremental predictive validity could be weaker for behaviors that are more spontaneous, though it is also plausible that the degree to which IATs or other implicit measures incrementally predict behavior may increase when looking at less controllable outcomes.

For instance, prior work has found that IATs were more predictive of behaviors in an interaction that were less consciously controllable (e.g., nonverbal behavior) compared to those that were more controllable (e.g., self-reported perceptions of partner friendliness; Dovidio, Kawakami, & Gaertner, 2002). Moreover, experimentally inducing lower control resources through cognitive load increased the predictive strength of the IAT on nonverbal behavior during an interaction (Hofmann, Gschwendner, Castelli, & Schmitt, 2008), though it is worth noting that meta-analyses have failed to find a moderating role of behavior controllability on the correlation between the IAT and behavior (Greenwald et al., 2009; Kurdi, Seitchik, et al., 2019). Given the

relatively modest effects found here (median $B = 0.098$ between IAT and criterion in an SEM framework, median $B = 0.056$ in a least squares framework), more comprehensive and high-powered tests of the incremental predictive validity of the IAT towards outcomes other than self-report may be difficult, but such work would be necessary and highly useful for those contexts and outcomes where IATs (and implicit measures more generally) are most likely to predict behavior (e.g., Axt, Bar-Anan, & Vianello, in press).

Although this paper focused on whether the psychometric properties of the IAT influenced rates of incremental predictive validity, the psychometric properties of the outcome variables also influence these rates (Kurdi et al., 2019). For instance, the exclusive use of partially ad-hoc, self-reported outcome variables complicates any comparisons between the rate of incremental predictive validity for our implicit versus explicit constructs. Among all outcomes, SEM analyses found that the implicit construct showed incremental predictive validity for 41.6% of analyses compared to 90% of analyses for the explicit construct. This discrepancy between the implicit and explicit construct appears to be at odds with prior work, such as the recent meta-analysis of the IAT's prediction of intergroup behavior (Kurdi et al., 2019) finding that both implicit ($\beta = .14$) and explicit ($\beta = .14$) were similarly associated with the selected criterion measures. Ultimately, these data cannot parse the extent to which this discrepancy in rates of incremental predictive validity is driven by the attitudes and outcomes measured here being inherently more related to explicit attitudes or stereotypes, or whether the common method variance shared between our explicit and outcome measures (Podsakoff et al., 2003) has artificially inflated such associations. Follow-up studies using more ambitious designs involving

multiple self-report and behavioral outcome measures will be better able to make progress on this issue.

Another notable limitation of this investigation is the exclusive use of the IAT as the measure of implicit associations. Other implicit measures may have produced different results. Correlations between implicit measures can be relatively strong, but can also vary considerably across topics. For example, the median correlation among seven implicit measures was $r = .55$ for political attitudes, $r = .30$ for racial attitudes, and $r = .20$ for self-esteem (Bar-Anan & Nosek, 2014). Given this variability in correlations among implicit measures, it is unclear how claims of incremental predictive validity would have fared when using other implicit measures. As a result, the present work may then have a rather narrow applicability to claims about the IAT alone, though the IAT is arguably the most reliable implicit measure (Bar-Anan & Nosek, 2014) and inarguably the most popular.

Comparing SEM and Least Squares Linear Regression Analyses

In this study, the SEM and least squares linear regression analyses produced very similar conclusions. It may then be tempting to conclude that it is acceptable to continue to use least squares linear regression for testing incremental predictive validity or to not question the claims of prior work that only used least squares linear regression. This would be an unwise conclusion. The flaws of least squares linear regression analyses for claims of incremental predictive validity identified by Westfall and Yarkoni (2016) and others still apply to all such tests, and there remains a potentially inflated risk of false positives.

The SEM analyses presented do not validate or invalidate any specific prior claims of incremental validity that relied on least squares linear regression, though they do suggest it is

unlikely that a vast majority of such tests were false positives. We urge researchers to use similar SEM analyses in future tests of the incremental predictive validity of the IAT or other implicit measures (ideally also adding enough self-report items to allow for a latent rather than manifest variable for the explicit construct). To facilitate this process, we have created annotated analysis scripts for adapting the SEM analyses reported here for new tests of incremental predictive validity using the IAT. These scripts are available at <https://osf.io/6pgyz/>.

Future Directions

The preliminary conclusions found here concerning the incremental predictive validity of the IAT will be strengthened by additional data investigating new topics and using a greater diversity of outcomes, particularly in those that do not rely on self-report. A better understanding of the role of the IAT in predicting relevant outcomes will come from more fine-grained analyses identifying whether certain types of IATs (e.g., those assessing attitudes versus stereotypes, or those with high versus low correlations with explicit associations) are more or less likely to show incremental predictive validity, or whether such IATs are more or less likely to independently predict certain outcomes (e.g., those high vs. low in dimensions like spontaneity, elaboration, or social sensitivity). Finally, these claims can be extended to the incremental predictive validity of implicit cognition more generally with the inclusion of additional indirect measures. While this work affirms prior claims that IATs can independently predict relevant outcome variables above and beyond parallel self-report measures, the conditions under which IATs (and implicit measures more broadly) independently predict such outcomes is certainly more nuanced than what is presented here.

Conclusion

After addressing the possibility of inflated false positive rates present in prior analytic approaches, this work provides the strongest evidence to date of the IAT's capacity to independently predict related criterion above and beyond parallel explicit measures. Follow-up investigations require expanding this work into different measures of implicit associations and a greater range of outcome variables, but these analyses provide a first step in updating our knowledge of where and when implicit associations can be used to predict relevant outcomes.

Open Practices Section

This paper earned Preregistration, Open Materials, and Open Data badges. The registration can be found at <https://osf.io/v4kcb/>. Materials and data can be found at <https://osf.io/6d7xp/>.

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Table 1

Sample Information Across IATs

Topic	Sample Size	Age (SD)	Prop. White	Prop. Female	Prop. US Resident
Age	1575	22.55 (12.91)	0.63	0.63	0.76
Arab	1560	22.54 (13.11)	0.62	0.64	0.78
Disability	1520	22.49 (13.00)	0.62	0.64	0.78
GenderCareer	1531	22.56 (13.03)	0.58	0.65	0.76
GenderScience	1517	22.55 (13.13)	0.6	0.65	0.78
Race	1731	21.85 (13.07)	0.59	0.63	0.77
Religion	1454	22.86 (13.25)	0.62	0.62	0.8
Sexuality	1618	22.13 (13.06)	0.62	0.63	0.77
Weapons	1614	21.99 (12.73)	0.61	0.63	0.78
Weight	1669	22.75 (13.35)	0.61	0.62	0.77

Note: IAT = Implicit Association Test

Table 2

Summary of Implicit and Explicit Constructs

IAT	IAT D (SD)	IAT α	<u>Descriptives</u>		95% CI	<u>Implicit/Explicit Correlation</u>		
			95% CI	Explicit α		<i>r</i>	95% CI	<i>p</i>
Age	0.46 (0.40)	.79	[.78, .81]	.83	[.82, .85]	.12	[.07, .16]	<.001***
Arab	0.09 (0.41)	.79	[.78, .81]	.83	[.81, .84]	.17	[.12, .22]	<.001***
Disability	0.61 (0.43)	.85	[.83, .86]	.76	[.73, .78]	.09	[.04, .14]	<.001***
GenderCareer	0.33 (0.35)	.70	[.67, .72]	.65	[.62, .68]	.15	[.10, .20]	<.001***
GenderScience	0.28 (0.38)	.75	[.73, .77]	.66	[.63, .69]	.20	[.15, .25]	<.001***
Race	0.33 (0.43)	.81	[.79, .82]	.87	[.86, .89]	.32	[.28, .36]	<.001***
Religion	0.21 (0.48)	.85	[.83, .86]	.68	[.65, .71]	.16	[.11, .21]	<.001***
Sexuality	0.28 (0.44)	.83	[.82, .85]	.87	[.86, .88]	.32	[.27, .36]	<.001***
Weapons	0.34 (0.39)	.77	[.75, .79]	.79	[.77, .81]	.21	[.16, .26]	<.001***
Weight	0.47 (0.42)	.82	[.81, .83]	.82	[.81, .84]	.24	[.19, .28]	<.001***

Note: IAT = Implicit Association Test; 95% CI = 95% confidence interval

Table 3

Wording, Response Options, and Anchors for All Outcome Measures

Outcome Name	Wording	Response Options	Response Anchors
Age_Behavior1	If you could choose, what age would you be?	115	1;115
Age_Behavior2	To what age do you hope to live?	115	1;115
Age_Behavior3	I personally would not want to spend much time with an old person.	7	Strongly disagree; Strongly agree
Age_Behavior4	I would feel nervous if I had to sit alone in a room with an elderly person and start a conversation.	7	Strongly disagree; Strongly agree
Age_Behavior5	If an elderly person were put in charge of me, I would not mind taking direction from him or her.	7	Strongly disagree; Strongly agree
Age_Belief1	A person moves from being middle-aged to being old at what age?	115	1;115
Age_Belief2	A person moves from being an adult to middle-aged at what age?	115	1;115
Age_Belief3	Elderly people have less to contribute to society than younger people.	7	Strongly disagree; Strongly agree
Age_Belief4	It is best that old people live where they won't bother anyone.	7	Strongly disagree; Strongly agree
Age_Belief5	Complex and interesting conversation cannot be expected from most old people.	7	Strongly disagree; Strongly agree
Age_Contact1	I have a friend or close acquaintance that is elderly.	7	Strongly disagree; Strongly agree
Age_Contact2	I interact with elderly people on a regular basis.	7	Strongly disagree; Strongly agree
Age_Contact3	I have friendly interactions with elderly people on a regular basis.	7	Strongly disagree; Strongly agree
Age_Contact4	I had a strong childhood friendship with an elderly person (for example, a grandparent).	7	Strongly disagree; Strongly agree
Age_Contact5	Have you ever volunteered your time for an organization that seeks to assist elderly people?	2	Yes; No

Age_Motivation1	I am personally motivated by my beliefs to be non-prejudiced toward elderly people.	7	Strongly disagree; Strongly agree
Age_Motivation2	Because of my personal values, I believe that using stereotypes about elderly people is wrong.	7	Strongly disagree; Strongly agree
Age_Motivation3	I attempt to act in nonprejudiced ways towards elderly people because it is personally important to me.	7	Strongly disagree; Strongly agree
Age_Motivation4	According to my personal values, using stereotypes about elderly people is OK.	7	Strongly disagree; Strongly agree
Age_Motivation5	Being nonprejudiced toward elderly people is important to my self-concept.	7	Strongly disagree; Strongly agree
Age_Policy1	Younger employees should be given priority to stay if a company needs to fire some employees.	7	Strongly disagree; Strongly agree
Age_Policy2	Organizations should place more effort in training younger workers rather than older workers.	7	Strongly disagree; Strongly agree
Age_Policy3	Individual companies should have the right to determine whom to hire based on an employee's age.	7	Strongly disagree; Strongly agree
Age_Policy4	It is acceptable for companies to have required retirement ages for older employees.	7	Strongly disagree; Strongly agree
Age_Policy5	Hospitals should set an age limit such that people above a certain age are not eligible to receive organ donations.	7	Strongly disagree; Strongly agree
Arab_Behavior1	How in favor would you be of having a close relative or family member marry an Arab Muslim?	5	Very much in favor; Very much opposed
Arab_Behavior2	How in favor would you be of living in a neighborhood where half of your neighbors were Arab Muslims?	5	Very much in favor; Very much opposed
Arab_Behavior3	I would feel nervous if I had to sit alone in a room with an Arab Muslim and start a conversation.	7	Strongly disagree; Strongly agree
Arab_Behavior4	I would experience some anxiety if I were in a room full of Arab Muslims.	7	Strongly disagree; Strongly agree
Arab_Behavior5	I would be willing to have a sexual relationship with an Arab Muslim person.	7	Strongly disagree; Strongly agree
Arab_Belief1	Over the past few years, the government and news media have shown more respect for Arab Muslims than they deserve.	7	Strongly disagree; Strongly agree
Arab_Belief2	Where would you rate Arab Muslims on this scale?	7	Very dangerous; Very safe
Arab_Belief3	If your personal safety is at stake, it's sensible to avoid members of ethnic groups known to behave more violently.	7	Strongly disagree; Strongly agree

Arab_Belief4	Arab Muslims should take the jobs that are available and then work their way up to better jobs.	7	Strongly disagree; Strongly agree
Arab_Belief5	Arab Muslims are demanding too much too fast in their push for equal rights.	7	Strongly disagree; Strongly agree
Arab_Contact1	I have a friend or close acquaintance that is an Arab Muslim.	7	Strongly disagree; Strongly agree
Arab_Contact2	I interact with Arab Muslims on a regular basis.	7	Strongly disagree; Strongly agree
Arab_Contact3	I have friendly interactions with Arab Muslims on a regular basis.	7	Strongly disagree; Strongly agree
Arab_Contact4	How often have you had brief conversations with an Arab Muslim?	5	Never; Very often
Arab_Contact5	I had a strong childhood friendship with an Arab Muslim.	7	Strongly disagree; Strongly agree
Arab_Motivation1	I am personally motivated by my beliefs to be nonprejudiced toward Arab Muslims.	7	Strongly disagree; Strongly agree
Arab_Motivation2	Because of my personal values, I believe that using stereotypes about Arab Muslims is wrong.	7	Strongly disagree; Strongly agree
Arab_Motivation3	I attempt to act in nonprejudiced ways towards Arab Muslims because it is personally important to me.	7	Strongly disagree; Strongly agree
Arab_Motivation4	According to my personal values, using stereotypes about Arab Muslims is OK.	7	Strongly disagree; Strongly agree
Arab_Motivation5	Being nonprejudiced toward Arab Muslims is important to my self-concept.	7	Strongly disagree; Strongly agree
Arab_Policy1	It should be against airport policy to allow security to search passengers based on their ethnic group.	7	Strongly disagree; Strongly agree
Arab_Policy2	Law enforcement officers should pay particular attention to those social groups more heavily involved in crime, even if this means focusing on members of particular ethnic groups.	7	Strongly disagree; Strongly agree
Arab_Policy3	Arab Muslims should not be allowed to work in places where many Americans gather, such as airports.	7	Strongly disagree; Strongly agree
Arab_Policy4	The federal government should limit immigration from mostly Arab Muslim countries due to safety concerns.	7	Strongly disagree; Strongly agree
Arab_Policy5	Muslim students should be allowed to wear traditional garments like the hijab at all times, even in physical education classes or military academies.	7	Strongly disagree; Strongly agree
Disability_Behavior1	I personally would not want to spend much time with a person who has a disability.	7	Strongly disagree; Strongly agree
Disability_Behavior2	How in favor would you be of having a close relative or family	7	Strongly disagree;

	member marry a person with a disability?		Strongly agree
Disability_Behavior3	I would feel nervous if I had to sit alone in a room with a person who has a disability and start a conversation.	7	Strongly disagree; Strongly agree
Disability_Behavior4	I would experience some anxiety if I were in a room full of people with disabilities.	7	Strongly disagree; Strongly agree
Disability_Behavior5	If I were at a party, I would have no problem starting a conversation with a person who had a disability.	7	Strongly disagree; Strongly agree
Disability_Belief1	It is almost impossible for people with disabilities to lead a normal life.	7	Strongly disagree; Strongly agree
Disability_Belief2	Employees with disabilities cannot be as successful as other employees.	7	Strongly disagree; Strongly agree
Disability_Belief3	Disabled people usually do not make much of a contribution to society.	7	Strongly disagree; Strongly agree
Disability_Belief4	Most people with disabilities expect special treatment.	7	Strongly disagree; Strongly agree
Disability_Belief5	The worst thing that could happen to a person would be for him or her to become disabled.	7	Strongly disagree; Strongly agree
Disability_Contact1	I have a family member with a disability.	7	Strongly disagree; Strongly agree
Disability_Contact2	I have a friend or close acquaintance with a disability.	7	Strongly disagree; Strongly agree
Disability_Contact3	How often have you had brief conversations with persons who have a disability?	5	Never; Very often
Disability_Contact4	How often have people with physical disabilities discussed their lives or problems with you?		Never; Very often
Disability_Contact5	How often have you tried to help people with disabilities with their problems?		Never; Very often
Disability_Motivation1	I am personally motivated by my beliefs to be non-prejudiced toward people with disabilities.	7	Strongly disagree; Strongly agree
Disability_Motivation2	Because of my personal values, I believe that using stereotypes about people with disabilities is wrong.	7	Strongly disagree; Strongly agree
Disability_Motivation3	I attempt to act in nonprejudiced ways towards people with disabilities because it is personally important to me.	7	Strongly disagree; Strongly agree
Disability_Motivation4	According to my personal values, using stereotypes about people with disabilities is OK.	7	Strongly disagree; Strongly agree
Disability_Motivation5	Being nonprejudiced toward people with disabilities is important to my self-concept.	7	Strongly disagree; Strongly agree
Disability_Policy1	I support the Americans with Disabilities Act.	7	Strongly disagree;

Disability_Policy2	Individual companies should have the right to determine whom to hire based on whether a person has a disability.	7	Strongly agree Strongly disagree;
Disability_Policy3	It would be best for people with disabilities to live and work in special communities.	7	Strongly disagree; Strongly agree
Disability_Policy4	I support adding more handicapped parking spaces in busy areas, even if it means fewer spaces for people without a disability.	7	Strongly disagree; Strongly agree
Disability_Policy5	The driving test given to a person with disabilities should be more severe than the one given to a person without disabilities.	7	Strongly disagree; Strongly agree
GenderCareer_Behavior1	In your perfect world, how much of the caregiving duties would you perform?	7	None; All of it
GenderCareer_Behavior2	I would not mind if a suitably qualified woman was appointed as my boss.	7	Strongly disagree; Strongly agree
GenderCareer_Behavior3	I would feel uncomfortable if asked to work for female boss.	7	Strongly disagree; Strongly agree
GenderCareer_Behavior4	I would be bothered if the current gap in pay for female versus male employees did not shrink in the next 10-20 years.	7	Strongly disagree; Strongly agree
GenderCareer_Behavior5	I would be embarrassed if I mistook a female executive for a secretary when visiting a new workplace.	7	Strongly disagree; Strongly agree
GenderCareer_Belief1	On average, men and women differ in their willingness to spend time away from their families.	7	Strongly disagree; Strongly agree
GenderCareer_Belief2	On average, men and women differ in their willingness to devote the time required by 'high-powered' positions.	7	Strongly disagree; Strongly agree
GenderCareer_Belief3	Under modern economic conditions with women being active outside the home, men should share in household tasks such as washing dishes and doing the laundry.	7	Strongly disagree; Strongly agree
GenderCareer_Belief4	Women should be concerned with their duties of childbearing and house tending rather than with desires for professional or business careers.	7	Strongly disagree; Strongly agree
GenderCareer_Belief5	Men should be willing to sacrifice their own well-being in order to provide financially for the women in their lives.	7	Strongly disagree; Strongly agree
GenderCareer_Contact1	I have friendly interactions with female professionals on a regular basis.	7	Strongly disagree; Strongly agree
GenderCareer_Contact2	How often have you had brief conversations with female professionals?	5	Never; Very often
GenderCareer_Contact3	I interact with 'stay at home dads' on a regular basis	7	Strongly disagree; Strongly agree
GenderCareer_Contact4	How often have you had brief conversations with 'stay at home dads'?	5	Never; Very often

GenderCareer_Contact5	I had a role model in my childhood who was a female professional.	7	Strongly disagree; Strongly agree
GenderCareer_Motivation1	I am personally motivated by my beliefs to be nonprejudiced toward women.	7	Strongly disagree; Strongly agree
GenderCareer_Motivation2	Because of my personal values, I believe that using stereotypes about women is wrong.	7	Strongly disagree; Strongly agree
GenderCareer_Motivation3	I attempt to act in nonprejudiced ways towards women because it is personally important to me.	7	Strongly disagree; Strongly agree
GenderCareer_Motivation4	According to my personal values, using stereotypes about women is OK.	7	Strongly disagree; Strongly agree
GenderCareer_Motivation5	Being nonprejudiced toward women is important to my self-concept.	7	Strongly disagree; Strongly agree
GenderCareer_Policy1	The federal government should take decisive steps to override the injustices women have faced in employment discrimination.	7	Strongly disagree; Strongly agree
GenderCareer_Policy2	In order to reduce differences in wages between men and women, it should be illegal for employees to ask about prior salary information.	7	Strongly disagree; Strongly agree
GenderCareer_Policy3	There should be a strict merit system in job appointment and promotion without regard to gender.	7	Strongly disagree; Strongly agree
GenderCareer_Policy4	Sometimes female applicants should be given special consideration in hiring.	7	Strongly disagree; Strongly agree
GenderCareer_Policy5	Companies should face serious fines if they are found to have significant differences in salaries paid to male versus female employees of the same rank and experience.	7	Strongly disagree; Strongly agree
GenderScience_Behavior1	In a medical emergency, I would feel nervous that a female doctor could not give the same quality of treatment as a male doctor.	7	Strongly disagree; Strongly agree
GenderScience_Behavior2	I would be embarrassed if I mistook a female doctor for a nurse when visiting a new hospital.	7	Strongly disagree; Strongly agree
GenderScience_Behavior3	I would be more hesitant to suggest to a woman that she enter a scientific career than I would be to a man.	7	Strongly disagree; Strongly agree
GenderScience_Behavior4	I would be bothered if the percentage of women working in scientific careers did not increase in the next 10-20 years.	7	Strongly disagree; Strongly agree
GenderScience_Behavior5	I would be upset if I heard a teacher argue that men are more naturally gifted at scientific reasoning than women.	7	Strongly disagree; Strongly agree
GenderScience_Belief1	Directly or indirectly, boys and girls tend to receive different levels of encouragement for developing scientific interest.	7	Strongly disagree; Strongly agree
GenderScience_Belief2	On average, men and women differ naturally in their scientific interest.	7	Strongly disagree; Strongly agree
GenderScience_Belief3	On average, men and women differ naturally in their capacity for	7	Strongly disagree;

GenderScience_Belief4	scientific reasoning. Suppose that ten 9th-grade boys were picked at random from a typical U.S. high school. How many would you predict will complete a calculus course before finishing high school?	10	Strongly agree 1;10
GenderScience_Belief5	Suppose that ten 9th-grade girls were picked at random from a typical U.S. high school. How many would you predict will complete a calculus course before finishing high school?	10	1;10
GenderScience_Contact1	I interact with female scientists on a regular basis.	7	Strongly disagree; Strongly agree
GenderScience_Contact2	I have friendly interactions with female scientists on a regular basis.	7	Strongly disagree; Strongly agree
GenderScience_Contact3	I have a friend or close acquaintance who is a female scientist.	7	Strongly disagree; Strongly agree
GenderScience_Contact4	I had a role model in my childhood who was a female scientist.	7	Strongly disagree; Strongly agree
GenderScience_Contact5	How often have you had brief conversations with female scientists?	5	Never; Very often
GenderScience_Motivation1	I am personally motivated by my beliefs to be nonprejudiced toward women.	7	Strongly disagree; Strongly agree
GenderScience_Motivation2	Because of my personal values, I believe that using stereotypes about women is wrong	7	Strongly disagree; Strongly agree
GenderScience_Motivation3	I attempt to act in nonprejudiced ways towards women because it is personally important to me.	7	Strongly disagree; Strongly agree
GenderScience_Motivation4	According to my personal values, using stereotypes about women is OK.	7	Strongly disagree; Strongly agree
GenderScience_Motivation5	Being nonprejudiced toward women is important to my self-concept.	7	Strongly disagree; Strongly agree
GenderScience_Policy1	Colleges should devote extra funds for scholarships that help female students that are interested in science.	7	Strongly disagree; Strongly agree
GenderScience_Policy2	To increase the representation of women in science, colleges should set target quotas for the number of women enrolled in science courses.	7	Strongly disagree; Strongly agree
GenderScience_Policy3	Sometimes female applicants should be given special consideration in hiring for jobs in science-related fields.	7	Strongly disagree; Strongly agree
GenderScience_Policy4	New television shows or books for children should be required to portray men and women as equally likely to have science-related professions (doctors, engineers, etc.).	7	Strongly disagree; Strongly agree
GenderScience_Policy5	In order to reduce gender discrimination, companies involved in scientific research should be required to increase their percentage of female managers and executives.	7	Strongly disagree; Strongly agree

Race_Behavior1	How in favor would you be of living in a neighborhood where half of your neighbors were Black people?	5	Very much in favor; Very much opposed
Race_Behavior2	How in favor would you be of having a close relative or family member marry a Black person?	5	Very much in favor; Very much opposed
Race_Behavior3	I would feel nervous if I had to sit alone in a room with a Black person and start a conversation.	7	Strongly disagree; Strongly agree
Race_Behavior4	I would be willing to have a sexual relationship with a Black person.	7	Strongly disagree; Strongly agree
Race_Behavior5	I would not mind if a suitably qualified Black person was appointed as my boss.	7	Strongly disagree; Strongly agree
Race_Belief1	Where would you rate Black people on this scale?	7	Very lazy; Very hardworking
Race_Belief2	Black people are demanding too much too fast in their push for equal rights.	7	Strongly disagree; Strongly agree
Race_Belief3	Black people should take the jobs that are available and then work their way up to better jobs.	7	Strongly disagree; Strongly agree
Race_Belief4	Discrimination against Black people is no longer a problem.	7	Strongly disagree; Strongly agree
Race_Belief5	Most Black people who receive money from welfare programs could get along without it if they tried.	7	Strongly disagree; Strongly agree
Race_Contact1	I had a strong childhood friendship with a Black person.	7	Strongly disagree; Strongly agree
Race_Contact2	Have you ever had (or now have) a romantic relationship with a Black person?	2	Yes, No
Race_Contact3	I interact with Black people on a regular basis.	7	Strongly disagree; Strongly agree
Race_Contact4	I have friendly interactions with Black people on a regular basis.	7	Strongly disagree; Strongly agree
Race_Contact5	How often have you had brief conversations with Black people?	5	Never; Very often
Race_Motivation1	I am personally motivated by my beliefs to be nonprejudiced toward Black people.	7	Strongly disagree; Strongly agree
Race_Motivation2	Because of my personal values, I believe that using stereotypes about Black people is wrong.	7	Strongly disagree; Strongly agree
Race_Motivation3	I attempt to act in nonprejudiced ways towards Black people because it is personally important to me.	7	Strongly disagree; Strongly agree
Race_Motivation4	According to my personal values, using stereotypes about Black people is OK.	7	Strongly disagree; Strongly agree
Race_Motivation5	Being nonprejudiced toward Black people is important to my self-	7	Strongly disagree;

	concept.		Strongly agree
Race_Policy1	The federal government should take decisive steps to override the injustices Black people suffer at the hands of local authorities.	7	Strongly disagree; Strongly agree
Race_Policy2	Law enforcement officers should pay particular attention to those social groups more heavily involved in crime, even if this means focusing on members of particular ethnic groups.	7	Strongly disagree; Strongly agree
Race_Policy3	Law enforcement officers should act as if members of all racial groups are equally likely to commit crimes.	7	Strongly disagree; Strongly agree
Race_Policy4	Sometimes Black job seekers should be given special consideration in hiring.	7	Strongly disagree; Strongly agree
Race_Policy5	I favor open housing laws that allow more racial integration of neighborhoods.	7	Strongly disagree; Strongly agree
Religion_Behavior1	How in favor would you be of having a close relative or family member marry a Jewish person?	5	Very much in favor; Very much opposed
Religion_Behavior2	How in favor would you be of living in a neighborhood where half of your neighbors were Jewish?	5	Very much in favor; Very much opposed
Religion_Behavior3	I would not mind if a suitably qualified Jewish person was appointed as my boss.	7	Strongly disagree; Strongly agree
Religion_Behavior4	I would experience some anxiety if I were in a room full of Jewish people.	7	Strongly disagree; Strongly agree
Religion_Behavior5	I would be willing to have a sexual relationship with a Jewish person.	7	Strongly disagree; Strongly agree
Religion_Belief1	Jewish people should not have as much control and power in money matters as they do now.	7	Strongly disagree; Strongly agree
Religion_Belief2	Jewish people should not have as much control and power in political matters as they do now.	7	Strongly disagree; Strongly agree
Religion_Belief3	On average, Jewish people are more materialistic than non-Jewish people.	7	Strongly disagree; Strongly agree
Religion_Belief4	Jewish people have jobs that other people should have.	7	Strongly disagree; Strongly agree
Religion_Belief5	Discrimination against Jewish people is no longer a problem.	7	Strongly disagree; Strongly agree
Religion_Contact1	I have a friend or close acquaintance that is Jewish.	7	Strongly disagree; Strongly agree
Religion_Contact2	I interact with Jewish people on a regular basis.	7	Strongly disagree; Strongly agree
Religion_Contact3	I have friendly interactions with Jewish people on a regular basis.	7	Strongly disagree; Strongly agree

Religion_Contact4	I had a strong childhood friendship with a Jewish person.	7	Strongly disagree; Strongly agree
Religion_Contact5	Have you ever had (or now have) a romantic relationship with a Jewish person?	2	Yes, No
Religion_Motivation1	I am personally motivated by my beliefs to be non-prejudiced toward Jewish people.	7	Strongly disagree; Strongly agree
Religion_Motivation2	Because of my personal values, I believe that using stereotypes about Judaism is wrong.	7	Strongly disagree; Strongly agree
Religion_Motivation3	I attempt to act in nonprejudiced ways towards Jewish people because it is personally important to me.	7	Strongly disagree; Strongly agree
Religion_Motivation4	According to my personal values, using stereotypes about Jewish people is OK.	7	Strongly disagree; Strongly agree
Religion_Motivation5	Being nonprejudiced toward Jewish people is important to my self-concept.	7	Strongly disagree; Strongly agree
Religion_Policy1	Jewish doctors and nurses should be required to work on Christmas and Easter to accommodate their Christian colleagues.	7	Strongly disagree; Strongly agree
Religion_Policy2	Jewish employees should be allowed to take extra days off from work to observe their own religious holidays.	7	Strongly disagree; Strongly agree
Religion_Policy3	The United States government should create a federal holiday to honor the victims of the Holocaust.	7	Strongly disagree; Strongly agree
Religion_Policy4	It is acceptable for colleges to set a limit on the maximum number of Jewish students accepted in order to make a more diverse student body.	7	Strongly disagree; Strongly agree
Religion_Policy5	Even if there are only a small number of Jewish students wanting to eat kosher meals, all college dining halls should be required to offer kosher meal options.	7	Strongly disagree; Strongly agree
Sexuality_Behavior1	I would feel nervous if I had to sit alone in a room with a gay person and start a conversation.	7	Strongly disagree; Strongly agree
Sexuality_Behavior2	How in favor would you be of living in a neighborhood where many of your neighbors were gay?	5	Very much in favor; Very much opposed
Sexuality_Behavior3	I personally would not want to spend much time with someone who was gay.	7	Strongly disagree; Strongly agree
Sexuality_Behavior4	I would experience some anxiety if I were in a room full of gay people.	7	Strongly disagree; Strongly agree
Sexuality_Behavior5	I would not mind if a suitably qualified gay person was appointed as my boss.	7	Strongly disagree; Strongly agree
Sexuality_Belief1	Discrimination against gay people is no longer a problem	7	Strongly disagree; Strongly agree

Sexuality_Belief2	Gay people are demanding too much too fast in their push for equal rights.	7	Strongly disagree; Strongly agree
Sexuality_Belief3	Over the past few years, the government and news media have shown more respect for gay people than they deserve.	7	Strongly disagree; Strongly agree
Sexuality_Belief4	Being gay is a choice people make	7	Strongly disagree; Strongly agree
Sexuality_Belief5	The love between two gay people is quite different than the love between two straight people.	7	Strongly disagree; Strongly agree
Sexuality_Contact1	I interact with gay people on a regular basis.	7	Strongly disagree; Strongly agree
Sexuality_Contact2	I have friendly interactions with gay people on a regular basis.	7	Strongly disagree; Strongly agree
Sexuality_Contact3	Have you ever met a gay person?	2	Yes, No
Sexuality_Contact4	I have a friend or close acquaintance who is gay.	7	Strongly disagree; Strongly agree
Sexuality_Contact5	How often have you had brief conversations with gay people?	5	Never; Very often
Sexuality_Motivation1	I am personally motivated by my beliefs to be nonprejudiced toward gay people.	7	Strongly disagree; Strongly agree
Sexuality_Motivation2	Because of my personal values, I believe that using stereotypes about gay people is wrong.	7	Strongly disagree; Strongly agree
Sexuality_Motivation3	I attempt to act in nonprejudiced ways towards gay people because it is personally important to me.	7	Strongly disagree; Strongly agree
Sexuality_Motivation4	According to my personal values, using stereotypes about gay people is OK.	7	Strongly disagree; Strongly agree
Sexuality_Motivation5	Being nonprejudiced toward gay people is important to my self-concept.	7	Strongly disagree; Strongly agree
Sexuality_Policy1	Marriages between gay people should be recognized by the law as valid and given the same rights as traditional marriages.	7	Strongly disagree; Strongly agree
Sexuality_Policy2	Homosexual relations between consenting adults should be legal.	7	Strongly disagree; Strongly agree
Sexuality_Policy3	It should be legal for same-sex partners to adopt a child.	7	Strongly disagree; Strongly agree
Sexuality_Policy4	It should be legal for business owners to refuse to serve same-sex partners.	7	Strongly disagree; Strongly agree
Sexuality_Policy5	Individual companies should have the right to determine whom to hire based on an employee's sexual orientation.	7	Strongly disagree; Strongly agree
Weapons_Behavior1	If I were driving through the neighborhoods in a city, I would you go out of my way to avoid going through a Black section.	7	Strongly disagree; Strongly agree

Weapons_Behavior2	To what extent would you feel less safe if you lived in a neighborhood where half of the residents were Black?	5	Not at all; Extremely
Weapons_Behavior3	I would feel nervous if I had to sit alone in a room with a Black person and start a conversation.	7	Strongly disagree; Strongly agree
Weapons_Behavior4	If a Black person with my same income and education moved into my block, I would feel less safe.	7	Strongly disagree; Strongly agree
Weapons_Behavior5	I would feel unsafe if I were in a room full of Black people.	7	Strongly disagree; Strongly agree
Weapons_Belief1	It is wrong to avoid someone because members of their racial group are more likely to commit violent crimes.	7	Strongly disagree; Strongly agree
Weapons_Belief2	If your personal safety is at stake, it's sensible to avoid members of ethnic groups known to behave more aggressively.	7	Strongly disagree; Strongly agree
Weapons_Belief3	It is likely that Black people will bring violence to neighborhoods when they move in.	7	Strongly disagree; Strongly agree
Weapons_Belief4	Do Black people tend to be violence prone or do they tend not to be prone to violence?	7	Very violence prone; Very not violence prone
Weapons_Belief5	When the only thing you know about someone is their race, it makes sense to use your knowledge of their racial group to form an impression of them.	7	Strongly disagree; Strongly agree
Weapons_Contact1	I had a strong childhood friendship with a Black person.	7	Strongly disagree; Strongly agree
Weapons_Contact2	Have you ever had (or now have) a romantic relationship with a Black person?	2	Yes; No
Weapons_Contact3	I interact with Black people on a regular basis.	7	Strongly disagree; Strongly agree
Weapons_Contact4	I have friendly interactions with Black people on a regular basis.	7	Strongly disagree; Strongly agree
Weapons_Contact5	How often have you had brief conversations with Black people?	5	Never; Very often
Weapons_Motivation1	I am personally motivated by my beliefs to be nonprejudiced toward Black people.	7	Strongly disagree; Strongly agree
Weapons_Motivation2	Because of my personal values, I believe that using stereotypes about Black people is wrong.	7	Strongly disagree; Strongly agree
Weapons_Motivation3	I attempt to act in nonprejudiced ways towards Black people because it is personally important to me.	7	Strongly disagree; Strongly agree
Weapons_Motivation4	According to my personal values, using stereotypes about Black people is OK.	7	Strongly disagree; Strongly agree
Weapons_Motivation5	Being nonprejudiced toward Black people is important to my self-	7	Strongly disagree;

	concept.		Strongly agree
Weapons_Policy1	Law enforcement officers should pay particular attention to Black people, as they are more heavily involved in crime.	7	Strongly disagree; Strongly agree
Weapons_Policy2	I'd be happier with local law enforcement if they focused on securing predominantly Black neighborhoods, as those are more heavily involved in crime.	7	Strongly disagree; Strongly agree
Weapons_Policy3	Law enforcement officers should act as if Black and White people are equally likely to commit crimes.	7	Strongly disagree; Strongly agree
Weapons_Policy4	It is reasonable for restaurants to refuse delivery service to areas inhabited predominantly by Black people, as such neighborhoods may be more dangerous.	7	Strongly disagree; Strongly agree
Weapons_Policy5	Police officers are justified to 'stop and frisk' Black suspects at a higher rate if they perceive them to be a safety risk.	7	Strongly disagree; Strongly agree
Weight_Behavior1	How easy or difficult would it be for you to lose 5 to 10 pounds if you wanted to?	6	Very easy; Very difficult
Weight_Behavior2	I would be willing to have a sexual relationship with an obese person.	7	Strongly disagree; Strongly agree
Weight_Behavior3	I would feel nervous if I had to sit alone in a room with an obese person and start a conversation.	7	Strongly disagree; Strongly agree
Weight_Behavior4	How in favor would you be of having a close relative or family member marry an obese person?	5	Very much in favor; Very much opposed
Weight_Behavior5	I would not mind if a suitably qualified obese person was appointed as my boss.	7	Strongly disagree; Strongly agree
Weight_Belief1	How much control do people have over their weight?	5	Complete control; No control
Weight_Belief2	People who are overweight lack the willpower necessary to control their weight.	7	Strongly disagree; Strongly agree
Weight_Belief3	One's weight is, to a great extent, controlled by fate.	7	Strongly disagree; Strongly agree
Weight_Belief4	A thin body is largely a result of genetics.	7	Strongly disagree; Strongly agree
Weight_Belief5	Having a slim and fit body has very little to do with luck.	7	Strongly disagree; Strongly agree
Weight_Contact1	I have a close family member that is obese	7	Strongly disagree; Strongly agree
Weight_Contact2	I have a friend or close acquaintance that is obese.	7	Strongly disagree; Strongly agree
Weight_Contact3	I interact with obese people on a regular basis.	7	Strongly disagree;

Weight_Contact4	I have friendly interactions with obese people on a regular basis.	7	Strongly agree Strongly disagree;
Weight_Contact5	I had a strong childhood friendship with a person who was obese.	7	Strongly agree Strongly disagree;
Weight_Motivation1	I am personally motivated by my beliefs to be non-prejudiced toward obese people.	7	Strongly agree Strongly disagree;
Weight_Motivation2	Because of my personal values, I believe that using stereotypes about obese people is wrong.	7	Strongly agree Strongly disagree;
Weight_Motivation3	I attempt to act in nonprejudiced ways towards obese people because it is personally important to me.	7	Strongly agree Strongly disagree;
Weight_Motivation4	According to my personal values, using stereotypes about obese people is OK.	7	Strongly agree Strongly disagree;
Weight_Motivation5	Being nonprejudiced toward obese people is important to my self-concept.	7	Strongly agree Strongly disagree;
Weight_Policy1	My country should include body weight in our civil rights law in order to protect people from discrimination based on their body weight.	7	Strongly agree Strongly disagree;
Weight_Policy2	Obesity should be considered a disability so that people will be protected from weight discrimination in the workplace.	7	Strongly agree Strongly disagree;
Weight_Policy3	Individual companies should have the right to determine whom to hire based on an employee's personal body weight.	7	Strongly agree Strongly disagree;
Weight_Policy4	It should be illegal for an employer to refuse to hire a qualified person because of his or her body weight.	7	Strongly agree Strongly disagree;
Weight_Policy5	Travel companies should have the right to charge obese passengers more due to the added fuel costs needed to transport them.	7	Strongly agree Strongly disagree;

Table 4

Correlations Between Outcomes and Implicit & Explicit Constructs

IAT	Outcome	df	Implicit Correlations			df	Explicit Correlations		
			<i>r</i>	95% CI	<i>p</i>		<i>r</i>	95% CI	<i>p</i>
Age	belief_1	1496	.04	[-.01, .09]	.143	1511	.07	[-.02, .12]	.007**
Age	belief_2	1492	.04	[-.01, .09]	.102	1506	.07	[-.02, .12]	.006**
Age	belief_3	1501	.06	[-.01, .11]	.019*	1512	.18	[-.13, .23]	<.001***
Age	belief_4	1500	.07	[-.02, .12]	.004**	1515	.14	[-.10, .19]	<.001***
Age	belief_5	1498	.04	[-.01, .09]	.16	1511	.12	[-.07, .17]	<.001***
Age	contact_1	1493	-.11	[-.16, -.06]	<.001***	1506	-.19	[-.24, -.14]	<.001***
Age	contact_2	1501	-.06	[-.11, -.01]	.03*	1514	-.23	[-.28, -.18]	<.001***
Age	contact_3	1496	-.07	[-.12, -.02]	.006**	1509	-.22	[-.27, -.17]	<.001***
Age	contact_4	1500	-.08	[-.13, -.03]	.003**	1512	-.21	[-.25, -.16]	<.001***
Age	contact_5	1499	-.04	[-.09, .01]	.128	1511	-.13	[-.18, -.08]	<.001***
Age	motivation_1	1487	-.01	[-.06, .04]	.643	1501	-.13	[-.18, -.08]	<.001***
Age	motivation_2	1497	-.03	[-.08, .02]	.246	1510	-.11	[-.16, -.06]	<.001***
Age	motivation_3	1495	-.06	[-.11, -.01]	.019*	1508	-.14	[-.19, -.09]	<.001***
Age	motivation_4	1492	-.07	[-.12, -.02]	.005**	1505	-.07	[-.12, -.02]	.005**
Age	motivation_5	1495	-.03	[-.08, .02]	.222	1506	-.15	[-.20, -.10]	<.001***
Age	policy_1	1496	-.05	[-.10, .00]	.058	1511	-.14	[-.19, -.09]	<.001***
Age	policy_2	1495	-.09	[-.14, -.04]	<.001***	1508	-.12	[-.16, -.07]	<.001***
Age	policy_3	1495	-.10	[-.15, -.05]	<.001***	1508	-.07	[-.12, -.02]	.007**
Age	policy_4	1491	-.07	[-.12, -.01]	.011*	1505	-.03	[-.08, .02]	.307
Age	policy_5	1494	-.06	[-.11, -.01]	.031*	1508	-.08	[-.13, -.03]	.003**
Age	predict_1	1475	.12	[-.07, .17]	<.001***	1489	.09	[-.04, .14]	<.001***
Age	predict_2	1480	.01	[-.04, .06]	.711	1493	.02	[-.03, .07]	.494
Age	predict_3	1502	.13	[-.08, .18]	<.001***	1515	.32	[-.28, .37]	<.001***
Age	predict_4	1502	.09	[-.04, .14]	<.001***	1513	.22	[-.17, .27]	<.001***
Age	predict_5	1497	.06	[-.01, .11]	.019*	1507	.14	[-.09, .19]	<.001***
Arab	belief_1	1477	.11	[-.06, .16]	<.001***	1481	.25	[-.20, .29]	<.001***
Arab	belief_2	1480	.16	[-.11, .21]	<.001***	1483	.34	[-.29, .38]	<.001***
Arab	belief_3	1468	.16	[-.11, .21]	<.001***	1473	.31	[-.26, .35]	<.001***
Arab	belief_4	1466	.04	[-.01, .09]	.134	1471	.08	[-.02, .13]	.004**
Arab	belief_5	1481	.13	[-.08, .18]	<.001***	1487	.33	[-.29, .38]	<.001***
Arab	contact_1	1478	-.09	[-.14, -.04]	<.001***	1481	-.21	[-.26, -.16]	<.001***
Arab	contact_2	1480	-.06	[-.11, -.01]	.027*	1482	-.25	[-.29, -.20]	<.001***
Arab	contact_3	1477	-.06	[-.11, -.01]	.02*	1481	-.29	[-.33, -.24]	<.001***
Arab	contact_4	1488	-.07	[-.12, -.02]	.005**	1490	-.21	[-.26, -.16]	<.001***
Arab	contact_5	1480	-.11	[-.16, -.06]	<.001***	1482	-.20	[-.24, -.15]	<.001***
Arab	motivation_1	1474	-.11	[-.16, -.06]	<.001***	1476	-.28	[-.33, -.23]	<.001***
Arab	motivation_2	1479	-.10	[-.15, -.05]	<.001***	1483	-.27	[-.32, -.22]	<.001***
Arab	motivation_3	1475	-.06	[-.11, -.01]	.022*	1481	-.21	[-.25, -.16]	<.001***
Arab	motivation_4	1481	-.12	[-.17, -.06]	<.001***	1483	-.37	[-.41, -.32]	<.001***
Arab	motivation_5	1480	-.09	[-.14, -.04]	<.001***	1484	-.25	[-.30, -.21]	<.001***
Arab	policy_1	1487	-.06	[-.11, -.01]	.015*	1490	-.19	[-.24, -.14]	<.001***
Arab	policy_2	1485	-.10	[-.15, -.05]	<.001***	1489	-.27	[-.32, -.22]	<.001***
Arab	policy_3	1488	-.08	[-.13, -.03]	.001**	1494	-.23	[-.28, -.18]	<.001***
Arab	policy_4	1482	-.12	[-.17, -.06]	<.001***	1487	-.37	[-.41, -.32]	<.001***

Arab	policy_5	1484	-.15	[-.20, -.10]	<.001***	1488	-.24	[-.29, -.19]	<.001***
Arab	predict_1	1487	.15	[.10, .20]	<.001***	1491	.38	[.34, .42]	<.001***
Arab	predict_2	1488	.16	[.11, .21]	<.001***	1492	.44	[.40, .48]	<.001***
Arab	predict_3	1489	.1	[.05, .15]	<.001***	1493	.32	[.27, .36]	<.001***
Arab	predict_4	1483	.15	[.10, .20]	<.001***	1488	.41	[.37, .45]	<.001***
Arab	predict_5	1454	.16	[.11, .21]	<.001***	1459	.37	[.32, .41]	<.001***
Disability	belief_1	1439	.08	[.03, .13]	.002**	1431	.22	[.18, .27]	<.001***
Disability	belief_2	1435	.05	[.00, .11]	.038*	1425	.27	[.22, .32]	<.001***
Disability	belief_3	1430	.06	[.01, .11]	.022*	1423	.31	[.27, .36]	<.001***
Disability	belief_4	1434	.1	[.05, .15]	<.001***	1429	.23	[.18, .28]	<.001***
Disability	belief_5	1437	.09	[.03, .14]	.001**	1430	.23	[.18, .27]	<.001***
Disability	contact_1	1430	-.08	[-.13, -.03]	.003**	1420	-.19	[-.24, -.14]	<.001***
Disability	contact_2	1427	-.05	[-.10, .00]	.076	1419	-.21	[-.26, -.16]	<.001***
Disability	contact_3	1444	-.04	[-.10, .01]	.093	1434	-.23	[-.28, -.18]	<.001***
Disability	contact_4	1442	-.03	[-.09, .02]	.193	1435	-.15	[-.20, -.10]	<.001***
Disability	contact_5	1439	-.01	[-.06, .05]	.843	1431	-.18	[-.23, -.13]	<.001***
Disability	motivation_1	1430	-.07	[-.12, -.02]	.01**	1424	-.21	[-.26, -.16]	<.001***
Disability	motivation_2	1440	-.05	[-.10, .00]	.065	1430	-.19	[-.24, -.14]	<.001***
Disability	motivation_3	1426	-.06	[-.11, -.01]	.027*	1419	-.17	[-.22, -.12]	<.001***
Disability	motivation_4	1440	-.09	[-.14, -.04]	<.001***	1431	-.22	[-.27, -.17]	<.001***
Disability	motivation_5	1432	-.06	[-.12, -.01]	.015*	1422	-.19	[-.24, -.14]	<.001***
Disability	policy_1	1395	-.02	[-.07, .03]	.513	1389	-.09	[-.14, -.04]	.001**
Disability	policy_2	1429	-.09	[-.14, -.04]	<.001***	1423	-.21	[-.26, -.16]	<.001***
Disability	policy_3	1436	-.05	[-.10, -.00]	.049*	1429	-.21	[-.26, -.16]	<.001***
Disability	policy_4	1436	-.10	[-.15, -.05]	<.001***	1428	-.21	[-.26, -.16]	<.001***
Disability	policy_5	1429	-.05	[-.10, .00]	.059	1420	-.13	[-.18, -.08]	<.001***
Disability	predict_1	1433	.08	[.03, .13]	.003**	1428	.42	[.38, .46]	<.001***
Disability	predict_2	1436	.08	[.03, .13]	.003**	1434	.26	[.21, .30]	<.001***
Disability	predict_3	1436	.04	[-.01, .09]	.139	1430	.32	[.27, .37]	<.001***
Disability	predict_4	1435	.06	[.01, .11]	.019*	1431	.35	[.30, .39]	<.001***
Disability	predict_5	1439	.06	[.01, .11]	.023*	1430	.27	[.22, .32]	<.001***
GenderCareer	belief_1	1459	.13	[.08, .18]	<.001***	1453	.28	[.24, .33]	<.001***
GenderCareer	belief_2	1447	.11	[.06, .16]	<.001***	1448	.24	[.19, .29]	<.001***
GenderCareer	belief_3	1463	.01	[-.04, .06]	.772	1455	.09	[.04, .14]	<.001***
GenderCareer	belief_4	1460	.02	[-.03, .07]	.506	1456	.15	[.10, .20]	<.001***
GenderCareer	belief_5	1454	.04	[-.01, .09]	.128	1449	.13	[.08, .18]	<.001***
GenderCareer	contact_1	1458	-.02	[-.07, .03]	.42	1455	-.11	[-.16, -.06]	<.001***
GenderCareer	contact_2	1467	-.05	[-.10, .00]	.053	1460	-.08	[-.13, -.03]	.003**
GenderCareer	contact_3	1462	-.08	[-.13, -.03]	.003**	1456	-.24	[-.28, -.19]	<.001***
GenderCareer	contact_4	1460	-.09	[-.14, -.04]	<.001***	1455	-.14	[-.19, -.09]	<.001***
GenderCareer	contact_5	1465	-.03	[-.09, .02]	.191	1459	-.17	[-.22, -.12]	<.001***
GenderCareer	motivation_1	1458	-.04	[-.09, .01]	.142	1456	-.09	[-.14, -.04]	<.001***
GenderCareer	motivation_2	1460	-.04	[-.10, .01]	.09	1456	-.18	[-.23, -.13]	<.001***
GenderCareer	motivation_3	1454	-.02	[-.07, .03]	.414	1454	-.14	[-.19, -.09]	<.001***
GenderCareer	motivation_4	1467	-.00	[-.05, .05]	.962	1461	-.20	[-.25, -.15]	<.001***
GenderCareer	motivation_5	1458	-.02	[-.07, .03]	.441	1455	-.10	[-.15, -.05]	<.001***
GenderCareer	policy_1	1454	-.00	[-.06, .05]	.862	1451	-.11	[-.16, -.06]	<.001***
GenderCareer	policy_2	1445	-.05	[-.10, .00]	.063	1447	-.04	[-.09, .01]	.132
GenderCareer	policy_3	1459	.00	[-.05, .05]	.994	1457	.02	[-.03, .07]	.532

GenderCareer	policy_4	1452	-.03	[-.08, .02]	.303	1448	-.01	[-.06, .04]	.73
GenderCareer	policy_5	1464	-.07	[-.12, -.01]	.012*	1461	-.08	[-.13, -.03]	.002**
GenderCareer	predict_1	1466	-.00	[-.06, .05]	.857	1459	.04	[-.02, .09]	.175
GenderCareer	predict_2	1464	.07	[.01, .12]	.012*	1457	.10	[.05, .15]	<.001***
GenderCareer	predict_3	1468	.05	[-.01, .10]	.082	1462	.08	[.03, .13]	.003**
GenderCareer	predict_4	1456	.01	[-.04, .06]	.671	1456	.10	[.05, .15]	<.001***
GenderCareer	predict_5	1467	.00	[-.05, .05]	.994	1458	-.03	[-.09, .02]	.195
GenderScience	belief_1	1443	-.01	[-.06, .04]	.788	1426	.12	[.07, .17]	<.001***
GenderScience	belief_2	1441	.07	[.02, .12]	.005**	1427	.21	[.16, .26]	<.001***
GenderScience	belief_3	1432	.01	[-.04, .06]	.67	1420	.16	[.11, .21]	<.001***
GenderScience	belief_4	1428	.02	[-.03, .08]	.379	1410	-.02	[-.07, .03]	.51
GenderScience	belief_5	1433	.04	[-.01, .09]	.115	1416	.08	[.03, .13]	.002**
GenderScience	contact_1	1433	-.10	[-.16, -.05]	<.001***	1422	-.17	[-.22, -.12]	<.001***
GenderScience	contact_2	1427	-.08	[-.13, -.03]	.002**	1415	-.17	[-.22, -.12]	<.001***
GenderScience	contact_3	1428	-.07	[-.12, -.02]	.009**	1416	-.17	[-.22, -.12]	<.001***
GenderScience	contact_4	1432	-.11	[-.16, -.06]	<.001***	1419	-.17	[-.22, -.11]	<.001***
GenderScience	contact_5	1435	-.07	[-.12, -.02]	.009**	1423	-.14	[-.19, -.09]	<.001***
GenderScience	motivation_1	1442	-.02	[-.07, .03]	0.5	1428	-.02	[-.07, .04]	.534
GenderScience	motivation_2	1437	-.00	[-.05, .05]	.951	1423	-.06	[-.11, -.01]	.025*
GenderScience	motivation_3	1433	.04	[-.01, .09]	.138	1419	-.00	[-.05, .05]	.991
GenderScience	motivation_4	1440	-.03	[-.08, .02]	.208	1427	-.13	[-.18, -.08]	<.001***
GenderScience	motivation_5	1438	-.00	[-.05, .05]	.909	1427	-.01	[-.06, .05]	.796
GenderScience	policy_1	1439	-.04	[-.09, .01]	.10	1426	.04	[-.01, .09]	.138
GenderScience	policy_2	1436	.02	[-.03, .07]	.465	1420	.00	[-.05, .06]	.864
GenderScience	policy_3	1437	-.02	[-.08, .03]	.373	1423	.01	[-.04, .07]	.611
GenderScience	policy_4	1445	.02	[-.03, .07]	.498	1429	-.03	[-.08, .02]	.27
GenderScience	policy_5	1442	-.07	[-.12, -.02]	.007**	1430	-.01	[-.06, .04]	.647
GenderScience	predict_1	1444	.00	[-.05, .06]	.867	1431	.08	[.03, .13]	.002**
GenderScience	predict_2	1445	.01	[-.04, .06]	.684	1430	.03	[-.03, .08]	.326
GenderScience	predict_3	1438	.02	[-.03, .07]	.392	1425	.15	[.10, .20]	<.001***
GenderScience	predict_4	1438	.01	[-.05, .06]	.813	1426	.00	[-.05, .05]	.937
GenderScience	predict_5	1444	.05	[-.01, .10]	.087	1431	0.1-	[.05, .15]	<.001***
Race	belief_1	1607	.17	[.12, .21]	<.001***	1601	0.32	[.28, .37]	<.001***
Race	belief_2	1652	.19	[.15, .24]	<.001***	1642	0.26	[.22, .31]	<.001***
Race	belief_3	1638	.11	[.06, .16]	<.001***	1627	0.17	[.12, .22]	<.001***
Race	belief_4	1664	.19	[.14, .24]	<.001***	1647	0.23	[.19, .28]	<.001***
Race	belief_5	1631	.13	[.08, .18]	<.001***	1620	0.2	[.16, .25]	<.001***
Race	contact_1	1658	-.15	[-.20, -.11]	<.001***	1641	-.27	[-.31, -.22]	<.001***
Race	contact_2	1660	-.14	[-.19, -.09]	<.001***	1641	-.25	[-.29, -.20]	<.001***
Race	contact_3	1661	-.13	[-.18, -.08]	<.001***	1646	-.22	[-.26, -.17]	<.001***
Race	contact_4	1666	-.10	[-.15, -.05]	<.001***	1648	-.20	[-.25, -.15]	<.001***
Race	contact_5	1664	-.14	[-.19, -.10]	<.001***	1649	-.20	[-.25, -.16]	<.001***
Race	motivation_1	1646	-.06	[-.11, -.01]	.014*	1633	-.20	[-.25, -.15]	<.001***
Race	motivation_2	1657	-.09	[-.14, -.04]	<.001***	1643	-.23	[-.27, -.18]	<.001***
Race	motivation_3	1651	-.01	[-.06, .03]	.579	1638	-.15	[-.20, -.10]	<.001***
Race	motivation_4	1660	-.12	[-.17, -.07]	<.001***	1646	-.24	[-.29, -.20]	<.001***
Race	motivation_5	1649	-.06	[-.11, -.01]	.011*	1637	-.20	[-.25, -.16]	<.001***
Race	policy_1	1639	-.12	[-.17, -.07]	<.001***	1626	-.23	[-.27, -.18]	<.001***
Race	policy_2	1638	-.22	[-.27, -.17]	<.001***	1627	-.28	[-.32, -.23]	<.001***

Race	policy_3	1655	-.07	[-.12, -.02]	.004**	1639	-.13	[-.18, -.08]	<.001***
Race	policy_4	1645	-.13	[-.18, -.08]	<.001***	1633	-.20	[-.24, -.15]	<.001***
Race	policy_5	1633	-.12	[-.17, -.07]	<.001***	1618	-.19	[-.24, -.15]	<.001***
Race	predict_1	1667	.23	[.19, .28]	<.001***	1650	.38	[.34, .42]	<.001***
Race	predict_2	1660	.18	[.13, .22]	<.001***	1647	.30	[.25, .34]	<.001***
Race	predict_3	1660	.07	[.02, .12]	.005**	1643	.16	[.11, .21]	<.001***
Race	predict_4	1630	.15	[.10, .20]	<.001***	1621	.30	[.25, .34]	<.001***
Race	predict_5	1663	.04	[-.01, .08]	.15	1647	.14	[.09, .19]	<.001***
Religion	belief_1	1381	.09	[.04, .14]	<.001***	1373	.12	[.07, .17]	<.001***
Religion	belief_2	1384	.07	[.02, .13]	.006**	1377	.11	[.05, .16]	<.001***
Religion	belief_3	1380	.06	[.01, .11]	.027*	1373	.10	[.05, .15]	<.001***
Religion	belief_4	1380	.05	[-.00, .10]	.058	1375	.09	[.04, .15]	<.001***
Religion	belief_5	1388	.07	[.02, .13]	.005**	1382	.08	[.03, .13]	.003**
Religion	contact_1	1386	-.15	[-.20, -.10]	<.001***	1377	-.21	[-.26, -.16]	<.001***
Religion	contact_2	1387	-.11	[-.16, -.06]	<.001***	1382	-.19	[-.24, -.14]	<.001***
Religion	contact_3	1384	-.13	[-.18, -.08]	<.001***	1377	-.21	[-.26, -.16]	<.001***
Religion	contact_4	1379	-.07	[-.12, -.01]	.014*	1372	-.13	[-.18, -.08]	<.001***
Religion	contact_5	1388	-.09	[-.14, -.04]	<.001***	1377	-.14	[-.19, -.09]	<.001***
Religion	motivation_1	1385	-.06	[-.11, -.00]	.038*	1379	-.09	[-.14, -.03]	.001**
Religion	motivation_2	1386	-.07	[-.12, -.02]	.007**	1376	-.03	[-.09, .02]	.210
Religion	motivation_3	1385	-.03	[-.08, .02]	.267	1378	-.03	[-.08, .02]	.237
Religion	motivation_4	1390	-.02	[-.07, .03]	.444	1382	-.06	[-.11, -.01]	.028*
Religion	motivation_5	1385	-.03	[-.09, .02]	.214	1378	-.06	[-.12, -.01]	.017*
Religion	policy_1	1381	-.02	[-.07, .04]	.526	1376	-.06	[-.11, -.01]	.026*
Religion	policy_2	1382	-.08	[-.13, -.02]	.005**	1373	-.06	[-.11, -.00]	.032*
Religion	policy_3	1388	-.11	[-.16, -.06]	<.001***	1378	-.15	[-.20, -.10]	<.001***
Religion	policy_4	1390	-.00	[-.06, .05]	.892	1382	-.07	[-.12, -.02]	.011*
Religion	policy_5	1388	-.05	[-.11, -.00]	.045*	1381	-.07	[-.12, -.02]	.009**
Religion	predict_1	1394	-.06	[-.11, -.00]	.038*	1385	-.07	[-.12, -.01]	.015*
Religion	predict_2	1394	.01	[-.04, .06]	.673	1386	-.05	[-.10, .00]	.054
Religion	predict_3	1389	.04	[-.01, .09]	.117	1379	.14	[.09, .19]	<.001***
Religion	predict_4	1383	.09	[.04, .14]	<.001***	1373	.11	[.06, .17]	<.001***
Religion	predict_5	1370	.08	[.03, .14]	.002**	1361	.13	[.08, .19]	<.001***
Sexuality	belief_1	1537	.16	[.11, .21]	<.001***	1494	.29	[.25, .34]	<.001***
Sexuality	belief_2	1529	.23	[.18, .28]	<.001***	1489	.48	[.44, .51]	<.001***
Sexuality	belief_3	1528	.22	[.17, .27]	<.001***	1488	.42	[.38, .46]	<.001***
Sexuality	belief_4	1538	.21	[.16, .26]	<.001***	1497	.41	[.37, .45]	<.001***
Sexuality	belief_5	1534	.18	[.13, .23]	<.001***	1492	.37	[.33, .42]	<.001***
Sexuality	contact_1	1538	-.22	[-.27, -.17]	<.001***	1492	-.40	[-.44, -.36]	<.001***
Sexuality	contact_2	1534	-.20	[-.24, -.15]	<.001***	1490	-.39	[-.43, -.34]	<.001***
Sexuality	contact_3	1546	-.05	[-.10, .00]	.051	1501	-.14	[-.18, -.09]	<.001***
Sexuality	contact_4	1541	-.21	[-.26, -.16]	<.001***	1495	-.39	[-.43, -.34]	<.001***
Sexuality	contact_5	1544	-.19	[-.24, -.14]	<.001***	1497	-.40	[-.44, -.35]	<.001***
Sexuality	motivation_1	1528	-.11	[-.16, -.06]	<.001***	1480	-.33	[-.38, -.28]	<.001***
Sexuality	motivation_2	1533	-.09	[-.14, -.04]	<.001***	1489	-.27	[-.31, -.22]	<.001***
Sexuality	motivation_3	1524	-.15	[-.20, -.11]	<.001***	1481	-.27	[-.32, -.22]	<.001***
Sexuality	motivation_4	1538	-.10	[-.14, -.05]	<.001***	1494	-.28	[-.33, -.23]	<.001***
Sexuality	motivation_5	1525	-.19	[-.24, -.14]	<.001***	1481	-.35	[-.39, -.30]	<.001***
Sexuality	policy_1	1534	-.23	[-.28, -.18]	<.001***	1493	-.49	[-.53, -.45]	<.001***

Sexuality	policy_2	1532	-.19	[-.24, -.14]	<.001***	1487	-.41	[-.45, -.37]	<.001***
Sexuality	policy_3	1538	-.23	[-.27, -.18]	<.001***	1496	-.41	[-.45, -.37]	<.001***
Sexuality	policy_4	1530	-.13	[-.17, -.08]	<.001***	1490	-.32	[-.36, -.27]	<.001***
Sexuality	policy_5	1538	-.15	[-.19, -.10]	<.001***	1493	-.35	[-.39, -.31]	<.001***
Sexuality	predict_1	1534	.12	[.07, .17]	<.001***	1489	.42	[.37, .46]	<.001***
Sexuality	predict_2	1538	.23	[.18, .28]	<.001***	1496	.47	[.43, .51]	<.001***
Sexuality	predict_3	1539	.20	[.15, .25]	<.001***	1494	.57	[.54, .60]	<.001***
Sexuality	predict_4	1538	.21	[.16, .26]	<.001***	1495	.48	[.44, .52]	<.001***
Sexuality	predict_5	1534	.17	[.12, .22]	<.001***	1492	.43	[.39, .48]	<.001***
Weapons	belief_1	1533	.06	[.01, .11]	.025*	1480	.12	[.07, .17]	<.001***
Weapons	belief_2	1538	.12	[.07, .17]	<.001***	1481	.35	[.30, .39]	<.001***
Weapons	belief_3	1538	.13	[.08, .18]	<.001***	1481	.36	[.31, .40]	<.001***
Weapons	belief_4	1519	.11	[.06, .15]	<.001***	1465	.35	[.30, .39]	<.001***
Weapons	belief_5	1549	.09	[.04, .14]	<.001***	1491	.22	[.17, .27]	<.001***
Weapons	contact_1	1541	-.13	[-.18, -.08]	<.001***	1484	-.19	[-.23, -.14]	<.001***
Weapons	contact_2	1547	-.15	[-.20, -.10]	<.001***	1489	-.25	[-.30, -.20]	<.001***
Weapons	contact_3	1552	-.10	[-.15, -.05]	<.001***	1493	-.19	[-.24, -.14]	<.001***
Weapons	contact_4	1543	-.10	[-.15, -.06]	<.001***	1486	-.19	[-.23, -.14]	<.001***
Weapons	contact_5	1549	-.08	[-.13, -.03]	.001**	1492	-.22	[-.26, -.17]	<.001***
Weapons	motivation_1	1537	-.06	[-.11, -.01]	.021*	1482	-.15	[-.20, -.10]	<.001***
Weapons	motivation_2	1544	-.03	[-.08, .02]	.22	1487	-.19	[-.23, -.14]	<.001***
Weapons	motivation_3	1535	-.01	[-.06, .04]	.798	1477	-.13	[-.18, -.08]	<.001***
Weapons	motivation_4	1547	-.04	[-.09, .01]	0.099	1491	-.23	[-.28, -.18]	<.001***
Weapons	motivation_5	1535	-.02	[-.07, .03]	.42	1478	-.13	[-.18, -.08]	<.001***
Weapons	policy_1	1547	-.13	[-.18, -.08]	<.001***	1491	-.39	[-.44, -.35]	<.001***
Weapons	policy_2	1547	-.06	[-.11, -.01]	.019*	1493	-.35	[-.39, -.31]	<.001***
Weapons	policy_3	1540	-.01	[-.06, .04]	.737	1483	-.21	[-.26, -.16]	<.001***
Weapons	policy_4	1547	-.01	[-.06, .04]	.575	1490	-.28	[-.32, -.23]	<.001***
Weapons	policy_5	1538	-.02	[-.07, .03]	.351	1486	-.27	[-.32, -.22]	<.001***
Weapons	predict_1	1541	.09	[.04, .14]	<.001***	1485	.36	[.32, .41]	<.001***
Weapons	predict_2	1546	.12	[.07, .17]	<.001***	1491	.31	[.26, .35]	<.001***
Weapons	predict_3	1548	.02	[-.03, .07]	.40	1488	.20	[.15, .24]	<.001***
Weapons	predict_4	1549	.06	[.01, .11]	.024*	1492	.18	[.13, .23]	<.001***
Weapons	predict_5	1551	.10	[.05, .15]	<.001***	1493	.36	[.31, .40]	<.001***
Weight	belief_1	1596	.11	[.06, .15]	<.001***	1597	.16	[.11, .21]	<.001***
Weight	belief_2	1593	.15	[.10, .19]	<.001***	1593	.27	[.22, .31]	<.001***
Weight	belief_3	1588	.11	[.07, .16]	<.001***	1588	.16	[.11, .21]	<.001***
Weight	belief_4	1593	.06	[.01, .11]	.019*	1592	.08	[.03, .12]	.002**
Weight	belief_5	1589	.07	[.03, .12]	.003**	1591	.08	[.03, .13]	<.001***
Weight	contact_1	1596	-.05	[-.10, -.00]	.032*	1596	-.19	[-.23, -.14]	<.001***
Weight	contact_2	1594	-.05	[-.10, -.00]	.033*	1595	-.22	[-.27, -.17]	<.001***
Weight	contact_3	1591	-.07	[-.12, -.02]	.005**	1592	-.20	[-.25, -.15]	<.001***
Weight	contact_4	1597	-.06	[-.11, -.01]	.021*	1594	-.20	[-.24, -.15]	<.001***
Weight	contact_5	1590	-.08	[-.13, -.03]	.002**	1593	-.24	[-.29, -.20]	<.001***
Weight	motivation_1	1583	-.07	[-.12, -.02]	.004**	1581	-.25	[-.29, -.20]	<.001***
Weight	motivation_2	1589	-.08	[-.13, -.03]	.001**	1590	-.27	[-.32, -.23]	<.001***
Weight	motivation_3	1587	-.01	[-.06, .04]	.756	1585	-.17	[-.22, -.12]	<.001***
Weight	motivation_4	1590	-.08	[-.12, -.03]	.002**	1592	-.27	[-.32, -.22]	<.001***
Weight	motivation_5	1586	-.08	[-.12, -.03]	.003**	1587	-.26	[-.30, -.21]	<.001***

Weight	policy_1	1586	-.12	[-.16, -.07]	<.001***	1586	-.24	[-.29, -.19]	<.001***
Weight	policy_2	1585	-.10	[-.15, -.05]	<.001***	1587	-.16	[-.21, -.11]	<.001***
Weight	policy_3	1586	-.10	[-.15, -.05]	<.001***	1589	-.24	[-.28, -.19]	<.001***
Weight	policy_4	1592	-.06	[-.11, -.01]	.025*	1592	-.13	[-.18, -.09]	<.001***
Weight	policy_5	1588	-.10	[-.14, -.05]	<.001***	1590	-.24	[-.29, -.20]	<.001***
Weight	predict_1	1598	.11	[.06, .16]	<.001***	1598	.15	[.10, .19]	<.001***
Weight	predict_2	1569	.18	[.13, .23]	<.001***	1567	.40	[.36, .44]	<.001***
Weight	predict_3	1592	.04	[-.01, .09]	.119	1591	.15	[.10, .20]	<.001***
Weight	predict_4	1593	.14	[.09, .18]	<.001***	1594	.32	[.27, .36]	<.001***
Weight	predict_5	1594	.08	[.03, .13]	.001**	1594	.26	[.21, .30]	<.001***

Note: * $p < .05$; ** $p < .01$; *** $p < .001$; IAT = Implicit Association Test

Table 5 – Incremental predictive validity using SEM and OLS regression

Model Information				Structural Equation Modeling – Full Model						Regression Modeling – Full Model				SEM Model Comparison			Regression Model Comparison
Outcome	IAT	Outcome Class	<i>n</i>	Implicit β	95% CI	Explicit β	95% CI	df	-2LL	Implicit β	95% CI	Explicit β	95% CI	Δ -2LL	<i>p</i>	<i>p</i>	
belief_1 ¹	Age	belief	1575	0.10	[.01, .20]	.09	[.01, .17]	12270	31,312.54	0.03	[−.02, .08]	0.07	[.02, .12]	4.57	.033*	.265	
belief_2 ¹	Age	belief	1575	0.02	[−.07, .12]	0.1	[.02, .18]	12266	31,305.17	0.04	[−.02, .09]	0.07	[.02, .12]	0.24	.625	.183	
belief_3	Age	belief	1575	0.07	[−.03, .16]	0.26	[.18, .34]	12274	31,286.49	0.04	[−.01, .09]	0.19	[.14, .24]	1.93	.165	.117	
belief_4	Age	belief	1575	0.08	[−.01, .18]	0.21	[.13, .29]	12274	31,300.60	0.06	[.01, .11]	0.15	[.10, .20]	3.22	.073	.025*	
belief_5 ¹	Age	belief	1575	0.06	[−.03, .15]	0.18	[.10, .26]	12272	31,305.11	0.02	[−.03, .07]	0.12	[.07, .17]	1.63	.202	.525	
contact_1	Age	contact	1575	−.14	[−.24, −.06]	−.25	[−.33, −.18]	12266	31,254.46	−.08	[−.14, −.03]	−.18	[−.23, −.13]	9.97	.002**	.001**	
contact_2	Age	contact	1575	−.06	[−.15, .03]	−.34	[−.41, −.26]	12274	31,255.80	−.03	[−.08, .02]	−.23	[−.28, −.18]	1.81	.178	.217	
contact_3	Age	contact	1575	−.08	[−.17, .01]	−.32	[−.39, −.24]	12269	31,247.88	−.04	[−.10, .01]	−.22	[−.27, −.17]	3.41	.065	.079	
contact_4	Age	contact	1575	−.10	[−.19, −.01]	−.30	[−.38, −.22]	12273	31,262.44	−.06	[−.11, −.00]	−.20	[−.25, −.15]	4.97	.026*	.032*	
contact_5 ^{1,2}	Age	contact	1575	−.07	[−.19, .04]	−.24	[−.34, −.14]	12273	29,087.29	−.04	[−.15, .06]	−.28	[−.39, −.17]	1.54	.214	.439	
motivation_1 ¹	Age	motivation	1575	0.03	[−.07, .12]	−.18	[−.27, −.11]	12261	31,277.36	0.01	[−.05, .06]	−.13	[−.18, −.08]	0.3	.584	.829	
motivation_2 ¹	Age	motivation	1575	−.02	[−.11, .07]	−.15	[−.23, −.08]	12270	31,307.90	−.02	[−.07, .03]	−.11	[−.16, −.06]	0.18	.673	.479	
motivation_3	Age	motivation	1575	−.09	[−.19, −.00]	−.19	[−.27, −.11]	12268	31,287.63	−.05	[−.10, .00]	−.14	[−.19, −.09]	4.08	.043*	.068	
motivation_4	Age	motivation	1575	−.10	[−.19, −.00]	−.09	[−.17, −.01]	12265	31,298.88	−.07	[−.12, −.01]	−.07	[−.12, −.02]	4.08	.043*	.011*	
motivation_5 ¹	Age	motivation	1575	−.02	[−.11, .07]	−.22	[−.30, −.14]	12267	31,283.09	−.02	[−.07, .03]	−.15	[−.21, −.10]	0.19	.662	.503	
policy_1 ¹	Age	policy	1575	−.05	[−.14, .04]	−.20	[−.28, −.12]	12270	31,295.19	−.03	[−.08, .02]	−.14	[−.19, −.09]	1.19	.276	.237	

policy_2	Age	policy	1575	−.13	[−.22, −.03]	−.15	[−.23, −.07]	12268	31,293.85	−.08	[−.14, −.03]	−.11	[−.16, −.06]	7.3	.007**	.001**
policy_3	Age	policy	1575	−.15	[−.24, −.05]	−.08	[−.16, −.00]	12267	31,299.10	−.09	[−.14, −.04]	−.06	[−.11, −.01]	9.59	.002**	<.001**
policy_4	Age	policy	1575	−.12	[−.21, −.03]	−.02	[−.10, .06]	12265	31,302.33	−.06	[−.12, −.01]	−.02	[−.07, .03]	6.24	.012*	.014*
policy_5	Age	policy	1575	−.10	[−.19, −.01]	−.10	[−.18, −.02]	12266	31,299.49	−.05	[−.10, .00]	−.07	[−.12, −.02]	4.35	.037*	.068
predict_1	Age	predict	1575	0.17	[.08, .27]	0.1	[.02, .18]	12247	31,235.47	0.11	[.06, .16]	0.08	[.03, .14]	13.29	<.001**	<.001**
predict_2 ¹	Age	predict	1575	−.01	[−.10, .09]	0.03	[−.05, .11]	12252	31,272.16	0.01	[−.04, .06]	0.02	[−.04, .07]	0.03	.866	.746
predict_3	Age	predict	1575	0.16	[.07, .25]	0.47	[.39, .55]	12276	31,166.76	0.1	[.05, .15]	0.32	[.27, .37]	12.74	<.001**	<.001**
predict_4	Age	predict	1575	0.09	[.00, .19]	0.31	[.24, .39]	12273	31,259.12	0.07	[.02, .12]	0.22	[.17, .27]	4.15	.042*	.01**
predict_5	Age	predict	1575	0.08	[−.01, .18]	0.2	[.13, .28]	12268	31,285.03	0.05	[−.01, .10]	0.14	[.09, .19]	3.2	.074	.081
belief_1	Arab	belief	1560	0.1	[.01, .19]	0.35	[.27, .44]	12093	30,742.30	0.07	[.02, .12]	0.24	[.19, .29]	5.16	.023*	.007**
belief_2	Arab	belief	1560	0.15	[.07, .24]	0.51	[.42, .59]	12096	30,650.35	0.1	[.05, .15]	0.32	[.27, .37]	12.24	<.001**	<.001**
belief_3	Arab	belief	1560	0.19	[.10, .27]	0.42	[.34, .50]	12084	30,663.11	0.11	[.06, .16]	0.3	[.25, .35]	17.66	<.001**	<.001**
belief_4 ¹	Arab	belief	1560	0.05	[−.04, .14]	0.11	[.02, .19]	12083	30,794.20	0.02	[−.03, .08]	0.07	[.02, .12]	1.01	.314	.356
belief_5	Arab	belief	1560	0.13	[.04, .21]	0.49	[.41, .58]	12099	30,676.64	0.08	[.03, .13]	0.33	[.28, .37]	8.36	.004**	.001**
contact_1	Arab	contact	1560	−0.11	[−.20, −.02]	−.30	[−.38, −.21]	12095	30,770.90	−.06	[−.11, −.00]	−.20	[−.26, −.15]	5.93	.015*	.035*
contact_2	Arab	contact	1560	−0.03	[−.12, .06]	−.36	[−.45, −.28]	12096	30,759.51	−.02	[−.07, .03]	−.25	[−.30, −.20]	0.43	.514	.497
contact_3	Arab	contact	1560	−.03	[−.12, .06]	−.44	[−.52, −.35]	12094	30,717.54	−.01	[−.06, .04]	−.29	[−.34, −.23]	0.48	.487	.562
contact_4	Arab	contact	1560	−.07	[−.15, .02]	−.31	[−.39, −.22]	12105	30,804.16	−.04	[−.09, .01]	−.21	[−.26, −.16]	2.11	.147	.128
contact_5	Arab	contact	1560	−.14	[−.23, −.06]	−.27	[−.35, −.18]	12096	30,777.82	−.08	[−.13, −.03]	−.18	[−.23, −.13]	10.35	.001**	.002**

motivati on_1	Arab	motivation	1560	−.11	[−.20, −.03]	−.40	[−.49, −.32]	12089	30,703.83	−.07	[−.12, −.02]	−.27	[−.32, −.22]	6.67	.01**	.006**
motivati on_2	Arab	motivation	1560	−.12	[−.20, −.03]	−.39	[−.47, −.31]	12096	30,731.80	−.06	[−.11, −.01]	−.26	[−.31, −.21]	6.61	.01*	.027*
motivati on_3	Arab	motivation	1560	−.03	[−.12, .05]	−.31	[−.40, −.23]	12093	30,772.72	−.02	[−.07, .03]	−.20	[−.25, −.15]	0.57	.451	.422
motivati on_4	Arab	motivation	1560	−.07	[−.15, .02]	−.54	[−.63, −.46]	12097	30,645.99	−.05	[−.10, −.00]	−.35	[−.39, −.30]	2.35	.126	.032*
motivati on_5	Arab	motivation	1560	−.08	[−.17, .01]	−.36	[−.45, −.28]	12097	30,756.36	−.04	[−.09, .01]	−.25	[−.30, −.20]	2.93	.087	.095
policy_1	Arab	policy	1560	−.05	[−.14, .04]	−.28	[−.36, −.19]	12105	30,816.70	−.03	[−.08, .02]	−.19	[−.24, −.14]	1.1	.294	.243
policy_2	Arab	policy	1560	−.08	[−.17, .01]	−.39	[−.47, −.30]	12104	30,763.70	−.05	[−.10, −.00]	−.27	[−.32, −.22]	3.24	.072	.045*
policy_3	Arab	policy	1560	−.07	[−.15, .02]	−.35	[−.44, −.27]	12106	30,787.65	−.05	[−.10, .00]	−.21	[−.26, −.16]	2.19	.139	.052
policy_4	Arab	policy	1560	−.09	[−.18, −.01]	−.53	[−.62, −.45]	12099	30,653.79	−.06	[−.10, −.01]	−.36	[−.41, −.31]	4.46	.035*	.024*
policy_5	Arab	policy	1560	−.19	[−.28, −.11]	−.32	[−.40, −.24]	12101	30,757.18	−.11	[−.16, −.06]	−.22	[−.27, −.17]	19.04	<.001** *	<.001* **
predict_ 1	Arab	predict	1560	0.15	[.06, .23]	0.55	[.47, .64]	12104	30,640.35	0.09	[.04, .13]	0.38	[.33, .42]	12.01	<.001** *	<.001* **
predict_ 2	Arab	predict	1560	0.13	[.05, .21]	0.64	[.56, .73]	12106	30,563.92	0.09	[.04, .14]	0.43	[.38, .47]	9.76	.002**	<.001* **
predict_ 3	Arab	predict	1560	0.06	[−.03, .15]	0.44	[.36, .53]	12107	30,742.26	0.05	[−.00, .09]	0.31	[.26, .36]	1.76	.184	.066
predict_ 4	Arab	predict	1560	0.12	[.04, .21]	0.58	[.50, .66]	12101	30,610.96	0.08	[.03, .13]	0.41	[.36, .45]	8.21	.004**	.001**
predict_ 5	Arab	predict	1560	0.18	[.09, .26]	0.52	[.43, .60]	12068	30,555.13	0.1	[.05, .15]	0.35	[.30, .40]	16.11	<.001** *	<.001* **
belief_1	Disability	belief	1520	0.1	[.02, .18]	0.45	[.34, .57]	11725	29,665.16	0.06	[.01, .11]	0.21	[.16, .26]	5.74	.017*	.026*
belief_2	Disability	belief	1520	0.05	[−.03, .13]	0.54	[.43, .66]	11721	29,632.64	0.03	[−.02, .08]	0.26	[.21, .32]	1.3	.255	.205
belief_3	Disability	belief	1520	0.06	[−.02, .14]	0.61	[.50, .72]	11716	29,580.62	0.04	[−.01, .09]	0.3	[.25, .35]	2.48	.116	.166
belief_4	Disability	belief	1520	0.13	[.05, .21]	0.44	[.33, .55]	11720	29,647.48	0.08	[.03, .13]	0.23	[.18, .28]	10.5	.001**	.002**

belief_5	Disability	belief	1520	0.11	[.03, .19]	0.42	[.31, .53]	11721	29,664.26	0.06	[.01, .11]	0.22	[.17, .28]	7.04	.008**	.03*
contact_1	Disability	contact	1520	−.10	[−.18, −.02]	−.35	[−.47, −.24]	11715	29,665.48	−.06	[−.11, −.01]	−.19	[−.25, −.14]	5.78	.016*	.022*
contact_2 ¹	Disability	contact	1520	−.05	[−.13, .03]	−.42	[−.53, −.31]	11713	29,647.55	−.03	[−.08, .02]	−.22	[−.27, −.16]	1.54	.214	.306
contact_3 ¹	Disability	contact	1520	−.04	[−.12, .04]	−.45	[−.56, −.34]	11730	29,685.83	−.02	[−.07, .03]	−.25	[−.30, −.20]	1.07	0.30	.441
contact_4 ¹	Disability	contact	1520	−.03	[−.11, .05]	−.28	[−.39, −.17]	11728	29,725.81	−.02	[−.08, .03]	−.16	[−.22, −.11]	0.64	.422	.366
contact_5 ¹	Disability	contact	1520	0.03	[−.05, .11]	−.35	[−.46, −.24]	11725	29,705.25	0.01	[−.04, .06]	−.18	[−.24, −.13]	0.45	.501	.771
motivation_1	Disability	motivation	1520	−.11	[−.19, −.02]	−.37	[−.48, −.26]	11716	29,661.44	−.05	[−.10, .00]	−.20	[−.25, −.15]	6.48	.011*	.059
motivation_2 ¹	Disability	motivation	1520	−.06	[−.14, .03]	−.35	[−.46, −.24]	11725	29,700.88	−.04	[−.09, .02]	−.19	[−.24, −.14]	1.78	.182	.179
motivation_3	Disability	motivation	1520	−.09	[−.17, −.01]	−.33	[−.44, −.22]	11713	29,667.06	−.04	[−.09, .01]	−.17	[−.23, −.12]	4.36	.037*	.122
motivation_4	Disability	motivation	1520	−.12	[−.20, −.04]	−.43	[−.55, −.32]	11725	29,669.41	−.08	[−.13, −.03]	−.22	[−.27, −.17]	8.58	.003**	.002**
motivation_5	Disability	motivation	1520	−.08	[−.16, .00]	−.35	[−.46, −.24]	11716	29,673.47	−.04	[−.09, .01]	−.19	[−.24, −.14]	3.39	.066	.104
policy_1	Disability	policy	1520	−.05	[−.13, .04]	−.18	[−.29, −.07]	11680	29,605.09	−.01	[−.06, .05]	−.08	[−.14, −.03]	1.18	.277	.824
policy_2	Disability	policy	1520	−.11	[−.19, −.03]	−.36	[−.47, −.25]	11715	29,660.96	−.07	[−.12, −.02]	−.21	[−.26, −.15]	6.96	.008**	.009**
policy_3	Disability	policy	1520	−.05	[−.13, .03]	−.42	[−.54, −.31]	11721	29,673.58	−.03	[−.08, .02]	−.21	[−.26, −.16]	1.38	.24	.215
policy_4	Disability	policy	1520	−.14	[−.22, −.06]	−.39	[−.51, −.29]	11722	29,665.89	−.09	[−.14, −.04]	−.19	[−.25, −.14]	11.38	<.001** *	<.001* **
policy_5 ¹	Disability	policy	1520	−.06	[−.14, .02]	−.24	[−.35, −.13]	11715	29,694.99	−.03	[−.09, .02]	−.12	[−.18, −.07]	2.14	.144	.20
predict_1	Disability	predict	1520	0.07	[−.01, .15]	0.79	[.68, .91]	11719	29,480.03	0.05	[.00, .10]	0.41	[.37, .46]	3.18	.074	.041*
predict_2	Disability	predict	1520	0.1	[.02, .18]	0.47	[.36, .59]	11722	29,647.22	0.06	[.01, .11]	0.26	[.20, .31]	5.59	.018*	.014*
predict_3 ¹	Disability	predict	1520	0.01	[−.06, .09]	0.62	[.51, .75]	11721	29,599.44	0.02	[−.03, .07]	0.32	[.27, .37]	0.14	.709	.356

predict_4	Disability	predict	1520	0.02	[−.05, .10]	0.65	[.54, .76]	11721	29,576.64	0.03	[−.02, .08]	0.35	[.30, .40]	0.38	.539	.181
predict_5	Disability	predict	1520	0.06	[−.02, .14]	0.5	[.40, .62]	11724	29,648.19	0.04	[−.01, .09]	0.28	[.23, .33]	1.86	.172	.157
belief_1	GenderCareer	belief	1531	0.15	[.04, .27]	0.67	[.53, .82]	11932	32,154.51	0.09	[.04, .14]	0.27	[.22, .32]	6.78	.009**	<.001**
belief_2	GenderCareer	belief	1531	0.13	[.02, .25]	0.54	[.41, .69]	11922	32,176.17	0.08	[.03, .13]	0.23	[.17, .28]	4.93	.026*	.002**
belief_3 ¹	GenderCareer	belief	1531	−.00	[−.12, .12]	0.19	[.06, .32]	11937	32,306.53	0.01	[−.05, .06]	0.08	[.03, .14]	0	.98	.815
belief_4 ¹	GenderCareer	belief	1531	−.00	[−.12, .11]	0.32	[.19, .45]	11934	32,279.83	0	[−.05, .06]	0.15	[.09, .20]	0	.945	.90
belief_5 ¹	GenderCareer	belief	1531	0.05	[−.07, .17]	0.27	[.14, .40]	11927	32,265.17	0.02	[−.03, .08]	0.12	[.07, .18]	0.74	.391	.363
contact_1 ¹	GenderCareer	contact	1531	−.01	[−.13, .11]	−.24	[−.37, −.11]	11933	32,288.82	−.01	[−.06, .04]	−.10	[−.15, −.05]	0.05	.818	.616
contact_2 ¹	GenderCareer	contact	1531	−.07	[−.19, .04]	−.16	[−.29, −.03]	11941	32,316.48	−.04	[−.10, .01]	−.06	[−.11, −.01]	1.51	.219	.096
contact_3	GenderCareer	contact	1531	−.08	[−.20, .03]	−.52	[−.66, −.39]	11936	32,231.22	−.05	[−.10, .00]	−.23	[−.28, −.17]	1.93	.165	.058
contact_4	GenderCareer	contact	1531	−.15	[−.27, −.04]	−.29	[−.42, −.16]	11934	32,270.39	−.08	[−.13, −.03]	−.12	[−.17, −.07]	6.51	.011*	.003**
contact_5 ¹	GenderCareer	contact	1531	0.03	[−.08, .15]	−.39	[−.52, −.26]	11940	32,285.31	−.01	[−.06, .04]	−.17	[−.22, −.12]	0.28	.596	.717
motivation_1 ¹	GenderCareer	motivation	1531	−.04	[−.16, .08]	−.19	[−.32, −.06]	11932	32,290.20	−.03	[−.08, .02]	−.09	[−.14, −.04]	0.47	.492	.246
motivation_2 ¹	GenderCareer	motivation	1531	−.03	[−.15, .09]	−.38	[−.51, −.25]	11934	32,265.44	−.02	[−.07, .03]	−.18	[−.23, −.13]	0.27	.602	.461
motivation_3 ¹	GenderCareer	motivation	1531	0.03	[−.09, .15]	−.33	[−.47, −.20]	11928	32,262.34	−.00	[−.06, .05]	−.14	[−.19, −.09]	0.29	.591	.874
motivation_4 ¹	GenderCareer	motivation	1531	0.09	[−.03, .21]	−.44	[−.57, −.32]	11942	32,279.97	0.02	[−.03, .07]	−.21	[−.26, −.15]	2.12	.145	.459
motivation_5 ¹	GenderCareer	motivation	1531	0.01	[−.11, .13]	−.21	[−.34, −.08]	11932	32,289.95	−.00	[−.06, .05]	−.10	[−.15, −.05]	0.02	.876	.874
policy_1 ¹	GenderCareer	policy	1531	0.03	[−.09, .15]	−.21	[−.34, −.09]	11927	32,276.01	0.01	[−.05, .06]	−.11	[−.16, −.06]	0.21	.649	.794
policy_2 ¹	GenderCareer	policy	1531	−.07	[−.19, .04]	−.06	[−.19, .06]	11919	32,261.00	−.05	[−.10, .01]	−.03	[−.08, .02]	1.52	.217	.09

policy_3 ₁	GenderCaree r	policy	1531	−.04	[−.16, .08]	0.06	[−.06, .19]	11934	32,305.97	−.01	[−.06, .04]	0.02	[−.03, .07]	0.39	.533	.676
policy_4 ₁	GenderCaree r	policy	1531	−.07	[−.19, .05]	−.02	[−.15, .11]	11926	32,282.64	−.02	[−.08, .03]	−.01	[−.07, .04]	1.27	.259	.396
policy_5	GenderCaree r	policy	1531	−.11	[−.23, .01]	−.13	[−.26, −.01]	11938	32,307.62	−.06	[−.11, −.00]	−.07	[−.12, −.02]	3.28	.07	.037*
predict_1 ₁	GenderCaree r	predict	1531	−.05	[−.17, .07]	0.08	[−.05, .20]	11940	32,322.40	−.02	[−.07, .04]	0.03	[−.02, .08]	0.66	.416	.537
predict_2	GenderCaree r	predict	1531	0.12	[.00, .24]	0.21	[.08, .34]	11938	32,298.20	0.05	[.00, .10]	0.08	[.03, .13]	4	.046*	.043*
predict_3 ₁	GenderCaree r	predict	1531	0.09	[−.02, .21]	0.16	[.03, .29]	11942	32,317.87	0.05	[−.01, .10]	0.07	[.02, .12]	2.46	.116	.088
predict_4 ₁	GenderCaree r	predict	1531	−.02	[−.14, .09]	0.24	[.11, .37]	11931	32,283.91	−.00	[−.05, .05]	0.1	[.05, .15]	0.16	.686	.977
predict_5 ₁	GenderCaree r	predict	1531	0.05	[−.07, .17]	−.10	[−.23, .02]	11941	32,324.28	0.02	[−.04, .07]	−.04	[−.09, .01]	0.69	.406	.529
belief_1 ₁	GenderScien ce	belief	1517	−.10	[−.21, .01]	0.27	[.15, .39]	11728	31,311.67	−.03	[−.09, .02]	0.12	[.07, .18]	3.1	.078	.194
belief_2	GenderScien ce	belief	1517	0.03	[−.07, .14]	0.42	[.30, .55]	11725	31,261.39	0.03	[−.02, .09]	0.21	[.15, .26]	0.35	.555	.207
belief_3 ₁	GenderScien ce	belief	1517	−.08	[−.19, .03]	0.33	[.21, .45]	11719	31,275.94	−.02	[−.07, .04]	0.16	[.11, .21]	1.97	.161	.52
belief_4 ₁	GenderScien ce	belief	1517	0.03	[−.08, .14]	−.03	[−.14, .09]	11715	31,295.26	0.03	[−.02, .08]	−.03	[−.08, .03]	0.27	0.60	.267
belief_5 ₁	GenderScien ce	belief	1517	0.06	[−.05, .17]	0.14	[.03, .26]	11722	31,305.39	0.02	[−.03, .08]	0.08	[.03, .13]	1.13	0.289	.407
contact_1	GenderScien ce	contact	1517	−.12	[−.23, −.01]	−.34	[−.46, −.22]	11720	31,256.87	−.08	[−.13, −.02]	−.15	[−.21, −.10]	4.89	.027*	.005**
contact_2	GenderScien ce	contact	1517	−.08	[−.19, .03]	−.35	[−.47, −.23]	11713	31,241.94	−.05	[−.10, .00]	−.16	[−.21, −.11]	2.2	.138	.062
contact_3	GenderScien ce	contact	1517	−.07	[−.18, .04]	−.30	[−.42, −.19]	11714	31,255.94	−.04	[−.09, .01]	−.16	[−.21, −.11]	1.65	.20	.132
contact_4	GenderScien ce	contact	1517	−.17	[−.28, −.06]	−.29	[−.41, −.17]	11719	31,255.17	−.08	[−.13, −.03]	−.15	[−.20, −.09]	9.94	.002**	.003**
contact_5	GenderScien ce	contact	1517	−.07	[−.18, .04]	−.27	[−.39, −.15]	11721	31,282.60	−.05	[−.10, .01]	−.13	[−.18, −.08]	1.63	.201	.078
motivati on_1 ₁	GenderScien ce	motivation	1517	−.05	[−.16, .06]	0.01	[−.10, .13]	11729	31,334.64	−.01	[−.07, .04]	−.03	[−.08, .03]	0.69	.407	.588

motivat on_2 ¹	GenderScien ce	motivation	1517	0.03	[−.08, .13]	−.13	[−.24, −.01]	11723	31,313.72	0.01	[−.04, .06]	−.06	[−.11, −.01]	0.22	.639	.699
motivat on_3 ¹	GenderScien ce	motivation	1517	0.07	[−.03, .18]	−.04	[−.16, .08]	11720	31,307.92	0.04	[−.01, .09]	−.02	[−.07, .04]	1.83	.176	.125
motivat on_4 ¹	GenderScien ce	motivation	1517	−.03	[−.14, .08]	−.21	[−.33, −.09]	11727	31,314.07	−.01	[−.06, .04]	−.12	[−.17, −.07]	0.25	.617	.786
motivat on_5 ¹	GenderScien ce	motivation	1517	−.02	[−.13, .09]	0.02	[−.10, .13]	11725	31,323.83	−.00	[−.05, .05]	−.01	[−.06, .04]	0.14	.708	.997
policy_1	GenderScien ce	policy	1517	−.11	[−.21, .00]	0.11	[−.01, .23]	11726	31,321.50	−.06	[−.11, −.00]	0.05	[−.00, .10]	3.76	.053	.033*
policy_2	GenderScien ce	policy	1517	0.04	[−.07, .15]	0.01	[−.11, .13]	11722	31,314.70	0.01	[−.04, .07]	0	[−.05, .06]	0.59	.442	.611
policy_3	GenderScien ce	policy	1517	−.05	[−.15, .06]	0.03	[−.09, .14]	11722	31,314.74	−.03	[−.08, .02]	0.02	[−.03, .08]	0.71	.399	.262
policy_4	GenderScien ce	policy	1517	0.06	[−.05, .16]	−.06	[−.18, .05]	11731	31,339.42	0.03	[−.02, .08]	−.04	[−.10, .01]	1.06	.302	.288
policy_5	GenderScien ce	policy	1517	−.13	[−.23, −.02]	0	[−.11, .12]	11729	31,329.35	−.07	[−.12, −.02]	0	[−.05, .06]	5.3	.021*	.01**
predict_1 ¹	GenderScien ce	predict	1517	−.07	[−.18, .04]	0.18	[.06, .30]	11732	31,334.95	−.02	[−.07, .04]	0.09	[.03, .14]	1.63	.201	.551
predict_2 ¹	GenderScien ce	predict	1517	0.02	[−.08, .13]	0.04	[−.07, .16]	11731	31,339.93	0.01	[−.05, .06]	0.03	[−.03, .08]	0.16	.686	.784
predict_3 ¹	GenderScien ce	predict	1517	−.02	[−.13, .08]	0.29	[.17, .41]	11724	31,296.86	−.00	[−.06, .05]	0.15	[.10, .20]	0.18	.672	.855
predict_4 ¹	GenderScien ce	predict	1517	0.02	[−.09, .13]	−.02	[−.14, .09]	11725	31,323.74	0.01	[−.04, .06]	−.01	[−.06, .05]	0.16	.687	.704
predict_5 ¹	GenderScien ce	predict	1517	0.03	[−.08, .14]	0.17	[.05, .29]	11731	31,330.66	0.03	[−.02, .08]	0.09	[.04, .15]	0.25	.616	.301
belief_1	Race	belief	1731	0.09	[.01, .18]	0.41	[.34, .48]	13456	33,167.35	0.07	[.02, .12]	0.3	[.25, .35]	4.6	.032*	.007**
belief_2	Race	belief	1731	0.19	[.11, .28]	0.31	[.24, .38]	13501	33,334.73	0.12	[.07, .17]	0.23	[.18, .28]	19.23	<.001** *	<.001* **
belief_3	Race	belief	1731	0.11	[.02, .20]	0.2	[.13, .27]	13487	33,384.60	0.06	[.01, .11]	0.15	[.10, .20]	6.02	.014*	.03*
belief_4	Race	belief	1731	0.19	[.11, .28]	0.26	[.19, .34]	13513	33,399.54	0.13	[.09, .18]	0.19	[.14, .24]	19.08	<.001** *	<.001* **
belief_5	Race	belief	1731	0.12	[.03, .20]	0.25	[.18, .33]	13480	33,338.39	0.07	[.02, .13]	0.18	[.13, .23]	6.82	.009**	.004**

contact_1	Race	contact	1731	-.11	[-.19, -.02]	-.32	[-.39, -.25]	13507	33,375.06	-.07	[-.12, -.02]	-.24	[-.29, -.19]	6.12	.013*	.007**
contact_2 ²	Race	contact	1731	-.13	[-.25, -.01]	-.39	[-.49, -.29]	13511	30,792.77	-.14	[-.25, -.02]	-.56	[-.70, -.43]	4.73	.03*	.018*
contact_3	Race	contact	1731	-.10	[-.18, -.01]	-.26	[-.33, -.19]	13509	33,422.21	-.06	[-.11, -.01]	-.20	[-.25, -.15]	4.74	.029*	.015*
contact_4	Race	contact	1731	-.03	[-.12, .06]	-.26	[-.34, -.19]	13514	33,450.53	-.04	[-.09, .01]	-.19	[-.24, -.14]	0.42	.517	.155
contact_5	Race	contact	1731	-.11	[-.20, -.03]	-.24	[-.31, -.17]	13514	33,443.01	-.08	[-.13, -.03]	-.18	[-.23, -.13]	6.39	.011*	.002**
motivation_1	Race	motivation	1731	0.04	[-.05, .12]	-.29	[-.36, -.21]	13495	33,397.26	0	[-.05, .05]	-.20	[-.25, -.15]	0.64	.424	.86
motivation_2	Race	motivation	1731	-.01	[-.10, .08]	-.31	[-.38, -.23]	13506	33,409.69	-.02	[-.06, .03]	-.22	[-.27, -.17]	0.05	.821	.551
motivation_3 ¹	Race	motivation	1731	0.07	[-.02, .16]	-.23	[-.30, -.16]	13500	33,437.49	0.04	[-.01, .09]	-.17	[-.22, -.12]	2.63	.105	.104
motivation_4	Race	motivation	1731	-.05	[-.14, .04]	-.32	[-.40, -.25]	13510	33,400.21	-.04	[-.09, .00]	-.23	[-.28, -.18]	1.34	.247	.077
motivation_5	Race	motivation	1731	0.04	[-.05, .13]	-.30	[-.37, -.22]	13498	33,400.67	0.01	[-.04, .06]	-.21	[-.26, -.16]	0.79	.375	.828
policy_1	Race	policy	1731	-.08	[-.16, .01]	-.29	[-.36, -.22]	13488	33,352.05	-.05	[-.10, -.00]	-.21	[-.26, -.16]	2.99	.084	.04*
policy_2	Race	policy	1731	-.24	[-.32, -.15]	-.31	[-.38, -.24]	13487	33,276.12	-.15	[-.20, -.10]	-.23	[-.28, -.18]	29.5	<.001** *	<.001* **
policy_3	Race	policy	1731	-.04	[-.12, .05]	-.17	[-.25, -.10]	13505	33,461.42	-.03	[-.08, .02]	-.12	[-.17, -.07]	0.62	.43	.245
policy_4	Race	policy	1731	-.14	[-.22, -.05]	-.24	[-.31, -.17]	13495	33,382.75	-.08	[-.13, -.03]	-.17	[-.22, -.12]	9.44	.002**	.002**
policy_5	Race	policy	1731	-.11	[-.20, -.03]	-.23	[-.31, -.16]	13482	33,354.81	-.07	[-.12, -.02]	-.18	[-.23, -.13]	6.39	.011*	.009**
predict_1	Race	predict	1731	0.18	[.10, .26]	0.46	[.39, .53]	13516	33,239.53	0.12	[.07, .16]	0.35	[.30, .39]	18.97	<.001** *	<.001* **
predict_2	Race	predict	1731	0.14	[.05, .22]	0.37	[.30, .44]	13510	33,338.36	0.08	[.03, .13]	0.28	[.23, .32]	10.01	.002**	.001**
predict_3	Race	predict	1731	0.01	[-.07, .10]	0.22	[.14, .29]	13509	33,460.20	0.01	[-.04, .07]	0.16	[.11, .21]	0.1	.747	.562
predict_4	Race	predict	1731	0.1	[.02, .19]	0.37	[.30, .44]	13480	33,267.70	0.06	[.01, .11]	0.28	[.23, .33]	5.67	.017*	.024*

predict_5 ¹	Race	predict	1731	−.03	[−.12, .06]	0.2	[.13, .28]	13513	33,481.84	−.00	[−.05, .05]	0.14	[.09, .19]	0.49	.482	.88
belief_1	Religion	belief	1454	0.11	[.03, .20]	0.22	[.09, .35]	11287	29,007.97	0.07	[.01, .12]	0.11	[.06, .17]	7.02	.008**	.016*
belief_2	Religion	belief	1454	0.1	[.02, .19]	0.19	[.06, .32]	11291	29,025.70	0.05	[.00, .11]	0.11	[.05, .16]	5.42	.02*	.046*
belief_3	Religion	belief	1454	0.07	[−.01, .16]	0.22	[.09, .35]	11286	29,011.49	0.04	[−.02, .09]	0.09	[.04, .15]	2.85	.091	.176
belief_4 ¹	Religion	belief	1454	0.05	[−.04, .14]	0.21	[.09, .34]	11286	29,014.78	0.04	[−.02, .09]	0.09	[.03, .14]	1.32	.251	.197
belief_5	Religion	belief	1454	0.11	[.03, .20]	0.14	[.01, .26]	11294	29,037.83	0.06	[.01, .12]	0.06	[.01, .12]	6.56	.01*	.023*
contact_1	Religion	contact	1454	−.16	[−.25, −.08]	−.43	[−.56, −.31]	11293	28,970.56	−.12	[−.17, −.06]	−.19	[−.25, −.14]	14.79	<.001** *	<.001* **
contact_2	Religion	contact	1454	−.13	[−.21, −.05]	−.39	[−.52, −.26]	11294	28,992.42	−.08	[−.13, −.03]	−.18	[−.23, −.12]	9.17	.002**	.003**
contact_3	Religion	contact	1454	−.14	[−.22, −.05]	−.43	[−.57, −.30]	11290	28,969.58	−.09	[−.15, −.04]	−.19	[−.24, −.14]	10.47	.001**	<.001* **
contact_4	Religion	contact	1454	−.07	[−.16, .01]	−.30	[−.43, −.17]	11285	28,997.95	−.05	[−.10, .00]	−.12	[−.18, −.07]	2.74	.098	.075
contact_5	Religion	contact	1454	−.11	[−.20, −.02]	−.28	[−.41, −.15]	11294	29,019.54	−.07	[−.12, −.02]	−.13	[−.18, −.07]	6.39	.011*	.009**
motivati on_1	Religion	motivation	1454	−.05	[−.14, .03]	−.17	[−.30, −.04]	11291	29,033.30	−.04	[−.09, .01]	−.08	[−.13, −.02]	1.53	.217	.128
motivati on_2	Religion	motivation	1454	−.12	[−.20, −.03]	−.04	[−.17, .09]	11293	29,040.58	−.06	[−.11, −.00]	−.02	[−.08, .03]	7.18	.007**	.044*
motivati on_3 ¹	Religion	motivation	1454	−.05	[−.14, .04]	−.04	[−.17, .09]	11292	29,044.76	−.02	[−.08, .03]	−.03	[−.08, .03]	1.26	.261	.404
motivati on_4 ¹	Religion	motivation	1454	−.03	[−.12, .05]	−.10	[−.23, .03]	11297	29,057.44	−.00	[−.06, .05]	−.06	[−.12, −.01]	0.63	.428	.927
motivati on_5 ¹	Religion	motivation	1454	−.04	[−.13, .04]	−.11	[−.24, .01]	11291	29,038.76	−.02	[−.07, .03]	−.05	[−.11, .00]	0.9	.344	.479
policy_1	Religion	policy	1454	−.02	[−.11, .07]	−.14	[−.27, −.01]	11288	29,030.05	−.00	[−.06, .05]	−.06	[−.11, −.00]	0.2	.657	.951
policy_2	Religion	policy	1454	−.13	[−.22, −.05]	−.08	[−.21, .05]	11289	29,025.18	−.06	[−.11, −.01]	−.05	[−.10, .01]	9.07	.003**	.026*
policy_3	Religion	policy	1454	−.13	[−.22, −.05]	−.29	[−.42, −.17]	11295	29,015.25	−.08	[−.14, −.03]	−.13	[−.19, −.08]	9.67	.002**	.002**

policy_4 ₁	Religion	policy	1454	−.00	[−.09, .08]	−.14	[−.27, −.01]	11297	29,055.73	0.01	[−.04, .06]	−.08	[−.13, −.02]	0.01	.923	.672
policy_5	Religion	policy	1454	−.08	[−.17, .00]	−.11	[−.24, .01]	11294	29,043.49	−.04	[−.10, .01]	−.06	[−.12, −.01]	3.62	.057	.104
predict_1	Religion	predict	1454	−.09	[−.17, −.00]	−.12	[−.25, .00]	11301	29,062.14	−.04	[−.10, .01]	−.05	[−.11, .00]	3.96	.047*	.104
predict_2 ₁	Religion	predict	1454	0.03	[−.06, .12]	−.14	[−.27, −.01]	11301	29,067.69	0.02	[−.04, .07]	−.05	[−.11, .00]	0.47	0.495	.527
predict_3 ₁	Religion	predict	1454	0.02	[−.07, .10]	0.32	[.19, .45]	11295	29,028.24	0.01	[−.04, .06]	0.13	[.08, .18]	0.13	.716	.639
predict_4	Religion	predict	1454	0.12	[.03, .20]	0.21	[.08, .34]	11290	29,018.06	0.06	[.01, .12]	0.11	[.05, .16]	7.08	.008**	.017*
predict_5	Religion	predict	1454	0.09	[.00, .17]	0.26	[.14, .39]	11276	28,974.46	0.05	[−.00, .11]	0.12	[.07, .17]	4.02	.045*	.052
belief_1	Sexuality	belief	1618	0.11	[.02, .19]	0.37	[.30, .45]	12513	30,506.26	0.07	[.01, .12]	0.28	[.23, .33]	6.39	.011*	.013*
belief_2	Sexuality	belief	1618	0.13	[.06, .21]	0.58	[.51, .65]	12505	30,241.07	0.09	[.04, .13]	0.44	[.39, .49]	12	<.001** *	<.001* **
belief_3	Sexuality	belief	1618	0.16	[.08, .23]	0.5	[.43, .58]	12504	30,331.71	0.1	[.06, .15]	0.39	[.34, .44]	14.93	<.001** *	<.001* **
belief_4	Sexuality	belief	1618	0.14	[.07, .22]	0.49	[.42, .56]	12515	30,379.87	0.1	[.05, .15]	0.38	[.33, .43]	13.14	<.001** *	<.001* **
belief_5	Sexuality	belief	1618	0.1	[.02, .18]	0.48	[.40, .55]	12511	30,410.62	0.07	[.02, .12]	0.35	[.30, .40]	5.78	.016*	.006**
contact_1	Sexuality	contact	1618	−.16	[−.24, −.08]	−.49	[−.56, −.42]	12513	30,368.39	−.10	[−.15, −.06]	−.37	[−.42, −.32]	15.99	<.001** *	<.001* **
contact_2	Sexuality	contact	1618	−.12	[−.19, −.04]	−.48	[−.55, −.41]	12510	30,391.37	−.08	[−.13, −.03]	−.36	[−.41, −.31]	8.12	.004**	.001**
contact_3 _{1,2}	Sexuality	contact	1618	−.00	[−.32, .33]	−.58	[−.85, −.33]	12523	26,374.53	−.06	[−.57, .44]	−.69	[−.97, −.38]	0	.999	.828
contact_4	Sexuality	contact	1618	−.12	[−.20, −.04]	−.48	[−.55, −.41]	12517	30,402.91	−.08	[−.13, −.03]	−.36	[−.41, −.31]	8.74	.003**	<.001* **
contact_5	Sexuality	contact	1618	−.09	[−.17, −.01]	−.51	[−.58, −.44]	12519	30,393.57	−.06	[−.11, −.01]	−.38	[−.42, −.33]	5.14	.023*	.018*
motivati on_1	Sexuality	motivation	1618	0.02	[−.06, .10]	−.48	[−.56, −.41]	12502	30,430.03	−.00	[−.05, .05]	−.33	[−.38, −.28]	0.14	.704	.902
motivati on_2	Sexuality	motivation	1618	0.04	[−.04, .12]	−.40	[−.47, −.32]	12508	30,518.10	0	[−.05, .05]	−.26	[−.32, −.21]	0.87	.35	.939

motivati on_3	Sexuality	motivation	1618	−.11	[−.19, −.03]	−.35	[−.42, −.27]	12499	30,486.76	−.07	[−.12, −.02]	−.25	[−.30, −.19]	7.12	.008**	.011*
motivati on_4	Sexuality	motivation	1618	0.01	[−.07, .09]	−.38	[−.45, −.30]	12514	30,541.12	−.00	[−.05, .05]	−.27	[−.32, −.22]	0.04	.849	.93
motivati on_5	Sexuality	motivation	1618	−.10	[−.18, −.02]	−.46	[−.54, −.39]	12499	30,392.94	−.08	[−.13, −.02]	−.33	[−.38, −.28]	6.32	.012*	.003**
policy_1	Sexuality	policy	1618	−.10	[−.18, −.03]	−.63	[−.70, −.56]	12511	30,206.73	−.08	[−.12, −.03]	−.46	[−.50, −.41]	7.18	.007**	.001**
policy_2	Sexuality	policy	1618	−.06	[−.14, .02]	−.54	[−.61, −.47]	12508	30,350.07	−.05	[−.10, −.00]	−.39	[−.44, −.34]	2.45	0.117	.043*
policy_3	Sexuality	policy	1618	−.14	[−.22, −.06]	−.50	[−.57, −.43]	12515	30,367.58	−.11	[−.16, −.06]	−.37	[−.42, −.32]	12.74	<.001** *	<.001* **
policy_4	Sexuality	policy	1618	−.02	[−.10, .06]	−.41	[−.49, −.34]	12507	30,486.47	−.03	[−.08, .02]	−.31	[−.36, −.25]	0.22	.639	.293
policy_5	Sexuality	policy	1618	−.03	[−.11, .05]	−.46	[−.53, −.38]	12512	30,460.38	−.04	[−.09, .01]	−.33	[−.38, −.28]	0.66	.417	.099
predict_ 1	Sexuality	predict	1618	−.05	[−.13, .03]	0.57	[.50, .64]	12510	30,372.05	−.02	[−.07, .03]	0.42	[.37, .47]	1.68	.195	.478
predict_ 2	Sexuality	predict	1618	0.14	[.06, .21]	0.58	[.51, .65]	12514	30,266.72	0.1	[.05, .15]	0.43	[.38, .48]	12.92	<.001** *	<.001* **
predict_ 3	Sexuality	predict	1618	0	[−.07, .08]	0.77	[.70, .84]	12515	30,057.79	0.02	[−.02, .06]	0.56	[.52, .60]	0.01	.908	.371
predict_ 4	Sexuality	predict	1618	0.09	[.02, .17]	0.6	[.53, .67]	12514	30,273.44	0.07	[.02, .11]	0.45	[.41, .50]	5.75	.016*	.005**
predict_ 5	Sexuality	predict	1618	0.04	[−.04, .12]	0.57	[.50, .65]	12511	30,339.33	0.03	[−.01, .08]	0.42	[.37, .47]	0.93	.334	.168
belief_1	Weapons	belief	1614	0.08	[−.02, .18]	0.15	[.07, .23]	12547	32,542.65	0.04	[−.02, .09]	0.11	[.06, .16]	2.4	.121	.18
belief_2	Weapons	belief	1614	0.12	[.02, .21]	0.45	[.38, .53]	12552	32,411.70	0.05	[.00, .10]	0.34	[.29, .39]	5.54	.019*	.048*
belief_3	Weapons	belief	1614	0.13	[.03, .22]	0.46	[.38, .54]	12552	32,406.43	0.05	[.00, .10]	0.35	[.30, .40]	6.72	.01**	.047*
belief_4	Weapons	belief	1614	0.06	[−.04, .15]	0.48	[.41, .56]	12532	32,345.91	0.03	[−.02, .08]	0.34	[.30, .39]	1.33	.249	.26
belief_5	Weapons	belief	1614	0.09	[−.00, .19]	0.28	[.20, .36]	12562	32,540.53	0.04	[−.01, .09]	0.22	[.17, .27]	3.51	.061	.161
contact_ 1	Weapons	contact	1614	−.19	[−.29, −.09]	−.23	[−.31, −.15]	12555	32,522.21	−.10	[−.15, −.05]	−.16	[−.22, −.11]	14.29	<.001** *	<.001* **

contact_2 ²	Weapons	contact	1614	−.26	[−.40, −.13]	−.42	[−.53, −.32]	12562	30,042.76	−.21	[−.33, −.10]	−.57	[−.72, −.44]	14.5	<.001** *	<.001* **
contact_3	Weapons	contact	1614	−.11	[−.21, −.01]	−.25	[−.33, −.17]	12566	32,560.31	−.07	[−.12, −.01]	−.17	[−.22, −.12]	4.88	.027*	.012*
contact_4	Weapons	contact	1614	−.12	[−.22, −.02]	−.23	[−.31, −.15]	12557	32,541.59	−.07	[−.13, −.02]	−.17	[−.22, −.12]	6.02	.014*	.005**
contact_5	Weapons	contact	1614	−.09	[−.19, .01]	−.28	[−.36, −.21]	12563	32,544.61	−.04	[−.09, .01]	−.21	[−.26, −.16]	2.96	.085	.097
motivation_1	Weapons	motivation	1614	−.05	[−.15, .05]	−.19	[−.27, −.11]	12551	32,546.52	−.03	[−.08, .02]	−.14	[−.19, −.09]	0.8	.371	.275
motivation_2 ¹	Weapons	motivation	1614	−.01	[−.11, .09]	−.24	[−.32, −.16]	12558	32,555.62	0.01	[−.04, .06]	−.18	[−.24, −.13]	0.06	.802	.713
motivation_3 ¹	Weapons	motivation	1614	0.02	[−.08, .12]	−.14	[−.22, −.06]	12547	32,550.08	0.03	[−.02, .08]	−.13	[−.18, −.08]	0.2	.655	.221
motivation_4 ¹	Weapons	motivation	1614	0.01	[−.09, .11]	−.30	[−.38, −.22]	12561	32,543.40	0.02	[−.03, .07]	−.23	[−.28, −.18]	0.02	.88	.531
motivation_5 ¹	Weapons	motivation	1614	0.01	[−.09, .11]	−.16	[−.24, −.08]	12548	32,549.21	0.01	[−.05, .06]	−.13	[−.18, −.07]	0.06	.801	.783
policy_1	Weapons	policy	1614	−.12	[−.22, −.02]	−.52	[−.61, −.45]	12561	32,381.70	−.05	[−.09, .00]	−.39	[−.43, −.34]	6.09	.014*	.058
policy_2	Weapons	policy	1614	0	[−.10, .10]	−.49	[−.57, −.41]	12561	32,436.67	0.02	[−.03, .07]	−.36	[−.41, −.31]	0	.987	.357
policy_3 ¹	Weapons	policy	1614	0.05	[−.05, .15]	−.30	[−.37, −.22]	12554	32,525.47	0.04	[−.01, .09]	−.22	[−.27, −.17]	0.93	.334	.093
policy_4 ¹	Weapons	policy	1614	0.06	[−.04, .15]	−.39	[−.47, −.31]	12560	32,499.49	0.03	[−.02, .08]	−.28	[−.33, −.23]	1.23	.268	.192
policy_5 ¹	Weapons	policy	1614	0.01	[−.09, .11]	−.39	[−.47, −.31]	12552	32,475.65	0.04	[−.01, .09]	−.29	[−.34, −.23]	0.04	.843	.088
predict_1	Weapons	predict	1614	0.05	[−.05, .14]	0.51	[.43, .58]	12555	32,391.47	0.02	[−.03, .07]	0.36	[.31, .41]	0.97	.325	.459
predict_2	Weapons	predict	1614	0.13	[.03, .23]	0.41	[.34, .49]	12560	32,456.39	0.06	[.01, .11]	0.29	[.24, .34]	7.03	.008**	.015*
predict_3 ¹	Weapons	predict	1614	−.05	[−.15, .05]	0.28	[.20, .36]	12562	32,556.21	−.03	[−.08, .02]	0.2	[.15, .25]	0.93	.334	.258
predict_4	Weapons	predict	1614	0.07	[−.03, .17]	0.23	[.15, .31]	12563	32,565.91	0.01	[−.04, .06]	0.18	[.13, .23]	2.12	.146	.625
predict_5	Weapons	predict	1614	0.07	[−.02, .17]	0.49	[.42, .57]	12565	32,425.33	0.03	[−.02, .08]	0.35	[.30, .40]	2.27	.132	.23

belief_1	Weight	belief	1669	0.13	[.05, .22]	0.22	[.14, .30]	12996	32,814.89	0.07	[.02, .12]	0.14	[.09, .19]	9.53	.002**	.007**
belief_2	Weight	belief	1669	0.13	[.05, .21]	0.38	[.30, .46]	12992	32,730.12	0.09	[.04, .14]	0.26	[.21, .30]	9.2	.002**	<.001**
belief_3	Weight	belief	1669	0.14	[.06, .23]	0.22	[.14, .30]	12987	32,787.89	0.08	[.03, .13]	0.15	[.09, .20]	10.98	<.001**	.003**
belief_4	Weight	belief	1669	0.1	[.01, .18]	0.1	[.02, .18]	12992	32,841.28	0.04	[−.01, .09]	0.07	[.02, .12]	4.81	.028*	.157
belief_5	Weight	belief	1669	0.09	[.01, .18]	0.1	[.02, .18]	12988	32,830.16	0.06	[.01, .11]	0.08	[.02, .13]	4.41	.036*	.027*
contact_1	Weight	contact	1669	−.00	[−.08, .08]	−.29	[−.38, −.21]	12996	32,811.20	−.00	[−.05, .05]	−.19	[−.24, −.14]	0	.996	.936
contact_2	Weight	contact	1669	0.02	[−.07, .10]	−.35	[−.43, −.27]	12992	32,778.53	0	[−.05, .05]	−.23	[−.28, −.18]	0.16	.69	.977
contact_3	Weight	contact	1669	−.01	[−.09, .08]	−.31	[−.40, −.23]	12991	32,789.18	−.02	[−.07, .03]	−.20	[−.25, −.15]	0.02	.886	.452
contact_4	Weight	contact	1669	0	[−.08, .09]	−.29	[−.38, −.21]	12997	32,812.85	−.01	[−.06, .04]	−.20	[−.25, −.15]	0	.949	.734
contact_5	Weight	contact	1669	−.02	[−.10, .07]	−.37	[−.45, −.29]	12990	32,757.49	−.02	[−.07, .03]	−.24	[−.29, −.19]	0.13	.717	.365
motivation_1	Weight	motivation	1669	0.01	[−.08, .09]	−.39	[−.47, −.31]	12982	32,731.25	−.01	[−.06, .04]	−.25	[−.30, −.20]	0.02	.884	.637
motivation_2	Weight	motivation	1669	0.01	[−.07, .10]	−.43	[−.51, −.35]	12987	32,724.06	−.01	[−.06, .03]	−.27	[−.32, −.22]	0.1	.753	.57
motivation_3 ¹	Weight	motivation	1669	0.07	[−.01, .16]	−.28	[−.37, −.20]	12984	32,787.38	0.04	[−.01, .09]	−.18	[−.23, −.13]	2.64	.104	.156
motivation_4	Weight	motivation	1669	−.00	[−.08, .08]	−.42	[−.50, −.34]	12989	32,730.99	−.00	[−.05, .05]	−.28	[−.32, −.23]	0	.983	.921
motivation_5	Weight	motivation	1669	−.02	[−.10, .07]	−.40	[−.49, −.32]	12985	32,726.39	−.01	[−.06, .03]	−.25	[−.30, −.20]	0.15	.699	.552
policy_1	Weight	policy	1669	−.10	[−.18, −.02]	−.34	[−.43, −.26]	12985	32,739.03	−.06	[−.11, −.01]	−.23	[−.28, −.18]	5.43	.02*	.026*
policy_2	Weight	policy	1669	−.11	[−.19, −.02]	−.23	[−.31, −.15]	12985	32,787.30	−.07	[−.12, −.02]	−.14	[−.19, −.09]	6.17	.013*	.01**
policy_3	Weight	policy	1669	−.05	[−.14, .03]	−.35	[−.44, −.27]	12986	32,745.61	−.04	[−.09, .01]	−.23	[−.27, −.18]	1.62	.203	.09
policy_4	Weight	policy	1669	−.05	[−.13, .04]	−.21	[−.29, −.13]	12991	32,820.77	−.02	[−.07, .03]	−.14	[−.19, −.08]	1.08	.299	.367

policy_5	Weight	policy	1669	−.06	[−.14, .02]	−.37	[−.45, −.29]	12988	32,743.73	−.03	[−.08, .02]	−.24	[−.29, −.19]	1.94	.164	.176
predict_1	Weight	predict	1669	0.13	[.05, .22]	0.2	[.12, .29]	12997	32,823.71	0.08	[.03, .13]	0.13	[.08, .18]	9.11	.003**	.002**
predict_2	Weight	predict	1669	0.12	[.04, .20]	0.57	[.49, .65]	12969	32,522.28	0.09	[.05, .14]	0.38	[.33, .43]	8.79	.003**	<.001**
predict_3 ¹	Weight	predict	1669	−.02	[−.10, .07]	0.24	[.16, .32]	12991	32,818.32	0	[−.05, .05]	0.15	[.10, .20]	0.14	.71	.863
predict_4	Weight	predict	1669	0.08	[.00, .16]	0.47	[.39, .55]	12993	32,687.11	0.06	[.01, .11]	0.31	[.26, .35]	3.9	.048*	.011*
predict_5	Weight	predict	1669	0.00	[−.08, .09]	0.41	[.33, .49]	12994	32,749.87	0.02	[−.03, .07]	0.26	[.21, .31]	0.01	.915	.50

Note: ¹ No zero-order correlation with the Implicit Association Test; ²Binary outcome; * $p < .05$; ** $p < .01$; *** $p < .001$; IAT = Implicit Association Test; SEM = Structural Equation Modeling; RMSEA = Root Mean Square Error of Approximation; AIC = Akaike Information Criterion; CFI = Comparative Fit Index; Γ LI = Tucker-Lewis Fit Index; -2LL = -2Log Likelihood 95% CI = 95% confidence interval; All SEM model comparisons are based on tests with 1 degree of freedom. For full SEM models, all RMSEA < .07, all CFI > .96, all TLI > .94. See Table S7 in online supplement for all fit statistics for the full SEM models.

Table 6

Incremental validity decisions by IAT

IAT	<u>SEM</u>		<u>Regression</u>	
	Yes	No	Yes	No
Age	11	5	10	6
Arab	14	10	16	8
Disability	10	7	9	8
GenderCareer	4	2	5	1
GenderScience	3	4	3	4
Race	15	8	16	7
Religion	13	4	11	6
Sexuality	15	9	16	8
Weapons	8	9	7	10
Weight	10	13	9	14

Note: IAT = Implicit Association Test; SEM = Structural Equation Modeling

Table 7

Incremental validity decisions by outcome type

Outcome Type	<u>SEM</u>		<u>Regression</u>	
	Yes	No	Yes	No
Belief	29	9	29	9
Contact	24	17	24	17
Motivation	10	17	8	19
Policy	19	15	21	13
Predict	21	13	20	14

Note: SEM = Structural Equation Modeling

Table 8

Relationship Between Implicit Construct and Outcome, Aggregated by IAT

IAT	<u>β (absolute value)</u>		<i>r</i>	<u>Correlations</u>	
	SEM	Regression		df	95% CI
Age	0.11	0.06	.96	14	[.88, .99]
Arab	0.1	0.06	.98	22	[.94, .99]
Disability	0.09	0.05	.91	15	[.76, .97]
GenderCareer	0.12	0.07	.86	4	[.17, .98]
GenderScience	0.1	0.06	.96	5	[.72, .99]
Race	0.1	0.07	.94	21	[.86, .97]
Religion	0.11	0.06	.90	15	[.74, .96]
Sexuality	0.09	0.06	.95	22	[.90, .98]
Weapons	0.1	0.05	.90	15	[.75, .97]
Weight	0.06	0.04	.95	21	[.88, .98]

Note: IAT = Implicit Association Test; SEM = Structural Equation Modeling; 95% CI = 95% confidence interval

Table 9

Relationship Between Implicit Construct and Outcome, Aggregated by Outcome Class

Outcome Class	<u>β (absolute value)</u>		<i>r</i>	<u>Correlations</u>	
	SEM	Regression		df	95% CI
Belief	0.11	0.07	.92	36	[.85, .96]
Contact	0.10	0.06	.93	39	[.86, .96]
Motivation	0.06	0.04	.91	25	[.81, .96]
Policy	0.1	0.06	.93	32	[.86, .96]
Predict	0.09	0.06	.92	32	[.84, .96]

Note: SEM = Structural Equation Modeling; 95% CI = 95% confidence interval

Table 10

Analyses Included in the Online Supplement

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All-outcome structural equation models for latent outcome classes	S4
All-outcome structural equation models for individual outcomes	S7
Correlations between outcomes by IAT	S9

Note: OLS = Ordinary Least Squares; SEM = Structural Equation Modeling

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Alternate Modelling Approaches

Outcome-Class Analyses

Our outcome measures were categorized into five outcome classes: policy support, intergroup motivation, anticipated behavioral or emotional reactions during intergroup contact or interactions, prior intergroup contact, and group-related beliefs. For each IAT, we fit confirmatory factor analyses testing our proposed five-factor solution, and additionally fit a one-factor solution for comparison. See Figure S1 for sample path diagram. Overall, we found moderate-to-acceptable fit for the five-factor solutions across IATs, with some fitting fairly well (e.g. Sexuality: RMSEA = .05 [.05, .06], CFI = .93, TLI = .92) and others fitting less well (e.g. GenderCareer: RMSEA = .07 [.06, .07], CFI = .73, TLI = .70). In all IATs, however, the five-factor solutions fit the data better than the one-factor solutions. See Table S2 for fit statistics.

Figure S1. Schematic path diagram for five-factor CFA analyses.

We then tested whether implicit attitudes showed incremental predictive validity for each class of outcomes.

Regression Models. In a regression framework, we averaged the scores of five items comprising each class, standardized the ensuing value, then, as with the individual outcome measures tested whether models predicting the class average from both the IAT and the explicit measure fit better than those with just the explicit measure.

SEM-Single. We created matching analyses in a structural equation framework by modeling implicit and explicit latent factors as above, and used them to predict a latent factor comprising the five measures of each outcome class (identified by fixing the pathway to the first outcome at 1). This model was compared to a model in which the pathway from the implicit latent construct

to the outcome latent construct was set to 0. Incremental predictive validity for the implicit construct is indicated by a significant loss of model fit. See Figure S2 for sample path diagram

Figure S2. Schematic path diagram for single-class SEM analyses. The dotted line represents the pathway removed in order to test the incremental predictive validity of the implicit construct.

SEM-Omnibus. We then fit models in which the explicit and implicit latent constructs, as defined above, simultaneously predicted all five outcome latent constructs, all five of which were allowed to covary. We removed the path from the implicit latent construct to each outcome latent construct in turn, comparing each model back to the full model, testing for a significant loss in model fit. We finally fit a model in which the paths from the implicit construct to all outcome constructs were removed, in order to test the overall incremental predictive validity. See Figure S3 for sample path diagrams.

Figure S3. Path diagram for omnibus incremental predictive validity analyses. Dotted lines indicate pathways that were removed to test the incremental predictive validity of the implicit construct for each outcome class. All dotted lines were removed for the overall omnibus test. All outcome latent factors were also allowed to covary with each other (not shown here).

We found that seven of the ten IATs demonstrated overall omnibus incremental predictive validity for the implicit construct, with only GenderCareer, GenderScience and the Weight IAT not showing reduced model fit when the pathways from the implicit latent construct to all outcomes were removed. See Table S4 for model comparisons and fit statistics.

For the modelling of outcome classes, we found that the three approaches came to broadly similar conclusions. The implicit construct showed incremental validity for 32 out of the 50 outcome classes (64%) when modelled in OLS, 30 out of 50 outcome classes when modelled singly in SEM (60%), and 27 out of 50 outcome classes when all classes were simultaneously modelled in SEM (54%). A mixed-effect logistic regression with a random intercept for each individual outcome found that there was no significant difference in binary significance decisions across the three modelling approaches, $X^2(2) = 2.97, p = .23$.

To determine whether incremental validity decisions for the implicit construct differed across IATs or outcome classes we tried to fit an additional mixed-effect logistic regression, predicting the yes/no significance decision from the modelling type interacted with the IAT and outcome type. Since we had complete separation in our data, we simplified the model to remove the modelling-type variable. We found no systematic differences in validity decisions across

IATs or outcome types, with no main effects for IAT, $X^2(9) = 1.71, p = .995$, or for outcome type, $X^2(4) = 1.28, p = .87$, and no interaction between the two, $X^2(36) = 0.001, p = 1.00$.

See Table S5 for the validity decisions for each analysis type, and for the complete models, see

<https://osf.io/5gyjw/>

Individual-Level SEM-Omnibus Analyses

An advantage of SEM modelling is that researchers can affirmatively model the relationship between all variables. The models in the main text assume that the outcome measures within each IAT are completely uncorrelated, which may be an overly-restrictive assumption. We relaxed this constraint in a final set of SEM analyses. For each IAT, we created implicit and explicit latent constructs as in the main text, and then had both constructs predict every outcome simultaneously, while allowing all outcomes to covary with each other. We then sequentially dropped the pathways from the implicit latent construct to outcome measures which were weakest, stopping when the nested, sequentially-constrained model fit statistically worse than the base model. The remaining pathways can be interpreted as having significant incremental predictive validity in this omnibus framework. This is a far more conservative test than our other SEM models, as it allows variance to be partitioned into the inter-item covariance structure, but nevertheless it may be a more appropriate technique if the set of outcomes one is modelling is a good representation of the world of possible items and one has sufficient power to model all the paths. Any item which survives this analysis can be thought of as demonstrating incremental validity, even controlling for the relationship of all other items in the model. While the items in this paper may not be a full representation of the possible outcome measures, and

while we are likely underpowered for this type of analysis, we nevertheless wish to present it as an option for those interested in alternate modelling strategies. Accordingly, it tags many fewer outcomes as having incremental predictive validity for the implicit construct than do our single-item approaches. See Table S6 for the items which remained significant in these analyses, and for the full model outputs, including the covariance structure, see <https://osf.io/2x3cg/>.

Correlations Between Outcomes, by IAT

For all plots, numbers printed below the diagonal are correlation coefficients. For all statistics including n's, p -values, and confidence intervals, see <https://osf.io/2x3cg/>

Age

Arab

Disability

Gender-Career

Gender-Science

Race

Religion

Sexuality

Weapons

Weight

Table S1
Reliability of Outcome Classification, by IAT

IAT	Belief α	95% CI	Contact α	95% CI	Motivation α	95% CI	Policy α	95% CI	Predict α	95% CI
Age	.53	[.49, .57]	.69	[.66, .71]	.76	[.74, .78]	.65	[.62, .68]	.45	[.41, .50]
Arab	.68	[.65, .70]	.85	[.83, .86]	.77	[.75, .78]	.64	[.62, .67]	.74	[.72, .77]
Disability	.67	[.64, .69]	.80	[.79, .82]	.71	[.69, .74]	.57	[.53, .60]	.73	[.71, .75]
GenderCareer	.57	[.54, .61]	.59	[.56, .63]	.76	[.74, .78]	.39	[.34, .44]	.42	[.37, .46]
GenderScience	.51	[.47, .55]	.87	[.86, .88]	.77	[.75, .79]	.78	[.76, .79]	.61	[.58, .64]
Race	.69	[.66, .71]	.75	[.74, .77]	.75	[.73, .77]	.60	[.57, .63]	.63	[.60, .66]
Religion	.73	[.71, .76]	.81	[.79, .82]	.75	[.73, .78]	.49	[.44, .53]	.59	[.56, .63]
Sexuality	.79	[.78, .81]	.81	[.79, .82]	.75	[.73, .77]	.79	[.77, .80]	.82	[.81, .83]
Weapons	.62	[.59, .65]	.76	[.74, .78]	.73	[.71, .75]	.72	[.70, .75]	.64	[.61, .67]
Weight	.64	[.61, .66]	.78	[.76, .80]	.78	[.76, .79]	.60	[.57, .63]	.47	[.43, .51]

Note: IAT = Implicit Association Test; 95% CI = 95% confidence interval

Table S2
Confirmatory Factor Analysis for Outcome Classification, by IAT

<u>Outcome</u>		<u>Five-Factor Solution</u>							<u>One-Factor Solution</u>						
IAT	Sample Size	RMSEA	95% CI	AIC	CFI	TLI	df	-2LL	RMSEA	95% CI	AIC	CFI	TLI	df	-2LL
Age	1575	.05	[.05, .05]	25,393.09	.86	.84	37983	101,359.09	.08	[.08, .08]	27,134.81	.63	.60	37993	103,120.81
Arab	1560	.05	[.05, .06]	20,542.80	.91	.90	37629	95,800.80	.10	[.10, .11]	23,888.21	.64	.60	37639	99,166.21
Disability	1520	.05	[.04, .05]	22,834.57	.90	.89	36609	96,052.57	.09	[.08, .09]	25,158.31	.64	.61	36619	98,396.31
GenderCareer	1531	.07	[.06, .07]	26,098.91	.73	.70	36930	99,958.91	.08	[.08, .08]	26,831.09	.62	.59	36940	100,711.09
GenderScience	1517	.08	[.08, .08]	20,447.27	.80	.78	36458	93,363.27	.13	[.13, .14]	25,399.26	.42	.36	36468	98,335.26
Race	1731	.06	[.05, .06]	25,968.25	.86	.84	41625	109,218.25	.09	[.09, .10]	28,535.17	.61	.58	41635	111,805.17
Religion	1454	.05	[.05, .05]	21,653.18	.90	.88	35105	91,863.18	.10	[.09, .10]	24,491.36	.57	.54	35115	94,721.36
Sexuality	1618	.05	[.05, .06]	17,920.76	.93	.92	39183	96,286.76	.10	[.09, .10]	20,873.50	.74	.72	39193	99,259.50
Weapons	1614	.04	[.04, .05]	23,839.91	.92	.91	38920	101,679.91	.09	[.08, .09]	26,299.90	.66	.63	38930	104,159.90
Weight	1669	.05	[.05, .06]	26,574.65	.85	.83	40292	107,158.65	.09	[.09, .10]	29,189.48	.55	.51	40302	109,793.48

Vote: IAT = Implicit Association Test; SEM = Structural Equation Modeling; RMSEA = Root Mean Square Error of Approximation; AIC = Akaike information Criterion; CFI = Comparative Fit Index; TLI = Tucker-Lewis Fit Index; -2LL = -2Log Likelihood 95% CI = 95% confidence interval

Table S3
Factor Loadings for Latent Constructs, by IAT

IAT	Implicit			Explicit	
	IAT2	IAT3	IAT4	Like	Therm
Age	1.18	1.19	1.11	1.22	1.17
Arab	1.14	1.13	1.03	1.28	1.24
Disability	1.12	1.17	1.14	1.55	1.49
GenderCareer	1.26	1.14	1.07	1.25	1.43
GenderScience	1.24	1.17	1.02	1.03	1.52
Race	1.15	1.11	1.07	1.10	1.15
Religion	1.16	1.19	1.10	1.40	1.37
Sexuality	1.07	1.07	1.05	1.12	1.10
Weapons	1.21	1.29	1.14	0.88	1.34
Weight	1.15	1.14	1.10	1.17	1.19

Note: IAT = Implicit Association Test; Implicit factor identified by IAT1, Explicit factor identified by Pref.

Table S4
Omnibus SEM Incremental Validity for the Implicit Construct

Outcome	Full Model							Nothing							Model Comparison		
	IAT	RMSEA	95% CI	AIC	CFI	TLI	df	-2LL	RMSEA	95% CI	AIC	CFI	TLI	df	-2LL	Δ -2LL	<i>p</i>
Age		.04	[.04, .04]	30,684.59	.90	.89	48722	128,128.59	.04	[.04, .04]	30,698.22	.90	.89	48727	128,152.22	23.633355	<.001***
Arab		.04	[.04, .05]	25,376.13	.92	.91	48211	121,798.13	.05	[.04, .05]	25,391.65	.92	.91	48216	121,823.65	25.524054	<.001***
Disability		.04	[.04, .04]	27,525.81	.92	.91	46854	121,233.81	.04	[.04, .04]	27,531.31	.92	.91	46859	121,249.31	15.493902	.008**
GenderCareer		.06	[.05, .06]	33,177.49	.76	.74	47377	127,931.49	.06	[.05, .06]	33,172.19	.76	.74	47382	127,936.19	4.70185	.453
GenderScience		.06	[.06, .07]	27,014.55	.82	.80	46714	120,442.55	.06	[.06, .07]	27,011.37	.82	.80	46719	120,449.37	6.820648	.234
Race		.05	[.04, .05]	30,571.11	.90	.88	53450	137,471.11	.05	[.04, .05]	30,615.10	.89	.88	53455	137,525.10	53.985267	<.001***
Religion		.04	[.04, .04]	26,830.00	.92	.91	44983	116,796.00	.04	[.04, .04]	26,842.80	.91	.90	44988	116,818.80	22.809733	<.001***
Sexuality		.04	[.04, .05]	21,298.37	.94	.93	50117	121,532.37	.04	[.04, .05]	21,322.29	.94	.93	50122	121,566.29	33.920689	<.001***
Weapons		.04	[.04, .04]	29,572.01	.92	.91	49910	129,392.01	.04	[.04, .04]	29,581.60	.92	.91	49915	129,411.60	19.588174	.001**
Weight		.05	[.04, .05]	31,666.87	.89	.87	51660	134,986.87	.04	[.04, .05]	31,613.39	.89	.88	51665	134,943.39	-43.48692	1.00

Note: **p* < .05; ***p* < .01; ****p* < .001; IAT = Implicit Association Test; SEM = Structural Equation Modeling; RMSEA = Root Mean Square Error of Approximation; AIC = Akaike Information Criterion; CFI = Comparative Fit Index; TLI = Tucker-Lewis Fit Index; -2LL = -2Log Likelihood 95% CI = 95% confidence interval; All model comparisons based on a test with 5 degrees of freedom

Table S5
SEM Group-Level Analyses

<u>Model Information</u>					<u>SEM Single-Model Comparison</u>		<u>SEM Omnibus Comparison</u>		<u>Regression Single-Model Comparison</u>
IAT	Outcome	Sample Size	α	95% CI	Δ -2LL	<i>p</i> -value	Δ -2LL	<i>p</i> -value	<i>p</i> -value
Age	belief	1575	.53	[.49, .57]	5.91	.015*	5.72	.017*	.016*
Age	contact	1575	.69	[.66, .71]	7.35	.007**	8.15	.004**	.004**
Age	motivation	1575	.76	[.74, .78]	1.44	.23	1.56	.212	.298
Age	policy	1575	.65	[.62, .68]	11.04	<.001***	11.59	<.001***	<.001***
Age	predict	1575	.45	[.41, .50]	15.59	<.001***	16.46	<.001***	<.001***
Arab	belief	1560	.68	[.65, .70]	17.31	<.001***	18.65	<.001***	<.001***
Arab	contact	1560	.85	[.83, .86]	2.26	.133	2.05	.153	.035*
Arab	motivation	1560	.77	[.75, .78]	7.29	.007**	7.04	.008**	.006**
Arab	policy	1560	.64	[.62, .67]	8.88	.003**	9.96	.002**	<.001***
Arab	predict	1560	.74	[.72, .77]	20.15	<.001***	19.85	<.001***	<.001***
Disability	belief	1520	.67	[.64, .69]	10.54	.001**	10.22	.001**	<.001***
Disability	contact	1520	.80	[.79, .82]	0.95	.329	0.91	.341	.253
Disability	motivation	1520	.71	[.69, .74]	9.59	.002**	9.78	.002**	.004**
Disability	policy	1520	.57	[.53, .60]	9.04	.003**	9.85	.002**	.003**
Disability	predict	1520	.73	[.71, .75]	1.76	.184	2.33	.127	.003**
GenderCareer	belief	1531	.57	[.54, .61]	6.15	.013*	2.8	.094	.005**
GenderCareer	contact	1531	.59	[.56, .63]	-220.54	1.00	0.19	.66	.013*
GenderCareer	motivation	1531	.76	[.74, .78]	0.08	.781	-86	1	.504
GenderCareer	policy	1531	.39	[.34, .44]	0.16	.686	1.08	.3	.112
GenderCareer	predict	1531	.42	[.37, .46]	2.63	.105	1.16	.282	.266
GenderScience	belief	1517	.51	[.47, .55]	608.28	<.001***	0.32	.572	0.71
GenderScience	contact	1517	.87	[.86, .88]	3.94	.047*	125.14	<.001***	.006**
GenderScience	motivation	1517	.77	[.75, .79]	0	.956	0	.946	.746
GenderScience	policy	1517	.78	[.76, .79]	1.67	.196	1.69	.194	.178
GenderScience	predict	1517	.61	[.58, .64]	0.02	.887	0.03	.873	.747
Race	belief	1731	.69	[.66, .71]	24.54	<.001***	24.57	<.001***	<.001***
Race	contact	1731	.75	[.74, .77]	6	.014*	6.04	.014*	<.001***
Race	motivation	1731	.75	[.73, .77]	0.55	.459	0.33	.565	.798
Race	policy	1731	.60	[.57, .63]	21.13	<.001***	1,770.25	<.001***	<.001***
Race	predict	1731	.63	[.60, .66]	18.39	<.001***	16.21	<.001***	<.001***
Religion	belief	1454	.73	[.71, .76]	9.07	.003**	9.58	.002**	.011*

Religion	contact	1454	.81	[.79, .82]	13.33	<.001***	13.86	<.001***	<.001***
Religion	motivation	1454	.75	[.73, .78]	3.72	.054	669.56	<.001***	.174
Religion	policy	1454	.49	[.44, .53]	12.49	<.001***	724.69	<.001***	.031*
Religion	predict	1454	.59	[.56, .63]	5.13	.024*	4.92	.027*	.149
Sexuality	belief	1618	.79	[.78, .81]	20.75	<.001***	19.91	<.001***	<.001***
Sexuality	contact	1618	.81	[.79, .82]	13.6	<.001***	13.18	<.001***	<.001***
Sexuality	motivation	1618	.75	[.73, .77]	1.92	.166	1.6	.206	.14
Sexuality	policy	1618	.79	[.77, .80]	9.05	.003**	9.21	.002**	<.001***
Sexuality	predict	1618	.82	[.81, .83]	1.52	.217	1.54	.214	.01*
Weapons	belief	1614	.62	[.59, .65]	8.73	.003**	9.58	.002**	.008**
Weapons	contact	1614	.76	[.74, .78]	9.05	.003**	7.97	.005**	<.001***
Weapons	motivation	1614	.73	[.71, .75]	0	.96	0	.95	.618
Weapons	policy	1614	.72	[.70, .75]	0.52	.469	0.33	.563	.193
Weapons	predict	1614	.64	[.61, .67]	2.79	.095	2.21	.137	.319
Weight	belief	1669	.64	[.61, .66]	18.19	<.001***	-54.69	1.00	<.001***
Weight	contact	1669	.78	[.76, .80]	0	.988	-73.42	1.00	.578
Weight	motivation	1669	.78	[.76, .79]	0.11	.745	-73.30	1.00	.906
Weight	policy	1669	.60	[.57, .63]	5.13	.024*	-66.88	1.00	.007**
Weight	predict	1669	.47	[.43, .51]	8.68	.003**	8.36	.004**	<.001***

Note: * $p < .05$; ** $p < .01$; *** $p < .001$; IAT = Implicit Association Test; SEM = Structural Equation Modeling; RMSEA = Root Mean Square Error of Approximation; AIC = Akaike Information Criterion; CFI = Comparative Fit Index; TLI = Tucker-Lewis Fit Index; -2LL = -2Log Likelihood 95% CI = 95% confidence interval; All model comparisons based on a test with 1 degree of freedom

Table S6

Significant Outcomes from Individual-Level SEM Omnibus Analyses

IAT	Outcome
Age	contact_1
Age	motivation_3
Age	policy_2
Age	policy_3
Age	predict_1
Age	predict_3
Arab	belief_2
Arab	belief_3
Arab	contact_1
Arab	contact_5
Arab	policy_5
Arab	predict_1
Arab	predict_2
Arab	predict_4
Arab	predict_5
Disability	belief_4
Disability	belief_5
Disability	contact_1
Disability	policy_4
GenderCareer	belief_1
GenderCareer	belief_2
GenderCareer	contact_4
GenderScience	contact_1
GenderScience	contact_4
GenderScience	policy_5
Race	belief_1
Race	belief_2
Race	belief_3
Race	belief_4
Race	belief_5
Race	contact_1
Race	contact_3
Race	contact_5
Race	policy_2
Race	policy_4
Race	policy_5
Race	predict_1
Race	predict_2
Religion	belief_1
Religion	belief_5
Religion	contact_1
Religion	contact_2
Religion	contact_3
Religion	motivation_2
Religion	policy_2
Religion	policy_3

Religion predict_4

Note: IAT = Implicit Association Test; SEM = Structural Equation Modeling

Table S7
Fit Statistics for Full Single-Item SEM Models
(see Table 5)

Outcome	IAT	Outcome Class	<i>n</i>	RMSEA	95% CI	AIC	CFI	TLI
belief_1 ¹	Age	belief	1575	.02	[.01, .04]	6,772.54	1.00	.99
belief_2 ¹	Age	belief	1575	.02	[.00, .03]	6,773.17	1.00	1.00
belief_3	Age	belief	1575	.03	[.01, .04]	6,738.49	1.00	.99
belief_4	Age	belief	1575	.01	[.00, .03]	6,752.60	1	1
belief_5 ¹	Age	belief	1575	.01	[.00, .03]	6,761.11	1	1
contact_1	Age	contact	1575	.04	[.03, .05]	6,722.46	.99	.98
contact_2	Age	contact	1575	.03	[.02, .04]	6,707.80	.99	.99
contact_3	Age	contact	1575	.03	[.02, .04]	6,709.88	.99	.99
contact_4	Age	contact	1575	.01	[.00, .03]	6,716.44	1.00	1.00
contact_5 ^{1, 2}	Age	contact	1575	.02	[.00, .03]	4,541.29	1.00	1.00
motivation_1 ¹	Age	motivation	1575	.02	[.01, .04]	6,755.36	1.00	.99
motivation_2 ¹	Age	motivation	1575	.02	[.00, .03]	6,767.90	1.00	1.00
motivation_3	Age	motivation	1575	.01	[.00, .03]	6,751.63	1.00	1.00
motivation_4	Age	motivation	1575	.03	[.01, .04]	6,768.88	1.00	.99
motivation_5 ¹	Age	motivation	1575	.01	[.00, .03]	6,749.09	1.00	1.00
policy_1 ¹	Age	policy	1575	.02	[.01, .04]	6,755.19	1.00	.99
policy_2	Age	policy	1575	.03	[.01, .04]	6,757.85	.99	.99
policy_3	Age	policy	1575	.03	[.01, .04]	6,765.10	.99	.99
policy_4	Age	policy	1575	.01	[.00, .03]	6,772.33	1.00	1.00
policy_5	Age	policy	1575	.01	[.00, .03]	6,767.49	1.00	1.00
predict_1	Age	predict	1575	.03	[.02, .04]	6,741.47	.99	.99
predict_2 ¹	Age	predict	1575	.01	[.00, .03]	6,768.16	1.00	1.00
predict_3	Age	predict	1575	.03	[.02, .05]	6,614.76	.99	.99

predict_4	Age	predict	1575	.03	[.02, .04]	6,713.12	.99	.99
predict_5	Age	predict	1575	.01	[.00, .03]	6,749.03	1.00	1.00
belief_1	Arab	belief	1560	.04	[.03, .05]	6,556.30	.99	.98
belief_2	Arab	belief	1560	.04	[.02, .05]	6,458.35	.99	.98
belief_3	Arab	belief	1560	.05	[.04, .06]	6,495.11	.98	.97
belief_4 ¹	Arab	belief	1560	.03	[.01, .04]	6,628.20	.99	.99
belief_5	Arab	belief	1560	.04	[.02, .05]	6,478.64	.99	.98
contact_1	Arab	contact	1560	.03	[.02, .05]	6,580.90	.99	.99
contact_2	Arab	contact	1560	.04	[.03, .05]	6,567.51	.99	.98
contact_3	Arab	contact	1560	.04	[.02, .05]	6,529.54	.99	.98
contact_4	Arab	contact	1560	.03	[.02, .04]	6,594.16	.99	.99
contact_5	Arab	contact	1560	.03	[.02, .05]	6,585.82	.99	.99
motivation_1	Arab	motivation	1560	.04	[.03, .05]	6,525.83	.99	.98
motivation_2	Arab	motivation	1560	.04	[.03, .05]	6,539.80	.99	.98
motivation_3	Arab	motivation	1560	.03	[.02, .05]	6,586.72	.99	.99
motivation_4	Arab	motivation	1560	.05	[.03, .06]	6,451.99	.98	.98
motivation_5	Arab	motivation	1560	.05	[.04, .06]	6,562.36	.98	.97
policy_1	Arab	policy	1560	.03	[.02, .05]	6,606.70	.99	.99
policy_2	Arab	policy	1560	.05	[.04, .06]	6,555.70	.98	.97
policy_3	Arab	policy	1560	.03	[.02, .04]	6,575.65	.99	.99
policy_4	Arab	policy	1560	.05	[.03, .06]	6,455.79	.98	.98
policy_5	Arab	policy	1560	.04	[.03, .05]	6,555.18	.99	.98
predict_1	Arab	predict	1560	.05	[.04, .06]	6,432.35	.98	.97
predict_2	Arab	predict	1560	.05	[.04, .06]	6,351.92	.98	.97
predict_3	Arab	predict	1560	.06	[.05, .07]	6,528.26	.97	.96

predict_4	Arab	predict	1560	.07	[.06, .08]	6,408.96	.97	.95
predict_5	Arab	predict	1560	.05	[.03, .06]	6,419.13	.98	.98
belief_1	Disability	belief	1520	.02	[.01, .04]	6,215.16	1.00	.99
belief_2	Disability	belief	1520	.04	[.02, .05]	6,190.64	.99	.99
belief_3	Disability	belief	1520	.04	[.02, .05]	6,148.62	.99	.99
belief_4	Disability	belief	1520	.03	[.02, .05]	6,207.48	.99	.99
belief_5	Disability	belief	1520	.04	[.02, .05]	6,222.26	.99	.99
contact_1	Disability	contact	1520	.03	[.02, .05]	6,235.48	.99	.99
contact_2 ¹	Disability	contact	1520	.03	[.01, .04]	6,221.55	.99	.99
contact_3 ¹	Disability	contact	1520	.03	[.02, .05]	6,225.83	.99	.99
contact_4 ¹	Disability	contact	1520	.03	[.02, .05]	6,269.81	.99	.99
contact_5 ¹	Disability	contact	1520	.03	[.02, .04]	6,255.25	.99	.99
motivation_1	Disability	motivation	1520	.04	[.02, .05]	6,229.44	.99	.99
motivation_2 ¹	Disability	motivation	1520	.03	[.02, .05]	6,250.88	.99	.99
motivation_3	Disability	motivation	1520	.03	[.01, .04]	6,241.06	.99	.99
motivation_4	Disability	motivation	1520	.03	[.01, .04]	6,219.41	.99	.99
motivation_5	Disability	motivation	1520	.03	[.02, .04]	6,241.47	.99	.99
policy_1 ¹	Disability	policy	1520	.03	[.01, .04]	6,245.09	.99	.99
policy_2	Disability	policy	1520	.04	[.03, .05]	6,230.96	.99	.98
policy_3	Disability	policy	1520	.03	[.02, .04]	6,231.58	.99	.99
policy_4	Disability	policy	1520	.03	[.02, .05]	6,221.89	.99	.99
policy_5 ¹	Disability	policy	1520	.03	[.01, .04]	6,264.99	.99	.99
predict_1	Disability	predict	1520	.05	[.04, .06]	6,042.03	.98	.97
predict_2	Disability	predict	1520	.04	[.02, .05]	6,203.22	.99	.99
predict_3 ¹	Disability	predict	1520	.04	[.03, .05]	6,157.44	.99	.98

predict_4	Disability	predict	1520	.05	[.03, .06]	6,134.64	.98	.98
predict_5	Disability	predict	1520	.04	[.02, .05]	6,200.19	.99	.98
belief_1	GenderCareer	belief	1531	.03	[.01, .04]	8,290.51	.99	.98
belief_2	GenderCareer	belief	1531	.03	[.01, .04]	8,332.17	.99	.98
belief_3 ¹	GenderCareer	belief	1531	.03	[.01, .04]	8,432.53	.99	.98
belief_4 ¹	GenderCareer	belief	1531	.03	[.01, .04]	8,411.83	.99	.98
belief_5 ¹	GenderCareer	belief	1531	.03	[.01, .04]	8,411.17	.99	.98
contact_1 ¹	GenderCareer	contact	1531	.03	[.02, .04]	8,422.82	.98	.97
contact_2 ¹	GenderCareer	contact	1531	.03	[.01, .04]	8,434.48	.99	.98
contact_3	GenderCareer	contact	1531	.03	[.01, .04]	8,359.22	.99	.98
contact_4	GenderCareer	contact	1531	.03	[.01, .04]	8,402.39	.99	.98
contact_5 ¹	GenderCareer	contact	1531	.03	[.02, .05]	8,405.31	.98	.97
motivation_1 ¹	GenderCareer	motivation	1531	.03	[.01, .04]	8,426.20	.99	.98
motivation_2 ¹	GenderCareer	motivation	1531	.03	[.02, .05]	8,397.44	.98	.97
motivation_3 ¹	GenderCareer	motivation	1531	.03	[.01, .04]	8,406.34	.99	.98
motivation_4 ¹	GenderCareer	motivation	1531	.04	[.02, .05]	8,395.97	.98	.96
motivation_5 ¹	GenderCareer	motivation	1531	.03	[.02, .04]	8,425.95	.99	.98
policy_1 ¹	GenderCareer	policy	1531	.05	[.04, .06]	8,422.01	.96	.94
policy_2 ¹	GenderCareer	policy	1531	.03	[.01, .04]	8,423.00	.99	.98
policy_3 ¹	GenderCareer	policy	1531	.03	[.01, .04]	8,437.97	.99	.98
policy_4 ¹	GenderCareer	policy	1531	.03	[.01, .04]	8,430.64	.99	.98
policy_5	GenderCareer	policy	1531	.03	[.02, .04]	8,431.62	.98	.98
predict_1 ¹	GenderCareer	predict	1531	.03	[.01, .04]	8,442.40	.99	.98
predict_2	GenderCareer	predict	1531	.03	[.02, .04]	8,422.20	.98	.98
predict_3 ¹	GenderCareer	predict	1531	.02	[.01, .04]	8,433.87	.99	.98

predict_4 ¹	GenderCareer	predict	1531	.03	[.01, .04]	8,421.91	.99	.98
predict_5 ¹	GenderCareer	predict	1531	.03	[.01, .04]	8,442.28	.99	.98
belief_1 ¹	GenderScience	belief	1517	.03	[.01, .04]	7,855.67	.99	.98
belief_2	GenderScience	belief	1517	.03	[.01, .04]	7,811.39	.99	.98
belief_3 ¹	GenderScience	belief	1517	.03	[.01, .04]	7,837.94	.99	.99
belief_4 ¹	GenderScience	belief	1517	.02	[.00, .04]	7,865.26	.99	.99
belief_5 ¹	GenderScience	belief	1517	.02	[.00, .04]	7,861.39	.99	.99
contact_1	GenderScience	contact	1517	.02	[.00, .04]	7,816.87	.99	.99
contact_2	GenderScience	contact	1517	.02	[.00, .04]	7,815.94	.99	.99
contact_3	GenderScience	contact	1517	.03	[.01, .04]	7,827.94	.99	.99
contact_4	GenderScience	contact	1517	.03	[.01, .04]	7,817.17	.99	.98
contact_5	GenderScience	contact	1517	.03	[.01, .04]	7,840.60	.99	.99
motivation_1 ¹	GenderScience	motivation	1517	.02	[.01, .04]	7,876.64	.99	.99
motivation_2 ¹	GenderScience	motivation	1517	.03	[.01, .04]	7,867.72	.99	.99
motivation_3 ¹	GenderScience	motivation	1517	.02	[.01, .04]	7,867.92	.99	.99
motivation_4 ¹	GenderScience	motivation	1517	.03	[.01, .04]	7,860.07	.99	.98
motivation_5 ¹	GenderScience	motivation	1517	.02	[.01, .04]	7,873.83	.99	.99
policy_1 ¹	GenderScience	policy	1517	.02	[.01, .04]	7,869.50	.99	.99
policy_2 ¹	GenderScience	policy	1517	.02	[.01, .04]	7,870.70	.99	.99
policy_3 ¹	GenderScience	policy	1517	.02	[.00, .04]	7,870.74	.99	.99
policy_4 ¹	GenderScience	policy	1517	.03	[.01, .04]	7,877.42	.99	.98
policy_5	GenderScience	policy	1517	.02	[.01, .04]	7,871.35	.99	.99
predict_1 ¹	GenderScience	predict	1517	.02	[.01, .04]	7,870.95	.99	.99
predict_2 ¹	GenderScience	predict	1517	.02	[.00, .04]	7,877.93	.99	.99
predict_3 ¹	GenderScience	predict	1517	.03	[.01, .04]	7,848.86	.99	.98

predict_4 ¹	GenderScience	predict	1517	.02	[.00, .04]	7,873.74	.99	.99
predict_5 ¹	GenderScience	predict	1517	.03	[.01, .04]	7,868.66	.99	.98
belief_1	Race	belief	1731	.03	[.02, .04]	6,255.35	.99	.99
belief_2	Race	belief	1731	.03	[.02, .05]	6,332.73	.99	.99
belief_3	Race	belief	1731	.03	[.02, .05]	6,410.60	.99	.99
belief_4	Race	belief	1731	.03	[.02, .04]	6,373.54	.99	.99
belief_5	Race	belief	1731	.03	[.02, .05]	6,378.39	.99	.99
contact_1	Race	contact	1731	.04	[.03, .05]	6,361.06	.99	.99
contact_2 ²	Race	contact	1731	.03	[.02, .05]	3,770.77	.99	.99
contact_3	Race	contact	1731	.03	[.02, .04]	6,404.21	.99	.99
contact_4	Race	contact	1731	.03	[.01, .04]	6,422.53	1.00	.99
contact_5	Race	contact	1731	.03	[.02, .04]	6,415.01	.99	.99
motivation_1	Race	motivation	1731	.03	[.02, .04]	6,407.26	.99	.99
motivation_2	Race	motivation	1731	.03	[.01, .04]	6,397.69	1.00	.99
motivation_3 ¹	Race	motivation	1731	.03	[.01, .04]	6,437.49	1.00	.99
motivation_4	Race	motivation	1731	.03	[.02, .04]	6,380.21	.99	.99
motivation_5	Race	motivation	1731	.03	[.02, .04]	6,404.67	.99	.99
policy_1	Race	policy	1731	.03	[.01, .04]	6,376.05	1.00	.99
policy_2	Race	policy	1731	.03	[.02, .05]	6,302.12	.99	.99
policy_3	Race	policy	1731	.03	[.01, .04]	6,451.42	1.00	.99
policy_4	Race	policy	1731	.03	[.02, .05]	6,392.75	.99	.99
policy_5	Race	policy	1731	.03	[.01, .04]	6,390.81	1.00	.99
predict_1	Race	predict	1731	.04	[.02, .05]	6,207.53	.99	.99
predict_2	Race	predict	1731	.03	[.02, .05]	6,318.36	.99	.99
predict_3	Race	predict	1731	.03	[.02, .04]	6,442.20	.99	.99
predict_4	Race	predict	1731	.03	[.02, .05]	6,307.70	.99	.99

predict_5 ¹	Race	predict	1731	.03	[.01, .04]	6,455.84	1.00	.99
belief_1	Religion	belief	1454	.04	[.03, .06]	6,433.97	.98	.97
belief_2	Religion	belief	1454	.04	[.03, .06]	6,443.70	.99	.98
belief_3	Religion	belief	1454	.03	[.02, .05]	6,439.49	.99	.98
belief_4 ¹	Religion	belief	1454	.04	[.03, .05]	6,442.78	.99	.98
belief_5	Religion	belief	1454	.04	[.02, .05]	6,449.83	.99	.98
contact_1	Religion	contact	1454	.04	[.03, .05]	6,384.56	.99	.98
contact_2	Religion	contact	1454	.04	[.02, .05]	6,404.42	.99	.98
contact_3	Religion	contact	1454	.04	[.02, .05]	6,389.58	.99	.98
contact_4	Religion	contact	1454	.04	[.02, .05]	6,427.95	.99	.98
contact_5	Religion	contact	1454	.04	[.02, .05]	6,431.54	.99	.98
motivation_1	Religion	motivation	1454	.04	[.02, .05]	6,451.30	.99	.98
motivation_2	Religion	motivation	1454	.04	[.02, .05]	6,454.58	.99	.98
motivation_3 ¹	Religion	motivation	1454	.04	[.02, .05]	6,460.76	.99	.98
motivation_4 ¹	Religion	motivation	1454	.04	[.02, .05]	6,463.44	.99	.98
motivation_5 ¹	Religion	motivation	1454	.04	[.03, .05]	6,456.76	.99	.98
policy_1 ¹	Religion	policy	1454	.04	[.02, .05]	6,454.05	.99	.98
policy_2	Religion	policy	1454	.04	[.02, .05]	6,447.18	.99	.98
policy_3	Religion	policy	1454	.04	[.03, .05]	6,425.25	.99	.98
policy_4 ¹	Religion	policy	1454	.04	[.02, .05]	6,461.73	.99	.98
policy_5	Religion	policy	1454	.04	[.02, .05]	6,455.49	.99	.98
predict_1	Religion	predict	1454	.03	[.02, .05]	6,460.14	.99	.98
predict_2 ¹	Religion	predict	1454	.03	[.02, .05]	6,465.69	.99	.99
predict_3 ¹	Religion	predict	1454	.04	[.02, .05]	6,438.24	.99	.98
predict_4	Religion	predict	1454	.04	[.02, .05]	6,438.06	.99	.98

predict_5	Religion	predict	1454	.04	[.03, .05]	6,422.46	.99	.98
belief_1	Sexuality	belief	1618	.02	[.00, .04]	5,480.26	1.00	1.00
belief_2	Sexuality	belief	1618	.03	[.01, .04]	5,231.07	1.00	.99
belief_3	Sexuality	belief	1618	.03	[.01, .04]	5,323.71	1.00	.99
belief_4	Sexuality	belief	1618	.03	[.01, .04]	5,349.87	1.00	.99
belief_5	Sexuality	belief	1618	.03	[.02, .05]	5,388.62	.99	.99
contact_1	Sexuality	contact	1618	.03	[.02, .05]	5,342.39	.99	.99
contact_2	Sexuality	contact	1618	.03	[.02, .05]	5,371.37	.99	.99
contact_3 ^{1,2}	Sexuality	contact	1618	.02	[.01, .04]	1,328.53	1.00	.99
contact_4	Sexuality	contact	1618	.04	[.02, .05]	5,368.91	.99	.99
contact_5	Sexuality	contact	1618	.03	[.02, .04]	5,355.57	.99	.99
motivation_1	Sexuality	motivation	1618	.02	[.00, .04]	5,426.03	1.00	1.00
motivation_2	Sexuality	motivation	1618	.03	[.02, .05]	5,502.10	.99	.99
motivation_3	Sexuality	motivation	1618	.03	[.01, .04]	5,488.76	1.00	.99
motivation_4	Sexuality	motivation	1618	.03	[.02, .05]	5,513.12	.99	.99
motivation_5	Sexuality	motivation	1618	.03	[.01, .04]	5,394.94	1.00	.99
policy_1	Sexuality	policy	1618	.03	[.02, .04]	5,184.73	1.00	.99
policy_2	Sexuality	policy	1618	.02	[.01, .04]	5,334.07	1.00	1.00
policy_3	Sexuality	policy	1618	.03	[.01, .04]	5,337.58	1.00	.99
policy_4	Sexuality	policy	1618	.03	[.01, .04]	5,472.47	1.00	.99
policy_5	Sexuality	policy	1618	.03	[.02, .04]	5,436.38	.99	.99
predict_1	Sexuality	predict	1618	.02	[.01, .04]	5,352.05	1.00	.99
predict_2	Sexuality	predict	1618	.03	[.02, .04]	5,238.72	.99	.99
predict_3	Sexuality	predict	1618	.03	[.02, .04]	5,027.79	1.00	.99
predict_4	Sexuality	predict	1618	.04	[.03, .05]	5,245.44	.99	.99
predict_5	Sexuality	predict	1618	.03	[.01, .04]	5,317.33	1.00	.99

belief_1	Weapons	belief	1614	.03	[.02, .04]	7,448.65	.99	.99
belief_2	Weapons	belief	1614	.05	[.04, .06]	7,307.70	.98	.96
belief_3	Weapons	belief	1614	.06	[.04, .07]	7,302.43	.97	.96
belief_4	Weapons	belief	1614	.04	[.03, .06]	7,281.91	.98	.97
belief_5	Weapons	belief	1614	.04	[.03, .05]	7,416.53	.99	.98
contact_1	Weapons	contact	1614	.04	[.02, .05]	7,412.21	.99	.98
contact_2 ²	Weapons	contact	1614	.03	[.02, .05]	4,918.76	.99	.99
contact_3	Weapons	contact	1614	.03	[.02, .04]	7,428.31	.99	.99
contact_4	Weapons	contact	1614	.03	[.02, .05]	7,427.59	.99	.99
contact_5	Weapons	contact	1614	.03	[.02, .05]	7,418.61	.99	.98
motivation_1	Weapons	motivation	1614	.03	[.02, .05]	7,444.52	.99	.98
motivation_2 ¹	Weapons	motivation	1614	.04	[.03, .05]	7,439.62	.99	.98
motivation_3 ¹	Weapons	motivation	1614	.04	[.03, .06]	7,456.08	.98	.97
motivation_4 ¹	Weapons	motivation	1614	.04	[.03, .06]	7,421.40	.98	.97
motivation_5 ¹	Weapons	motivation	1614	.03	[.02, .05]	7,453.21	.99	.98
policy_1	Weapons	policy	1614	.06	[.05, .07]	7,259.70	.97	.96
policy_2	Weapons	policy	1614	.05	[.04, .06]	7,314.67	.98	.96
policy_3 ¹	Weapons	policy	1614	.04	[.03, .05]	7,417.47	.99	.98
policy_4 ¹	Weapons	policy	1614	.04	[.03, .06]	7,379.49	.98	.97
policy_5 ¹	Weapons	policy	1614	.05	[.04, .06]	7,371.65	.98	.97
predict_1	Weapons	predict	1614	.04	[.02, .05]	7,281.47	.99	.98
predict_2	Weapons	predict	1614	.04	[.02, .05]	7,336.39	.99	.98
predict_3 ¹	Weapons	predict	1614	.04	[.02, .05]	7,432.21	.99	.98
predict_4	Weapons	predict	1614	.03	[.02, .05]	7,439.91	.99	.98
predict_5	Weapons	predict	1614	.04	[.02, .05]	7,295.33	.99	.98
belief_1	Weight	belief	1669	.03	[.02, .04]	6,822.89	.99	.99

belief_2	Weight	belief	1669	.04	[.02, .05]	6,746.12	.99	.99
belief_3	Weight	belief	1669	.03	[.02, .04]	6,813.89	.99	.99
belief_4	Weight	belief	1669	.03	[.02, .04]	6,857.28	.99	.99
belief_5	Weight	belief	1669	.03	[.02, .04]	6,854.16	.99	.99
contact_1	Weight	contact	1669	.03	[.02, .04]	6,819.20	.99	.99
contact_2	Weight	contact	1669	.03	[.02, .04]	6,794.53	.99	.99
contact_3	Weight	contact	1669	.03	[.02, .04]	6,807.18	.99	.99
contact_4	Weight	contact	1669	.03	[.02, .05]	6,818.85	.99	.99
contact_5	Weight	contact	1669	.04	[.03, .06]	6,777.49	.99	.98
motivation_1	Weight	motivation	1669	.04	[.02, .05]	6,767.25	.99	.99
motivation_2	Weight	motivation	1669	.03	[.02, .04]	6,750.06	.99	.99
motivation_3 ¹	Weight	motivation	1669	.03	[.02, .05]	6,819.38	.99	.99
motivation_4	Weight	motivation	1669	.04	[.03, .05]	6,752.99	.99	.98
motivation_5	Weight	motivation	1669	.03	[.02, .04]	6,756.39	.99	.99
policy_1	Weight	policy	1669	.03	[.02, .05]	6,769.03	.99	.99
policy_2	Weight	policy	1669	.03	[.02, .04]	6,817.30	.99	.99
policy_3	Weight	policy	1669	.03	[.02, .05]	6,773.61	.99	.99
policy_4	Weight	policy	1669	.03	[.02, .04]	6,838.77	.99	.99
policy_5	Weight	policy	1669	.03	[.02, .04]	6,767.73	.99	.99
predict_1	Weight	predict	1669	.03	[.02, .04]	6,829.71	.99	.99
predict_2	Weight	predict	1669	.05	[.04, .06]	6,584.28	.98	.97
predict_3 ¹	Weight	predict	1669	.03	[.02, .04]	6,836.32	.99	.99
predict_4	Weight	predict	1669	.04	[.02, .05]	6,701.11	.99	.99
predict_5	Weight	predict	1669	.03	[.02, .05]	6,761.87	.99	.99

Note: ¹ No zero-order correlation with the Implicit Association Test; ²Binary outcome; IAT = Implicit Association Test; SEM = Structural Equation Modeling; RMSEA = Root Mean Square Error of Approximation; AIC = Akaike Information Criterion; CFI = Comparative Fit Index; TLI = Tucker-Lewis Fit Index;

Table S8
Median Correlation Between Outcome Measures, by IAT

IAT	Median r
Age	.15
Arab	.24
Disability	.19
GenderCareer	.13
GenderScience	.16
Race	.19
Religion	.19
Sexuality	.32
Weapons	.19
Weight	.15

Note: IAT = Implicit Association Test