Creativity Stereotypes and the Consensual Assessment Technique

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In creativity, there is scant evidence of significant racial and gender differences, and when such differences are found, there is no consistency regarding which groups perform best. There has been little work focusing on racial and gender biases and/or stereotypes within creativity assessment. It is study these issues by using a modified version of the Consensual Assessment Technique in which the judges are provided with information about the creators' gender and/or race. A total of 455 undergraduates assigned ratings for creativity, writing ability, and enjoyment to 60 poems downloaded from a poetry Web site. These poems either had no attribution or had (fictional) stereotypical Black, White, and Crossover names for each gender. Results suggest that novice raters using CAT methodology display little evidence of bias in their ratings of creativity, writing ability, and poem enjoyment. Very slight preference was found for poems assigned names of White females.

The related topics of racial and gender differences in (a) cognitive abilities, (b) the assessment of cognitive abilities, and (c) biases and stereotypes with regard to cognitive abilities have had a large impact in schools, the workplace, and the larger world. These issues have, therefore, generated much discussion and research in psychology (see, e.g., Agars, 2004; Camara & Schmidt, 1999; Coley, 2001; Eagly, Makhijani, & Klonsky, 1992; Eagly, Mladinic, & Otto, 1991; Herrnstein & Murray, 1994; Jacoby & Glauberman, 1995; A. S. Kaufman & Lichtenberger, 2006; Loehlin, 1999; Morgan & Maneckshana, 1996).

The issues of possible racial and gender differences in abilities and in assessment have been raised in the area of creativity, as well. In creativity, there is little evidence of significant racial and gender differences, and when such differences are found, there is no consistency regarding which groups out-perform which others (Ai, 1999; Baer & Kaufman, 2008; J. C. Kaufman, 2006; Kessler & Quinn, 1987). There has also been some recent research in gender and ethnic group differences in self-assessments of creativity. This research suggests that (a) African Americans are less likely than other groups to see themselves in gender stereotypical ways and (b) African Americans and Native Americans tend to view themselves as more creative than other ethnicities (J. C. Kaufman, 2006).

In the area of racial and gender biases and/or stereotypes, however, there has been little research. Are women and men, or African Americans and Caucasians, viewed as more or less creative than one another, and might such views impact creativity assessment? There has been extensive research, much in the economics and business

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literature, focusing on how work is assessed with African American versus Caucasian names. Bertrand and Mullainathan (2004) found that the same resumes were more favorably viewed if they had a Caucasian name than if they had an African American name. King, Madera, Hebl, Knight, and Mendoza (2006) found that resumes with African American names were rated poorly even when they were objectively quite strong.

Creativity assessment is typically conducted in a gender- and race-blind manner, and it therefore provides little information of possible racial or gender biases or stereotypes. There is, however, one kind of creativity assessment that, although it is also generally conducted in a manner that would not allow gender or racial biases or stereotypes to influence outcomes, nonetheless could be conducted in a manner that would allow such biases and/or stereotypes to emerge. This is the Consensual Assessment Technique (CAT), developed by Amabile (1983, 1996) and extended by others (e.g., Baer, 1993, 1994; Baer, Kaufman, & Gentile, 2004; Hennessey, 1994; J. C. Kaufman, Baer, Cole, & Sexton, 2008).

The CAT is a powerful tool used by creativity researchers in which groups of expert judges rate the creativity of a set of creative products (such as stories, collages, poems, etc.). The judges must be experts in the domain in which they serve as judges, so (for example) in a study of creativity using collages and poems, a panel of artists and/or art critics might judge the creativity of the collages, whereas a separate panel of poets and/or poetry critics would be needed to judge the creativity of the poems. Unlike other measures of creativity, such as divergent-thinking tests, the CAT is not based on any particular theory of creativity (Amabile, 1996), which means that its validity (which has been well established empirically) is not dependent upon the validity of any particular theory of creativity. For these reasons, it has been called the ''gold standard'' of creativity assessment (Carson, 2006).

Although CAT judges generally receive no information about the creators of the artifacts that they are being asked to judge, other than information about the group as a whole (e.g., that the subjects were all elementary-school students, or college students, or published writers, etc.), it would, of course, be possible to provide such information about the individual creators. This could be done either directly (e.g., ''This collage was created by an African-American female subject.'') or indirectly by providing a name that clues the judge to the gender and/or ethnicity of the creator (e.g., Imani and Ebony, listed by Levitt & Dubner, 2005, as the two ''Blackest'' girl names).

It is, thus, possible to assess racial and gender stereotypes and biases using the CAT by providing judges with information about the creators' gender and/or race (although we emphasize that this is a special use of the CAT that would be considered a misuse, were it being done for assessment purposes). In this study, we have provided this information indirectly by supplying (fictional) names of the creators that suggested gender and racial identities. In fact, these clues to gender and race were randomly assigned.

The primary purpose of this study was to continue examining the bias-free nature of the CAT, given that past results showed little or no gender or ethnic group differences in creativity assessments (J. C. Kaufman, Baer, & Gentile, 2004). This study's goal was to see if CAT ratings remain free of such differences even when gender and racial identifying information is available.

METHODS

Materials

A total of 60 poems were randomly downloaded from the Web site poetry.com. These poems were then randomly assigned to a name taken from Levitt and Dubner's (2005) lists of the ''Whitest'' boys names, ''Whitest'' girls names, ''Blackest'' boys names, ''Blackest'' girls names, Crossover boys names, and Crossover girls name (10 from each group were randomly selected and assigned to the poems). The degree to which a name was considered White or Black was determined by the percentage of times the name appeared on a birth certificate issued to a Black family versus a White family (Levitt & Fryer, 2004).

These 60 poems were then randomly arranged into two packets. One packet simply had the poems with no attribution. The second packet had the poems with their randomly generated author attribution.

Raters

A total of 455 undergraduates rated the poems for creativity, writing ability, and enjoyment. They used the CAT. In its original (and validated) form, the CAT requires expert judges. Amabile (1983) wrote, for example, that ''it would be a mistake to conclude that everyone (or even every psychology graduate student) can be considered an appropriate judge'' and ''the best guideline is to use judges who have at least some formal training and experience in the target domain'' (p. 72). The CAT, as Dollinger and Safran (2005) correctly noted, has as its most fundamental tenet (and as the core of its validity claims) the requirement that artifacts be assessed for creativity by experts in the domain in question. There has been some work using a modified versions of the CAT that employs novice judges (e.g., Kasof et al., 2007) or experts with limited expertise (e.g., Baer, 1996; J. C. Kaufman, Gentile, & Baer,

2005). Recent research suggests that the use of novice judges may be problematic (and invalid for many purposes), including CAT judgments of poetry such as those conducted in this study (J. C. Kaufman, Baer, & Cole, 2009; J. C. Kaufman et al., 2008). Because the primary goal of this research did not require accurate assessments of creativity but rather assessments that might expose biases or stereotypes about the creativity of different gender and racial groups held by subjects in general (not by domain experts), novice raters were required for this particular study. The real subjects in this study were not those who created the poems, but the novice judges who rated them for creativity.

RESULTS

For each of 60 poems, a total of 455 student raters provided ratings for creativity, writing ability, and enjoyment. In condition 1 ($n = 260$), each poem was credited to an author name, which was coded to represent a specific gender (male or female) and a specific race (Caucasian, African American, or crossover). In the control condition ($n = 195$), the identical 60 poems were presented with no author association.

In order to examine the impact of target gender and ethnicity on CAT ratings, the data set was manipulated such that independent scale scores were created for each gender and ethnicity condition (as determined by ratee name) and for each gender/ethnicity combination. By combining ratings across poems based on author gender and ethnicity, a scale score was created for each of 11 categories: male, female, Caucasian, African American, crossover, Caucasian female, African American female, crossover female, Caucasian male, African American male, and crossover male. Because scores were computed from the same set of ratings, individual poem ratings were necessarily included in multiple scales (i.e., the Female creativity scale score necessarily includes ratings of creativity for all poems from the Caucasian female, African American female, and crossover female categories).

Prior to testing rater effects based on author demographics, group effects were examined in the no-name condition in order to test for inherent quality differences in the pomes. Using a within subjects design, significant effects were found for gender, $F(1,193) = 7.689$, $p = .01$; ethnicity, $F(2,192) = 29.449$, $p < .001$; and the interaction of race and gender, $F(2, 192) = 10.563$, $p < .001$, on ratings of creativity. For ratings of writing ability, effects were also found for gender, $F(1,193) = 5.034$, $p = .01$; ethnicity, $F(2,192) = 17.131$, $p < .001$, and the gender/ethnicity interaction, $F(1,192) = 16.187$, $p < .01$. Lastly, enjoyment ratings also revealed effects for gender, $F(1, 193) = 14.863$, $p < .001$; ethnicity, $F(2, 192) = 60.875$,

$p < .001$; and their interaction, $F(2,192) = 29.088$, $p < .001$. It is important to note that these score differences do not reflect actual ethnicity and gender differences as these tests were of ratings in the no-names condition only. They do reveal, however, that inherent quality differences existed across the poems, and these differences were confounded with author gender and ethnicity. Consequently, for this study, cross-group comparisons are not possible. All subsequent comparisons are within-group but across condition (i.e., named vs. unnamed).

In order to test for gender and/or ethnicity bias in CAT ratings of creativity, writing ability, and enjoyment, individual t-tests were run comparing poem ratings in the named and unnamed conditions for each of the 11 demographic categories. As noted earlier, the expectation of this study was that CAT raters would not be influenced by gender and ethnicity bias as a function of poet names. Therefore, because nonsignificant effects would support the proposed expectations, corrections for familywise error (which would have increased the likelihood of null effects) were not made. In other words, these analyses erred on the side of revealing any potential gender or ethnic differences that might exist. Mean ratings, SD's, and t-test results for creativity, writing ability, and enjoyment are provided in Tables 1–3. Of the 33 independent tests, five produced significant results. Among the creativity ratings, poems with a Caucasian name were rated slightly higher than the same poems with no-names associated with them (3.81, 3.66). The same was true for Caucasian female authors (3.73, 3.56). Among the writing ability ratings, poems attributed to Caucasian authors (3.84, 3.70), female authors (3.91, 3.77) and Caucasian female authors (3.70, 3.53) were all rated slightly higher than

TABLE 1
Means, SDs, and t-Tests Comparing *Creativity* Ratings in Names and No-Names Conditions

| Group | Names | | No-Names | | | |
	Mean	SD	Mean	SD	t	Alpha
Caucasian	3.81	.77	3.66	.76	$t(453) = 2.073$	.04
Black	3.90	.77	3.78	.74	$t(453) = 1.604$	.11
Ambiguous ethnicity	3.98	.78	3.88	.81	$t(453) = 1.411$	.16
Women	3.88	.77	3.75	.73	$t(453) = 1.815$	.07
Men	3.92	.75	3.80	.77	$t(453) = 1.647$	.10
Caucasian women	3.73	.80	3.56	.76	$t(453) = 2.299$	.02
Black women	3.93	.81	3.81	.79	$t(453) = 1.674$	.10
Ambiguous women	3.96	.84	3.88	.85	$t(453) = 1.039$	.30
Caucasian men	3.89	.80	3.76	.84	$t(453) = 1.647$	.10
Black men	3.87	.78	3.77	.79	$t(453) = 1.442$	.15
Ambiguous men	4.00	.82	3.88	.85	$t(453) = 1.597$	.11

Notes. Names, $n = 260$; no-names, $n = 195$.

TABLE 2
Means, SDs, and *t*-Tests Comparing *Writing Ability* Ratings in Names and No-Names Conditions

| Group | Names | | No-Names | | | |
	Mean	SD	Mean	SD	*t*	Alpha
Caucasian	3.84	.73	3.70	.73	$t(453) = 2.131$	.03
Black	3.96	.74	3.85	.76	$t(453) = 1.798$	.07
Ambiguous ethnicity	4.03	.77	3.89	.74	$t(453) = 1.845$	.07
Women	3.91	.74	3.77	.73	$t(453) = 2.033$	.04
Men	3.99	.73	3.86	.73	$t(453) = 1.877$	.06
Caucasian women	3.70	.74	3.53	.77	$t(453) = 2.443$	.02
Black women	3.99	.80	3.87	.82	$t(453) = 1.613$	.11
Ambiguous women	4.03	.84	3.90	.79	$t(453) = 1.735$	.08
Caucasian men	3.99	.79	3.86	.77	$t(453) = 1.614$	.11
Black men	3.96	.74	3.86	.77	$t(453) = 1.872$	.07
Ambiguous men	4.02	.78	3.88	.79	$t(453) = 1.868$	.06

Notes. Names, $n = 260$; no-names, $n = 195$.

TABLE 3
Means, SDs, and *t*-Tests Comparing *Enjoyment* Ratings in Names and No-Names Conditions

| Group | Names | | No-Names | | | |
	Mean	SD	Mean	SD	*t*	Alpha
Caucasian	3.47	.78	3.35	.77	$t(453) = 1.579$	.12
Black	3.58	.78	3.51	.76	$t(453) = 0.992$	.32
Ambiguous ethnicity	3.70	.77	3.59	.80	$t(453) = 1.536$	.13
Women	3.56	.77	3.44	.73	$t(453) = 1.549$	.12
Men	3.61	.74	3.52	.76	$t(453) = 1.296$	.20
Caucasian women	3.36	.83	3.25	.81	$t(453) = 1.487$	.14
Black women	3.64	.82	3.57	.81	$t(453) = 0.920$	.36
Ambiguous women	3.66	.84	3.51	.81	$t(453) = 1.859$	.07
Caucasian men	3.57	.82	3.46	.83	$t(453) = 1.517$	.13
Black men	3.51	.82	3.43	.83	$t(453) = 0.991$	.32
Ambiguous men	3.74	.81	3.65	.87	$t(453) = 1.131$	.26

Notes. Names, $n = 260$; no-names, $n = 195$.

the same poems with no author association. No differences reached significance among the enjoyment ratings.

It should be noted that all ratings in the named condition trended higher than ratings in the unnamed condition for all groups in all categories. Further, differences that did emerge as significant ranged in size from .14 to .17 on a 5.00 point scale, each accounting for 1% or less of the between-component variance.

DISCUSSION

The results of this study suggest that novice raters using CAT methodology display little evidence of bias in their ratings of creativity, writing ability, and poem enjoyment. Although some differences did emerge, these differences were small and consistent with an overall trend to inflate ratings of poems presented with author

names, regardless of the author's gender or ethnicity. This finding suggests that biases and stereotypes about the creativity of writing by different groups are at most small. It also suggests that the CAT, even when demographic information about individuals is (inappropriately) provided, is robust in being little influenced by such biases. This is in accord with previous research showing little gender or ethnic group differences in CAT ratings of subjects' writings when such demographic information was not provided to expert judges (J. C. Kaufman et al., 2004).

Given that the CAT is not typically used with names, further studies are needed to determine the generalizability of these findings. Similarly, this study used novices instead of experts (as is recommended); however, novices are often used by creativity researchers in lieu of experts (see J. C. Kaufman, Baer, et al., in press, for a discussion of these studies).

Despite the inclination to discount the differences as inconsequential in the larger process of evaluation, we do note that ratings of females, particularly White females, seemed to drive each of the five differences that emerged. This is consistent with past research on evaluation of men and women (cf. Eagly et al., 1992; Eagly et al., 1991), which identified a tendency for positive bias in the evaluation of women on non-masculine typed performance tasks. Although we remain skeptical about the meaning of these differences, we note that even small effects may be meaningful (Agars, 2004). Concomitantly, these two points suggest that additional examination of stereotypes and/or biases in other areas and of the CAT as a bias-free means to measure creative performance should also consider the impact of the task itself. Future research comparing perceived creativity differences based on CAT assessments between groups in different domains (such as the math domain versus the writing domain) would be useful.

It should be noted that there is a significant body of research that argues, rather persuasively, that males and females do indeed write differently, and our subjects' slightly higher evaluations of writing by women might reflect such differences. Mulac and Lundell (1994) found that by analyzing such things as judgmental adjectives and elliptical sentences (more common among males) and references to emotions, sentences beginning with adverbs, and hedge words (more common among females) they could correctly identify college-student writers as male or female with 75% accuracy. A group of computer scientists (Argamon, Koppel, Fine, & Shimoni, 2003; Koppel, Argamon, & Shimoni, 2002) did better still (achieving 80% accuracy) using language-based algorithms for identifying a writer's gender. Baron (2008) found that female and male college students' instant message posts were distinguishable: women's postings were more like conventional writing,

whereas men's postings more closely resembled face-to-face speech. These studies simply tried to distinguish female and male writing, without assessing quality, but the National Assessment of Educational Progress (also known as The Nation's Report Card) results clearly and consistently favors girls over boys in measures of fourth-, eighth-, and twelfth-grade writing skill (Baron, 2008; Salahu-Din, Persky, & Miller, 2008). J. C. Kaufman, Niu, Sexton, and Cole (2010) found that both men and women blindly rated female poetry as being more creative than male poetry (unlike in this study, J. C. Kaufman, Niu, et al., in press, did not reveal the gender or ethnicity of the writer).

The results of this study suggest that there is little in the way of stereotypes regarding differences in the creativity of both Caucasian versus African American and female versus male writers. This study used poems as the task to be evaluated. There is much evidence in creativity research for domain effects, however (Agars, Baer, & Kaufman, 2005; Baer, 1993, in press; J. C. Kaufman & Baer, 2005; J. C. Kaufman, Cole, & Baer, 2009), and further research is, therefore, needed to know how widely these findings can be generalized to other domains.

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