Implicit Ambivalent Racist Sexism: An Intersectional Approach to Racial and
Gender Bias

An Honors Thesis for the Department of Psychology

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Abstract

Recent publicity of sexual misconduct (e.g., O’Brien & Segall, 2017) often fails to address the impact of intersectionality on implicit sexist associations. Intersectionality theory posits specific consequences for Women of Color (Crenshaw, 1989) including varied perceptions of femininity across race (‘gendered race theory,’; Schug et al., 2017) and unique prejudices targeting Black women (‘misogynoir,’; Bailey, 2010). Such are often overlooked due to lacking social salience of oppressed groups like Black women (‘invisibility’; Books, 1998; Fryberg & Townsend, 2008). ‘Ambivalent sexism’ posits two disparate valences of sexism: perceptually negative ‘hostile sexism’ (HS) targeting non-traditional women, and positive ‘benevolent sexism’ (BS) targeting traditionally feminine women (Glick & Fiske, 1996). As racial competence was not incorporated in the original testing of the Ambivalent Sexism Inventory (Glick & Fiske, 1996), this study chooses to investigate implicit ambivalent sexist associations toward Black and White women. In light of intersectional theories (e.g., Bailey, 2010; Schug et al., 2017), the current hypothesis predicted that BS would have a significantly stronger association with White as compared to Black female images (or, HS would have a significantly stronger association with Black as compared to White female images). MTurk Participants (N=188) completed an Implicit Association Test (IAT). Results indicate a significant and large effect supporting the original hypothesis. Potential limitations and future directions are discussed. Overall, the findings suggest a nuanced relationship between implicit ambivalent sexism and race. Future research should explore the relationships
between implicit racism, implicit sexism, and explicit judgment and behavior toward Black and White women.

*Keywords:* ambivalent sexism, implicit, race, intersectionality, invisibility, misogynoir, IAT
Introduction

With the spread of the #MeToo movement and subsequent sexism allegations dominating the news, Hollywood stars, Silicon Valley moguls and large corporations are being held publicly accountable for sexual misconduct (O’Brien & Segall, 2017; Zacharek, Dockterman, & Sweetland Edwards, 2017; Buckley, 2018). However, Women of Color (WOC) have long been excluded from the conversation due to their social ‘invisibility’ (Purdie-Vaughns & Eibach, 2008). For example, the public rarely gives recognition to the fact that Tarana Burke, a Black female activist, founded #MeToo years before famous White women began to declare their support for the campaign (Scott, 2017). Public discourse fails to address how patterns of sexism interact with intersectional identities, especially in how we think about women of different races (Garcia-Navarro, 2017; Crenshaw, 1991; Glick & Fiske, 1996). Patterns of sexism refer to ‘ambivalent sexism,’ or the negative (‘hostile’) and positive (‘benevolent’) leanings of sexist attitudes and behavior (Glick & Fiske, 1996). Due to the predictive relationship between ambivalent sexist attitudes and behavior (de Oliveira Laux, Ksenofontov, & Becker, 2015), how society thinks about ambivalent sexism in relation to women of different races may shed light on subsequent behavioral implications.

Despite the United States’ obsession with race, we are failing to acknowledge whether and how racial identity interacts with ambivalent sexism. This study addresses gaps like these in the public dialogue by considering how

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1 This paper will address cisgender, heterosexual individuals unless otherwise indicated. Therefore, the term ‘female’ will be used interchangeably with the term ‘woman.’ ‘Sexism’ will refer to “discrimination against women” (Sexism, n.d.).
implicit ambivalent sexist associations may vary across female targets of different races. This study investigates implicit associations between the two kinds of ambivalent sexism, benevolent and hostile, in relation to Black and White women. This paper will address the nature, causes and consequences of ambivalent sexism; the implications of intersectionality for WOC, specifically Black women; and related measures of implicit associations and attitudes. Gaps in the current literature with regard to Black women and ambivalent sexism will highlight the necessity of this study and its investigation of implicit ambivalent sexist associations across women of two polarized races.

**Ambivalent Sexism**

The term ‘*ambivalent sexism,*’ first coined by Glick and Fiske (1996) in their *Ambivalent Sexism Inventory (ASI),* highlights the existence of both negative and positive perceptions of sexist behavior and attitudes towards women. Ambivalent sexism promotes ‘*traditional*’ or ‘*benevolent*’ feminine traits that perpetuate the dependent female role, among other consequences (Glick & Fiske, 1996). These consequences include: gender discrimination and inequality; tolerance of sexual harassment; polarized male evaluations of female subtypes; and negative physiological consequences like cardiovascular strain (Glick & Fiske, 2002; Glick & Fiske, 2001; Russell & Trigg, 2004; Salomon, Burgess, & Bosson, 2015). Beyond influencing intimate to professional settings, ambivalent sexism exists across cultures and predicts international gender inequality (e.g., Li, 2004).

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2 Following the example of Kimberle Crenshaw in her 1991 piece, the terms ’*Black*’ and ‘*African American*’ will be used interchangeably in this paper.
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2015; Reilly, Rackley, & Awad, 2017; Custers & McNallie, 2017; Glick et al., 2000).

The complementary components of ambivalent sexism are perceptually negative ‘hostile sexism’ and its positive counterpart ‘benevolent sexism’ (Glick & Fiske, 1996). Despite their disparate perceptions, hostile and benevolent sexism can and do coexist (Glick & Fiske, 1996). For example, though men may enact social control over women (hostile sexism), they may simultaneously depend on women for emotional support (benevolent sexism; Glick & Fiske, 1996). Appropriately, hostile and benevolent sexism indicate a significant positive correlation (Abrams, Viki, Masser, & Bohner, 2003).

**Hostile Sexism** Hostile sexism is perceived as overtly negative and is best described as ‘sexist antipathy,’ or prejudice, toward women (Glick & Fiske, 1996, p. 491). The term is comprised of men’s paternalistic control, social-institutional power, and sexual dominance over women (Glick & Fiske, 1996). Explicit hostile sexist attitudes are shown to predict similar behavior (de Oliveira Laux et al., 2015). These attitudes and behaviors include inflation of negative perceptions of “highly sexually active” (non-traditional) women and perpetuation of gender role stereotypes (e.g., women as temptresses) (de Oliveira Laux et al., 2015; Glick, Diebold, Bailey-Werner, & Zhu, 1997; Zaikman & Marks, 2014, p. 341). Sexual misconduct consequences include 35% of identification variance for tolerance of sexual harassment being attributable to hostile and ambivalent sexism (Russell & Trigg, 2004). Related studies indicate that men with high levels of hostile sexism express greater acquaintance rape proclivity and less endorsement of active
coping for female sexual assault victims (Abrams et al., 2003; Saunders, Scaturro, Guarino, & Kelly, 2017). In the workplace, hostile sexism perpetuates perceived female incompetence (Good & Rudman, 2010), inhibits the hiring of female job applicants (Good & Rudman, 2010), and maintains sexist discrimination and imbalanced gender structures (Li, 2015). Finally, hostile sexism is associated with aggressive perceptions and behaviors (Abrams et al., 2003; Hammond & Overall, 2017), communication inhibition in intimate relationships (Overall, Sibley, & Tan, 2011), and benign perceptions of sexist humor (Greenwood & Isbell, 2002). Across the literature, hostile sexism exposure consistently indicates harmful physical and socioemotional implications for women, especially women who do not fit the traditional, subordinate feminine role.

**Benevolent Sexism** Due to the discrepancy between its positive perception and negative functionality, benevolent sexism is less likely to be identified as a form of prejudice and is viewed as less negative than hostile sexism (Barreto & Ellemers, 2005; Kilianski & Rudman, 1998). Benevolent sexism embodies men’s paternalistic protection of, dependency on, and desire for psychological intimacy with women (Glick & Fiske, 1996). The term’s false-positive perception may be aided by its endorsement of traditionally feminine women (e.g., housewives) and reproachment of non-traditional women (e.g., career-women) (Glick et al., 1997). As with hostile sexism, explicit benevolent sexist attitudes are shown to predict similar behavior (de Oliveira Laux et al., 2015). Benevolent sexism is associated with perpetuation of rape myth acceptance (LeMaire, Oswald, & Russell, 2016), victim blaming (Abrams et al., 2003), and denial or minimization of rape
acknowledgment status (Wilson, Miller, Leheney, Ballman, & Scarpa, 2016; LeMaire et al., 2016). Related to the workplace, benevolent sexism negatively affects women’s self-endorsement related to task competency (Barreto, Ellemers, Piebinga, & Moya, 2010). Other associated consequences include intimate partner violence (Vecina & Piñuela, 2017), male authority complexes (Vecina & Piñuela, 2017), and benign perceptions of sexist humor in men (Greenwood & Isbell, 2002). Benevolent sexism further perpetuates maladaptive female attitudes and behaviors including body shame, appearance management and self-objectification and surveillance (Calogero & Jost, 2011). Despite its multidimensional consequences for traditionally feminine and non-traditional women, benevolent sexism flies under the radar of prejudice and has less of both overt and physical consequences in comparison to hostile sexism.

ASI & Racial Competence Despite loose acknowledgment of ‘ambivalent racism’ in their introduction, Glick and Fiske (1996, p.494) did not enact racial competence in the testing or content of their original Ambivalent Sexism Inventory. Although the researchers recruited comparable gender proportions for each of their six sample groups, more than 75% of participants in every sample (and subsample) group self-identified as White (Glick & Fiske, 1996, p.495-6). Within the measure itself, questions generally refer to “women” without recognition of intersecting racial identities (Glick & Fiske, 1996, p.495-6). In the Glick et al. (2000) follow-up study of ambivalent sexism across 19 cultures, the same general use of the term “women” was also used. In this study, the authors declared that their samples were not comparable to any of the nations’ general
population demographics (with the exception of the Netherlands; Glick et al., 2000, p.766). The *Ambivalent Sexism Inventory* cannot be considered a racially competent scale as its validity was verified on the basis of majority White samples and its content questions do not address intersecting racial identities. Thus, further research is needed investigating ambivalent sexism in relation to race.

**Intersectional Invisibility & Black Women**

Although Tarana Burke, a Black female activist, founded #MeToo years ago on the premise of supporting women of all backgrounds, publicity peaked when influential White women like Ashley Judd declared their support for the campaign (Scott, 2017). Burke’s then lack of recognition may have been the result of three overlapping factors: intersectionality, intersectional invisibility, and misogynoir.

*Intersectionality* ‘Intersectionality,’ originally coined as a nod to the intricacies of interaction between more than one subordinate identity, has unique consequences for Black women (Crenshaw, 1989; Crenshaw, 1991). Ghavami and Peplau (2012) support intersectionality theory through positing the existence of ‘gender-by-ethnic stereotypes,’ or stereotypes that are more nuanced than a simple combination of gender and ethnic stereotypes. For example, the disproportionate negative stereotyping of Black versus White women illuminates the particular effects of gender-by-race intersectionality. Historical sexual stereotypes associated with Black women typically refer to the ‘Jezebel,’ or a greedy, “over-sexed,” promiscuous woman (Stephen & Phillips, 2003, p. 8; Hill
Collins, 2000; Morton, 1991). Today, ‘Jezebel’ has morphed into colloquial understandings of Black female stereotypes such as ‘Diva,’ ‘Gold Digger’ and ‘Baby Mama’ (Stephens & Phillips, 2003). These negative labels are distinct from the dichotomous sexual stereotyping of White women, which fluctuates between sexually-restrained virgin and lower-class slut (Bettie, 2014; Crawford & Popp, 2003; Attwood, 2007; Armstrong, Hamilton, Armstrong, & Seeley, 2014). These polarized representations of Black and White women are also present in the media sphere. Plous and Neptune (1997) found that Black models wore 70% of the animal print clothing displayed in a fashion magazine, further perpetuating Black females’ predatory sexualized stereotyping. These examples help distinguish patterns of stereotype valence across Black and White women, with the negative being disproportionately associated with Black women.

**Intersectional invisibility** Many consequences of intersectionality for Black women fall under the umbrella of social visibility and varied perceptions of femininity. Invisibility refers to the systemic repression of, or absence of representation among, oppressed groups in society (e.g., WOC; Books, 1998; Fryberg & Townsend, 2008). The ‘intersectional invisibility hypothesis’ stems out of invisibility theory, positing that ethnic group stereotypes are more attributable to male rather than female stereotypes, while gender group stereotypes are more attributable to White rather than ethnic minority stereotypes (Purdie-Vaughns & Eibach, 2008). Black women are therefore perceived as less prototypical for their in-groups, which exacerbates their invisibility status (Sesko & Biernat, 2010). Implicit associations between Black women and the categories ‘Black’ and
‘female’ are proven slower, or less automatic, as compared to relating Black men to the category ‘Black’ and White women to the category ‘female’ (Thomas, Dovidio, & West, 2014). ‘Gendered Race Theory’ further supports these slower in-group associations by positing that Blacks are perceived as more masculine than other races (Schug, Alt, Lu, Gosin, & Fay, 2017). These slower in-group associations may be related to backlash for White female leaders exhibiting dominance than for Black female leaders, corroborating the association between Blackness and masculinity (Livingston, Rosette, & Washington, 2012). Overall, Black women are neither the immediate association with regard to Blackness nor femininity.

Varied implicit associations of femininity across race echo the dichotomous associations of femininity within ambivalent sexism (Glick & Fiske, 1996). To review, hostile sexism targets less feminine (or, non-traditional) women while benevolent sexism promotes traditionally feminine women (Glick & Fiske, 1996). In comparison, Black women are less associated with femininity as compared to White women (e.g., Schug et al., 2017). Therefore, patterns emerge amongst both intersectionality and ambivalent sexism in relation femininity, with White women and benevolent sexism being more attributable to traditional femininity than Black women or hostile sexism (Schug et al., 2017; Glick & Fiske, 1996),

**Invisibility consequences** Implicit and explicit consequences of intersectionality span many other domains including leadership. In the workplace, Black female leaders suffer from the ‘double jeopardy’ effect, in which they are
perceived as less “typical” leaders than their Black male and White female coworkers (Rosette & Livingston, 2012). Furthermore, though Black women are perceived as dominant in relation to White and Asian American women, they are also perceived as less competent (Rosette, Koval, Ma, & Livingston, 2016). Such findings consistently echo how Black women are perceived as less visible, less positive, and less feminine as compared to White women (Purdie-Vaughns & Eibach, 2008; Sesko & Biernat, 2010; Rosette et al., 2016).

Black women additionally face underrepresentation in academic research and scholarship, both as researchers and participants (Mowatt, French, & Malebranche, 2013). Though some academic measures specifically target Black Women (e.g., ‘Gendered Racial Microaggressions Scale for Black Women’; Lewis & Neville, 2015), such are few and far between (Remedios & Snyder, 2015). Furthermore, academic circles under-cite and plagiarize the term ‘misogynoir’ which refers to the unique interaction of anti-Black sentiments and misogyny that targets Black women (Webber, 2017; Trudy, 2014; Bailey & Trudy, 2018; Bailey, 2010; ). Moya Bailey, the Black female creator of ‘misogynoir’, is often not cited when other researchers use her term (Bailey, 2010; Bailey & Trudy, 2018). Bailey may not be recognized due to her intersectional invisibility as a Black woman, in addition to being the target of ‘misogynoir,’ despite having coined the term herself (Bailey, 2010; Bailey & Trudy, 2018). As Webber (2017) addresses in her study of misogynoir, few academic or peer-reviewed resources exist on the term. Webber (2017) expresses support for Bailey (2013) in her argument that historically marginalized groups are often excluded
from traditional academic outlets, and that due to this exclusion, non-traditional online publications (e.g., blogs) that reference misogynoir should be considered academically valid. Bailey (2013) essentially argues that the intersectional invisibility of Black women is the reason that misogynoir is not studied in traditional academic circles. In light of this argument, we consider misogynoir an academically valid term for consideration in this study.

The invisibility of Black women in the academic sphere is not only disappointing but dangerous. Black women are significantly more likely to experience suicidal ideation when having experienced gendered racism (Perry, Pullen, & Oser, 2012). Related studies corroborate associations between psychological distress, experienced sexism and experienced racism for Black female participants (Szymanski & Stewart, 2010). More extensive racially-competent research is psychologically and physiologically critical in mitigating the effects of Black female intersectional invisibility (Purdie-Vaughns & Eibach, 2008).

In the end, it is reasonable to posit that Burke’s lack of recognition in the early years of #MeToo was the result of intersectionality, intersectional invisibility and misogynoir. Particularly, intersectional invisibility seems to obscure the incidence of misogynoir in the first place. Inhibiting recognition of misogynoir may allow for scapegoat reasoning (e.g., #MeToo had less support in its early years) that does not acknowledge the particular consequences for Black women facing sexism. Intersectional invisibility may therefore impact how
society thinks about Black women as targets of sexism; or rather, how society doesn’t think about them.

**Implicit attitudes, sexism, & racism**

Implicit, or automatic, attitudes are critical measures of racist and sexist prejudice due to their weak malleability and subsequent resistance to social desirability (e.g., Joy-Gaba & Nosek, 2010; Pinkston, 2015; Dasgupta & Greenwald, 2001). The *Implicit Association Test* (IAT) was the original evaluative measure of implicit attitudes (Greenwald, McGhee, & Schwartz, 1998). This timed, category-pairing task was the first of its kind to reveal pro-White preference in self-reported non-biased White participants, evidenced by faster response times in pairing the categories of ‘White’ and ‘Good’ (and ‘Black’ and ‘Bad’) as compared to ‘Black’ and ‘Good’ (and ‘White’ and ‘Bad’) (Greenwald et al., 1998). The IAT produced similar results in a six-year study of 2.5 million participants, corroborating the finding that implicit ‘pro-White preference’ exists across various races (with the exception of Blacks; Nosek et al., 2007, p. 17). In relation to gender attitudes, the same study found that 76% of participants exhibit stronger associations with men and the work-world and women and domesticity rather than the other way around (Nosek et al., 2007). Results like these establish the functionality of using the IAT to measure implicit racial and sexist attitudes.

**CURRENT STUDY**

The present study hypothesis merges implicit attitudes, ambivalent sexism and the intersectionality of gender and race, and is informed by the following:
general negative perceptions of hostile sexism and false-positive perceptions of benevolent sexism (Glick & Fiske, 1996); race-specific female stereotyping, namely the negative stereotyping of Black women in comparison to White women (e.g., Stephen & Phillips, 2003; Bettie, 2014); associations of traditional femininity with White women and benevolent sexism as compared to Black women and hostile sexism (e.g., ‘gendered race theory’; Schug et al., 2017; ‘ambivalent sexism’; Glick & Fiske, 1996); and the pro-White preference findings of previous IATs (e.g., Greenwald et al., 1998; Nosek et al., 2007, p. 17). Based on this current literature, the present hypothesis predicts that benevolent sexist terminology will indicate a significantly stronger association with White as compared to Black female images (or, hostile sexist terminology will indicate a significantly stronger association with Black as compared to White female images).

PILOT STUDY

Method

Participants Undergraduate students (N=49) were recruited through the Tufts University SONA research participation system. Of the completed data sets (N=48), 29 participants identified as male, 17 as female, and 2 as other. Participants additionally identified as the following: 34 participants identified as White/European American, 6 as East Asian/E. Asian American, 3 as Black/African American, 3 as South East Asian/S.E. Asian American, 3 as Latino(a)/Hispanic American, 2 as Middle Eastern/Arab American, and 2 as South Asian/S. Asian American.
Materials

IAT images The images used in the IAT include ten Black and ten White female images. These images were obtained from the University of Chicago online Chicago Face Database (Ma, Correll, & Wittenbrink, 2015). Images were chosen based on similar ratings across prototypicality, attractiveness, and femininity to minimize participant perceptual bias. The trait scales are based on Likert scales of 1 (not at all) to 7 (extremely), or 1 (not at all) to 5 (extremely), depending on the target trait (Ma et al., 2015). For the selected images, the ratings and scales fall within the following bounds: prototypicality 3.816-4.563 (1-5 Likert scale); attractiveness 3.207-3.934 (1-7 Likert scale); and femininity 4.069-5.364 (1-7 Likert scale). Refer to Appendices A and B for the images used.

IAT terms Ten hostile and ten benevolent sexist terms were chosen from relevant literature to be included in the IAT. The chosen hostile sexist terms are power-seeking, controlling, temptress, whore, aggressive, incompetent, promiscuous, career-woman, frigid, and feminist; the chosen benevolent sexist terms are superior, pure, worshipped, moral, chaste, helper, homemaker, innocent, caregiver, and supportive (Barreto & Ellemers, 2005; Glick et al., 1997; Hammond & Overall, 2017; Kilianski & Rudman, 1998; Viki, Abrams, & Hutchison, 2003; Sibley & Wilson, 2004; Reilly et al., 2017; Tavris & Wade, 1984).

IAT design Within the IAT design, Black female images are considered Target A and White female images are considered Target B, while benevolent sexist terms are considered Positive Attributes and the hostile sexist terms are
considered Negative Attributes. The general format of the IAT is a word-image pairing task to be taken using a computer with a keyboard. Participants are instructed to press the “E” key to match a presented image or word with the left attribute(s) on-screen, or the “I” key for the right attribute(s) on-screen (Carpenter et al., 2018). The matching blocks presented to participants are: Incompatible [Black female images with benevolent attributes on right]; Compatible [Black female images with hostile attributes on right]; Incompatible [Black female images with benevolent attributes on left]; and Compatible [Black female images with hostile attributes on left]. For example, an association between Black and hostile is simultaneously considered an association between White and benevolent. The IAT program randomly generates the order of the compatible and incompatible blocks (Carpenter et al., 2018). Each block type is given a practice round containing 20 trials and a critical round containing 40 trials (Carpenter et al., 2018). See Appendix C for current study design examples.

**Distribution platforms** The IAT was programmed using *IATgen*, an online Qualtrics-based platform intended for IAT task administration (Carpenter et al., 2018). The *IATgen* program expresses reliability and validity through the results of three studies that indicate internal consistency, correlation with explicit measures, and moderate test-retest correlations between the studies (Carpenter et al., 2018).

**Procedure**

Participants were awarded course credit in exchange for their participation. After consenting to participate in the study, participants completed
an IAT task. Participants were then debriefed in-person by the researcher and also by a digital form at the end of the survey. The researcher then asked participants a series of questions regarding study content and ambiguous study aspects, thanked them and awarded online course credit.

**Results**

Results were based on the 48 completed data sets and analyzed using IATgen software. No data were excluded due to the use of excessive speed. In line with implicit association research (e.g., Greenwald et al., 1998), stronger implicit associations will manifest as faster response times through pairing of the two variables in the IAT. Internal consistency of the data is corroborated by a split-half reliability of 78.9%, an error rate of 9.8%, and a timeout rate of <0.0002. Results of a single sample t-test \((t=-3.42625, p<0.001, 95\% \text{ CI } [-0.29252,-0.07609])\) express a D-score mean of -0.18431 \((SD=0.37269)\), indicating a significantly greater association between Target B (White female images) and the Positive Attribute (benevolent sexism) as compared to Target A (Black female images) and the Positive Attribute; or, indicating a significantly greater association between Target A (Black female images) and the Negative Attribute (hostile sexism) as compared to Target B (White female images) and the Negative Attribute. The results of a t-test further show a medium effect \((d=-0.49454)\) regarding the association between White-benevolent/Black-hostile as compared to Black-benevolent/White-hostile.

The pilot study intended to establish the validity of the materials used, ultimately with the goal of replicating these findings with appropriately measured
power. Replication of the pilot study is intended to further corroborate the results of the pilot study using the now-validated IAT measure. The pilot study results are consistent with the original hypothesis, confirm the validity of the IAT, and corroborate its use in the subsequent study.

EXPERIMENT 1

Method

Participants A total of 252 eligible participants were recruited online through Amazon’s MTurk. Five data sets were unable to be verified regarding their participant completion code and were excluded from the data analysis. Another 59 data sets were excluded from the data analysis due to use of excessive speed during the IAT task. Of the eligible (N=188) data sets, 101 participants identified as male, 86 as female, and 1 did not disclose information. Additionally, 86 participants identified as White/European American, 51 as South Asian/S. Asian American, 14 as Black/African American, 11 as South East Asian/S.E. Asian American, 11 as mixed race, 7 as Latino(a)/Hispanic American, 4 as East Asian/E. Asian American, and 4 as other or did not disclose information.

Procedure

All participants completed the same IAT task via Qualtrics as in the pilot study. The Tufts Qualtrics survey link was administered using MTurk. Eligible MTurk users completed the study in exchange for monetary compensation of $0.25 after submission of the completion code provided at the end of the survey. Consent and debriefing forms were embedded digitally in the survey. All other materials used were the same as in the pilot study.


**Results**

A total of 248 participants successfully completed the IAT. Results were based on the (N=188) participants with valid data and analyzed using IATgen software. Internal consistency of the data was corroborated by a split-half reliability of 80.1%, an error rate of 11.9%, and a timeout rate of <0.002. Results of a single sample t-test (t = -11.56, p < 0.001, 95% CI [-0.35757, -0.25334]) express a D-score mean of -0.30546 (SD=0.36222), indicating a significantly greater association between Target B (White female images) and the Positive Attribute (benevolent sexism) as compared to Target A (Black female images) and the Positive Attribute; or, indicating a significantly greater association between Target A (Black female images) and the Negative Attribute (hostile sexism) as compared to Target B (White female images) and the Negative Attribute. The results of the t-test show a large effect (d = -0.84329) regarding the association between White-benevolent/Black-hostile as compared to Black-benevolent/White-hostile. The results of the present study corroborate the results and hypothesis of the pilot study, as well as the present hypothesis. Refer to Table 1 and Figure 1 for the descriptive statistics and histogram representation of participants’ individual mean D-scores.

**General Discussion**

The present study is critical for understanding the racial associations within implicit ambivalent sexism. The results of this study support the present study hypothesis in that implicit understanding of the relationship between White female images and benevolent sexist terms (or, Black female images and hostile
sexist terms) is more automatic (faster in response time) than the implicit understanding of the relationship between Black female images and benevolent sexist terms (or, White female images and hostile sexist terms). In other words, participants automatically associate positive (benevolent) sexist terminology with White women on a deeper level than with Black women, or negative (hostile) sexist terminology with Black women on a deeper level than with White women. These results are consistent with the findings of the original IAT that found deeper associations between positive terms and typical White male names (or, negative terms and typical Black male names) than between positive terms and typical Black male names (or, negative terms and typical White male names; Greenwald et al., 1998). These patterns of pro-White preference (Nosek et al., 2007) remain consistent in this study even with the unique substitutions of female targets, visual images, and ambivalent sexist terms. The present findings indicate the unique consequences of intersectionality for implicit sexist associations across women of two polarized races.

Despite the drastic rise in public discourse about sexism (e.g., Zacharek et al., 2017), our society yet fails to consider how we associated different kinds of sexism (‘ambivalent sexism’; Glick & Fiske, 1996) with women across different races. In a society that prioritizes maleness and Whiteness, intersectionality often results in social invisibility, which may obscure intersectional consequences for Black women including ‘gendered race theory’ and ‘misogynoir’ (Books, 1998; Purdie-Vaughns & Eibach, 2008; Schug et al., 2017; Bailey, 2010). When society uses social invisibility as a tool to avoid including Black women in our dialogues
about sexism, we are actually exacerbating our own biases that feed misogynoir (Bailey, 2010). It therefore comes as no surprise that Black women are largely excluded from academic research, especially research involving ambivalent sexism (Mowatt et al., 2013; Lewis & Neville, 2015; Remedios & Snyder, 2015; Webber, 2017). As we’ve seen in various studies, sexist behavior is predicted by sexist attitudes (e.g., de Oliveira Laux et al., 2015). Therefore, further research investigating the interaction of gender, race and implicit attitudes is critical in understanding the biased thinking, and theoretical subsequent behavior, of our society with regard to sexism.

**Implications** This study calls detailed attention to the disparate ways in which we think about ambivalent sexism in relation race. Though more studies are beginning to investigate racialized sexism targeting Black women (e.g., Watson, Robinson, Dispenza, & Nazari, 2012), few have investigated race in relation to implicit ambivalent sexism. This study may aid intersectionality awareness in exposing how ambivalent sexist associations are implicitly biased by racial preferences. However, more research must be conducted to understand the emotional, social and behavioral implications of racialized sexism and misogynoir (Bailey, 2010).

**Limitations** Various aspects of this study may pose as confounds that could have affected the validity and analysis of the data. One limitation is the participant pool. The sample does not reflect comparable racial demographics as a microcosm of the United States population (Pew Research Center, 2015). Furthermore, participants were not monitored during the study due to the online
MTurk platform. A significant portion of eligible participant data (22.67%) were excluded from the data analysis due to excess speed; it is possible that some of the included data are also not valid due to lack of monitoring.

Despite its common use, the measured content of the IAT is disputed. Although the original function of the IAT was meant to measure implicit attitudes and associations, some researchers argue that the measure may be influenced by various “non-associative processes” that could affect its validity and reliability (Calanchini, Sherman, Klauer, & Lai, 2014, p. 1285; Oswald, Mitchell, Blanton, Jaccard, & Tetlock, 2013, p. 183; Rezaei, 2011). However, other studies have corroborated the validity and reliability of the IAT (Nosek & Hansen, 2008). One of the original creators of the IAT formally addressed these concerns through consideration of the relationship between small statistical effects and greater real-life implications, as well as research inconsistencies across studies (Greenwald, Banaji, Nosek, & Smith, 2015). We based the design of this study on the validity of the IAT but keep in mind the potential confounding limitations of the measure.

On a related note, the malleability of implicit attitudes themselves is disputed in academic research. One study indicates that implicit racial biases may be weakly, though reliably, affected by exposure to influential, positive, and known Black targets, suggesting that implicit attitudes are not significantly malleable (e.g., Joy-Gaba & Nosek, 2010; Pinkston, 2015; Dasgupta & Greenwald, 2001). In contrast, a study of implicit gender bias claims that exposure to a counter-stereotypic female (e.g., intelligent) promotes greater perceived credibility of a female target in an unrelated task (Power, Murphy, &
Coover, 1996, p. 49). Despite the existence of prejudice-reducing results like those of Power et al. (1996), the significant malleability of implicit attitudes is not widely indicated and is thus assumed to function at a near negligent level for the purpose of this study.

Concern also lies in the discriminant validity between the original version of the IAT (Greenwald et al., 1998) and the version designed for this study. We have limited means of determining whether this study’s results are significant due to the interaction of race and word valence alone (as in the original IAT), or due to the added variable of ambivalent sexism. Though the present study results indicate that participants associate the White-benevolent/Black-hostile pairings significantly more than Black-benevolent/White-hostile pairings, it is possible that this effect mirrors the findings of the original IAT study in that the most influential variable is word valence alone, rather than the interaction of word valence and sexist terminology.

Additionally, we are unable to determine whether the significance of the results are attributable to pro-White preference or anti-Black prejudice. The results indicate that there is a stronger association between the White-benevolent/Black-hostile pairings as compared to the Black-benevolent/White-hostile pairings. However, we are unable to discriminate the degree to which participants separately associated White and benevolent as compared to Black and hostile. We must stress that pro-White sentiments are not to be directly equated with anti-Black sentiments, although some researchers that have used the IAT have done so (e.g., Nosek et al., 2007). As mentioned in the introduction, the IAT
measure cannot produce hard data that represents the relationship of each target category (by race) with each attribute (by sexist valence). In light of these limitations, we are unable to ascertain the degree to which the IAT measures anti-Black versus pro-White biases.

Finally, concerns arose during the pilot study in reference to specific sexist terminology. For example, some participants expressed confusion as to why “career-woman” was categorized as negative, or why “chaste” was categorized as positive. Despite these comments, the pilot study analysis shows that participants indicate a significantly greater, medium effect association within the White-benevolent/Black-hostile pairings as compared to the Black-benevolent/White-hostile pairings. Though terminology concerns do not seem to affect relationship significance between variables, we are unable to declare so without appropriate analyses. It is therefore necessary to further explore the effects of ambiguous sexist terminology within a measure that centralizes valenced word content.

**Future Directions** Future replications of this study should consider incorporating a more representative participant pool (e.g., racial proportions); an in-person study experience; tests of discriminant validity in comparison to the original IAT; exploratory analyses that target the implicit associations between race variables and each of the ambivalent sexist categories; and exploratory analyses that target the incidence of anti-Black versus pro-White associations within the data. Additionally, future replications should consider conducting explicit measures of sexism and racism (e.g., Rape Proclivity Scale; Bohner et al., 1998) for means of correlation testing with the implicit measures in the study.
Data from these correlations may provide further insight into how the implicit relationships between race and ambivalent sexism translate to explicit attitudes and behaviors, or the enactment of ambivalent sexism across race. Finally, regarding the disputed efficacy and measured content of the IAT, relational rather than associative measures (e.g., Implicit Relational Assessment Procedure; Drake et al., 2010) should be considered.
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Appendix A

Chicago Face Database Black Female Images (Ma et al., 2015)
Appendix B

Chicago Face Database White Female Images (Ma et al., 2015)
Appendix C

Current Study IAT Examples (Carpenter et al., 2018)
Table 1

*Descriptive statistics of individual participant mean IAT D-scores.*

<table>
<thead>
<tr>
<th>Statistics</th>
<th></th>
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<tbody>
<tr>
<td><strong>D-score</strong></td>
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<tr>
<td>N</td>
<td>Valid</td>
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<tr>
<td></td>
<td>Missing</td>
</tr>
<tr>
<td>Mean</td>
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</tr>
<tr>
<td>Median</td>
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<tr>
<td>Mode</td>
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<td>Skewness</td>
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<tr>
<td>Std. Error of Skewness</td>
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<tr>
<td>Range</td>
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<tr>
<td>Minimum</td>
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<tr>
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<td>50</td>
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</tr>
</tbody>
</table>

*Note.* Negative D-scores indicate faster participant response times in associating White-benevolent/Black hostile as compared to Black-benevolent/White-hostile.

Statistics determined using SPSS Version 24.0.
Figure 1. SPSS Version 24.0 was used to depict a histogram of mean D-scores for individual participants that completed the IAT task. Negative D-scores indicate faster participant response times in associating White-benevolent/Black hostile as compared to Black-benevolent/White-hostile.