Social Judgments as a Measure of Right Mindfulness

Robert Lindsay Hakan¹, Julia M. Neal¹, and John Lothes¹

Abstract
Mindfulness should be associated with decreased automatic responding and with increased empathy and compassion. Therefore, given an opportunity to express judgments about other people, a highly mindful person should be less inclined to express negative and unnecessary judgments. The present study provided participants the opportunity to express judgments about photographs of other people in a procedure that attempted to control for potential demand characteristics associated with self-report measures of mindfulness. Expressed judgments were panel rated, and the derived judgment scores were regressed with participant scores on the Mindful Attention Awareness Scale (MAAS) and the Five Facets of Mindfulness Questionnaire (FFMQ). Results demonstrated no overall significant relationship between judgments and MAAS or FFMQ total scores. However, a significant relationship between judgment scores and the “act with awareness” and the “non-judgment” facets of the FFMQ was observed. Judgment scores were also related to self-reported involvement in mindfulness activities such as meditation and yoga. These results suggest that self-reported mindfulness may not completely align with behaviors that logically reflect right mindfulness. Moreover, social judgment may be a useful overt measure related to mindfulness. The results also provide empirical evidence of the very strong social tendency to negatively and often derogatorily judge other people.

Keywords
mindfulness, social judgment, automatic, subject bias

According to Kabat-Zinn (2003) mindfulness is “the awareness that emerges through paying attention on purpose, in the present moment, and not judgmentally to the unfolding of experience moment by moment” (p. 145). Although definitions and perspectives on mindfulness range from its Eastern origin in Buddhism to its practice in Western behavioral science, mindfulness pertains to particular qualities of attention and awareness. In the West, mindfulness has been growing as a psychological approach to cultivate positive mental health, and is often viewed as a technique or collection of techniques to produce psychological outcomes (Grossman, 2011; Hayes & Wilson, 2003). Whereas in the East, the practice of mindfulness has existed for more than 2,500 years and is considered “the heart” of spiritual meditation (Thera, 1962). Yet, Kabat-Zinn (2003) has argued that we are all mindful to a certain degree, that “it is an inherent human capacity,” while the role of Buddhism in mindfulness is “to emphasize simple and effective ways to cultivate and refine this capacity and bring it to all aspects of life” (p. 146).

Mindfulness training in clinical settings increases awareness of automatic reactions to sensations, thoughts, and emotions that increase emotional distress and attempts to reduce the vulnerability to these mind states. For example, mindfulness-based cognitive therapy (MBCT) has been utilized to reduce the inclination toward negative thinking patterns that lead to depressive episodes. Patients are taught to “disidentify with or ‘decenter’ from negative self-evaluative, ruminative thinking patterns” and interrupt the automatic habit of negative thinking patterns and negative emotion (Hick & Chan, 2010; Segal, Williams, & Teasdale, 2002; Teasdale, 1999). Mindfulness interventions may also be an effective treatment for chronic pain (Green & Bieling, 2012; Kabat-Zinn, Lipworth, & Burney, 1985), stress (Shapiro, Schwartz, & Bonner, 1998), panic disorder (Kabat-Zinn et al., 1992), eating disorders (Kristeller & Hallet, 1999), bipolar disorder (Weber et al., 2010), and generalized anxiety disorder (GAD; Evans et al., 2008).

Many studies of cognitive processing and mindfulness theory argue that our typical mode of operating is dominated by automatic processes that reduce our quality of experience (. Brown, Marquis, & Guiffrida, 2013; see also, Breslin, Zack, & McMain, 2002; Teasdale, Segal, & Williams,
Automatic processes arise without awareness, intention, or interference from other ongoing mental activity (Posner & Snyder, 1975; Winter, Uleman, & Cunniff, 1985). According to Usoff-Thowfeek, Janoff-Bulman, and Tavernini (2011), automatic reactions even in deliberative processes become particularly evident when the deliberative response is associated with emotionally potent negative reactions (particularly disgust; Rozin, Lowery, Imada, & Haidt, 1999). Practicing mindfulness requires that one not only observe their moment-to-moment experiences but also completely let go of (i.e., nonreact, to) such moments, particularly negative automatic reactions (Bishop et al., 2004; Freven, Evans, Maraj, Dozois, & Partridge, 2008 Martin, 2002; O’Driscoll, 2009). According to Kabat-Zinn et al. (1992), there is potential for disconnection between oneself and one’s own thoughts (i.e., “the insight that one is not one’s thoughts”) that allows an individual to realize they have “a potential range of responses to a given thought” (p. 942). This range allows the individual to choose a response that is deliberate, as opposed to automatic, resulting in more volition of control.

To date, the investigation of mindfulness has almost exclusively utilized self-report as its primary measure. Many different self-report scales have been created in efforts to measure mindfulness. The Mindful Attention Awareness Scale (MAAS; formulated by Brown & Ryan, 2003), the Five Facets of Mindfulness Questionnaire (FFMQ; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006), the Cognitive and Affective Mindfulness Scale (CAMS; Feldman, Hayes, Kumar, Greer, & Laurenceau, 2007.), the Kentucky Inventory of Mindfulness Skills (KIMS; Baer, Smith, & Allen, 2004), the South Hampton Mindfulness Questionnaire (“MQ”; Chadwick, Hember, Mead, Lilley, & Dagnan, 2005), the Freiburg Mindfulness Inventory (FMI; Buchheld, Grossman, & Walach, 2001), the Toronto Mindfulness Scale (TMS; Lau, Bishop, Segal, Buys, Anderson, Carlson & Devins, (2006)), and the Philadelphia Mindfulness Scale (PHLMS; Cardaciottio, Herbert, Forman, Moitra, & Farrow, 2008) are some of the self-report measures that have been developed.

The MAAS, created by Brown and Ryan in 2003, considers mindfulness as “an enhanced attention to and awareness of current experience or present reality” (p. 822). It consists of 15 items with a 6-point Likert-type response scale with possible responses ranging from almost always to almost never (Baer et al., 2006). Although the MAAS is among the most commonly used form of mindfulness assessment, it provides only one overall mindfulness score (much like the MQ); most other measures delineate multiple elements of mindfulness. Perhaps the most popular of these measures, the FFMQ, divides mindfulness into five facets (mindful observation, mindful describing, acting with awareness, non-reactivity, and nonjudgment), each with their own point value. In general, although mindfulness scales vary in different ways, they all are self-report measures.

The self-report measure of mindfulness is likely to be problematic (Grossman, 2011; Lindahl, 2015; Quickel, Johnson, & David, 2014; Sauer et al., 2013). Although the results from several studies have supported the validity of the MAAS and FFMQ (e.g., Brown, Ryan, Loverich, Biegel, & West, 2011), there is still debate about the overall validity of such measures (Grossman, 2011; Quickel et al., 2014; Sauer et al., 2013). One problem may be that the adaptation of mindfulness to accommodate Western ideals may be distorting (Buddhadasa, 1988; Rosch, 2007). Moreover, it is very clear that self-report measures have common problems that can lead to misinterpretations. Perhaps, most notably, self-report measures are associated with demand characteristics that may lead to biased responses (Vartanian & Powlishta, 2001). The term demand characteristic refers to “task-orienting cues” that may produce subject bias (Rosnow, 2002). For example, people often have a tendency to present themselves in a “brighter light” (social desirability response sets) than they truly are. Vartanian and Powlishta (2001) performed a series of studies using the concept of an imaginary audience to manipulate subject response. Subject’s responses changed when they felt they were being critically evaluated by the audience. Likewise, Nichols and Maner (2008) found that having foreknowledge about the nature of a study would affect the way that participants responded. Despite that psychologists are quite sensitive to the potential problem presented by demand characteristics, Nichols and Maner (2008) reported that few researchers actually attempt to control for demand characteristics. Moreover, demand characteristics appear more influential when people are asked to rate themselves (Luchins, 2011). Thus, reporting about one’s own “mindfulness” may be particularly vulnerable to such biases. Hipol and Deacon (2012) mentioned that “Demand characteristics may have artificially inflated respondents’ endorsement of techniques widely considered to be effective, such as those associated with CBT” (p. 184). We performed a review and meta-analysis of published studies related to mindfulness for inclusion of control procedures to decrease demand characteristics and potential subject bias. We conducted a search in the PsycINFO database (including only linked full text publications) published between the years 2012 and 2013. “Mindfulness” was entered as the search title, which resulted in 141 text-link studies. Each study was examined for control procedures and/or the use of blinding or disguise techniques, which would reflect concern for subject bias and demand characteristics. None of the studies appeared to have included any relevant control procedures, and only 12 studies described any concern for subject bias or demand characteristics. Therefore, self-report studies of mindfulness would be served by the inclusion of control procedures for demand characteristics and subject bias. Alternatively, exploration of alternative methods to measure mindfulness should be explored (Feldman, Hayes, Kumar, Greer, &
Mindfulness should reduce vulnerability to automatic responses (Frewen, Evans, Maraj, Dozois, & Partridge, 2008). Although emphasis has been placed on reducing vulnerability to automatic self-ruminations, Grossman (2010) has pointed out that automatic judgments of all kinds are suspended by the mindful one (Bodhi, 1984). Apparently, automatic responses are ubiquitous and include automatic attitudes toward the self, activation of social stereotypes (Brewer, 1988; Devine, 1989; Perdue & Gurtman, 1990; Pratto & Bargh, 1991), social judgment (Murphy & Zajone, 1993), and social comparison (Devine, 1989; Devine, Monteith, Zuwerink, & Elliot, 1991). Negative information appears to be especially prone to automatic processing (Anderson, 1974; Fiske, 1980; Hamilton & Zanna, 1972; Lazarus, 1982; Pratto & John, 1991), and social prejudice and bigotry are likely to involve automatic processes (Devine, 1989; Devine et al., 1991). For example, overweight people are often automatically disliked, ridiculed, and judged to be lower in intelligence and many other social characteristics (e.g., DeJong, 1980; Grover, Keel, & Mitchel, 2003; Hebl & Mannix, 2003; Polivy & Herman, 2004).

The current study measures the relationship of mindfulness to social judgments. We did this by simply asking people their opinions about both famous and nonfamous people pictured in a survey. The survey was described to participants as a public opinion survey to disguise its true nature and reduce potential reactivity. Pilot investigations indicated that not only are people frequently willing to give such judgments about people they generally know little about (whether they are famous or not), they are also often negative and derogatory in those judgments. Participants’ responses to the “public opinion survey” were then correlated with responses to the MAAS and to the FFMQ, which were both presented as “self-reflection” surveys. We argue here that negative judgments about people who are not directly known are likely to arise from automatic processes and should be related to at least some components of common self-report mindfulness measures. Moreover, the mindful individual should be less inclined to express such judgments, automatic or not, because mindfulness is related to compassionate ethics (Greenberg & Mitra, 2015) and mindfulness training has been found to increase compassion, empathy, and “perspective taking” (Kingsbury, 2009; Shapiro, Astin, Bishop, & Cordova, 2005; Shapiro, Brown, & Biegel, 2007).

Method
Participants
Roughly half of the subjects \( n = 48/99 \) were randomly encountered at different school buildings around the campus of the University of North Carolina Wilmington (UNCW). Researchers approached participants who appeared to be alone and uninvolved in any consuming activities, such as homework or eating. The participants were asked whether they had 15 to 20 min to participate in a survey. If the participants agreed, a script was read aloud informing them that the first of three surveys was a “public opinion survey” about public figures. The script explained that the survey responses were anonymous and encouraged participants to answer the questions as honestly as possible. Other participants \( n = 51 \) were recruited via a recruitment website and were offered credit to participate in a scheduled laboratory assessment. These participants were administered the same surveys in the same way. The participants as a whole \( n = 99 \) included 36 males and 63 females who were of an average age of 22 years \( SD = 7.9 \) years. The education status of the sample included three individuals with high school diplomas, 25 college freshman, 17 college sophomores, 20 college juniors, 24 college seniors, seven graduate students, and three individuals with post graduate degrees. The sample consisted of people identifying as Caucasian \( n = 85 \), Asian \( n = 5 \), and Hispanic \( n = 9 \). All procedures were approved by the UNCW Institutional Review Board (IRB) for human subjects and researchers followed all ethical guidelines created by the IRB for studying human subjects. All subjects read and signed an informed consent agreement describing their rights as participants.

Materials
The materials for this study included three surveys: the “Public Opinion Survey” (the Judgment survey; Appendix I), the FFMQ (Baer et al., 2008), and the MASS (K. Brown & Ryan, 2003). The researchers constructed the Judgment survey, which was disguised as a “public opinion survey” when presented to the participants. The covert nature of the public opinion survey was intended to reduce demand characteristics and allow or entice expression of social judgments and opinions from the participant if they were prone to do so. The logic utilized in the construction of the Judgment survey was that a more mindful individual would be less likely to express judgments (particularly negative, unnecessary judgments), because the automatic nature of negative judgment and stereotyping is contrary to the practice of mindfulness. The Judgment survey began with a demographics page that collected specific information from participants including age, gender, current educational status, race, religious affiliation, and religious devoutness. The next five pages of the survey included pictures of five different individuals, of which three were famous (to add credibility to the public opinion survey disguise). Pictures were chosen with the following criteria: All were of roughly the same size and image quality, and based on research panel assessment, all pictures were predicted to elicit negative judgments in many participants (however, pilot investigations suggested strongly that almost any individual presented in the photographs would be effective). Two of the pictures were of anonymous individuals who were found on the Internet by the researchers. The celebrity photos
were of pop singer, Justin Bieber; reality TV star, Snooki Pollizzi; and heavyweight boxing champion, Mike Tyson. The two anonymous pictures included one female and one male. The female was shown in a suggestively provocative pose, whereas the male was frequently described as being “nerdy.” Beneath each picture, the survey asked, “Do you know who this is? Who?” and “What do you think about this person?” If participants did not know who the individual was, they were still asked to give their opinion of the individual. Each photo was followed by scales, where participants rated the individual on intelligence, style, and morality. The scales were included to reduce attention to the primary dependent variable (their open-response judgments). The final section of the survey was constructed to examine regressions between their expressed judgments, and their involvement in yoga, meditation, or martial arts as well as other (disguise) activities (working out, watching TV, reading, listening to music, outdoor recreations, shopping, and crafts). Participants were asked to rate how often they participated in each activity on a scale from 1 (not at all) to 7 (very frequently).

The FFMQ and MAAS were administered on computers through the “Select Surveys” website (http://appserv01.uncw.edu/selectsurveyenet/SurveyList.aspx). The FFMQ is a 39-item survey that was developed from the KIMS. The FFMQ measures five specific facets of mindfulness: observing, describing, acting with awareness, nonjudging of inner experience, and nonreactivity to inner experience. Items related to these five facets are rated on a 5-point Likert-type scale ranging from 1 (never or very rarely true) to 5 (very often or always true). Higher scores are argued to reflect more mindfulness (Baer et al., 2008). The MAAS is a 15-item survey that is also commonly used to assess the mindfulness of an individual. The specific purpose of the MAAS is to measure the presence or absence of attention to, and awareness of, the present moment. Each question describes an event, and respondents indicate on a 6-point Likert-type scale ranging from 1 (almost always) to 6 (almost never) how often they recall experiencing that event (K. Brown & Ryan, 2003).

Procedure

The participants were read a script that explained that three surveys would be presented. The surveys were given in a specific sequence with the Judgment survey presented first so that the mindfulness surveys could not potentially prime participants to respond more mindfully than they otherwise would. The first pictured page of the Judgment survey (Justin Bieber) was completed in an interview process with the researcher to insure that they understood the nature of the questions. The participants completed the rest of the survey independently. Researchers were careful to avoid any discussion of the concept of mindfulness; and to further reduce demand characteristics, the FFMQ and the MAAS were presented as self-reflection surveys. The subset of participants who were recruited around campus (n = 48) used researchers’ laptops to access the surveys. Participants in the lab (n = 51) utilized the lab computers.

Results

Three participants were excluded from the data analysis: Two people did not finish the survey and another participant was deemed to have provided inauthentic responses. The remaining participants’ (n = 99) average FFMQ score was 126.15 (SD = 16.23). The means and standard deviations for each of the FFMQ subscales, respectively, were FFMQ observe, 27.4/4.9; FFMQ describe, 27.15/5.3; FFMQ act with awareness, 25.03/5.57; and FFMQ nonjudge, 25.56/5.53. The mean MAAS score was 49.265 (SD = 11.04). A frequency analysis indicated that the scores on these mindfulness measures were normally distributed (see Figures 1 and 2).
Significant relationships between normalized judgment scores and each of the five facets of the FFMQ. A similar regression was assessed between the normalized judgment scores and the FFMQ total score, or the MAAS scores (see Table 1).  

It was found that the normalized judgment scores did not have a significant regression relationship with the FFMQ total score, or the MAAS scores (see Table 1). A similar regression was assessed between the normalized judgment scores and each of the five facets of the FFMQ. Significant relationships between normalized judgment scores and FFMQ subscales were found for only two of the five facets, “act with awareness” (Figure 4) and “non-judgment of inner experience” (Figure 5). The relationship between normalized judgment scores and self-reported mindfulness activities such as, yoga, meditation, and martial arts was assessed (Figure 6). Because of relatively low representation of any individual mindfulness activity, self-reported involvement in yoga, meditation, and martial arts were summed. The relationship of “normalized judgment scores” to reported mindfulness involvement was found to be significant, \( F(1, 96) = 4.17, p = .04 \). Normalized judgment scores were not significantly related to any other self-reported activities (TV watching, listening to music, shopping, working out, reading, outdoor recreation, and crafts). Researchers then analyzed whether the MAAS or the FFMQ predicted participation in any of the listed activities. A significant relationship was indicated between the FFMQ and total mindfulness activity scores (mean mindfulness activities score = 5.39/std 2.55), \( F(1, 98) = 5.36, p = .02 \), but was not observed between the MAAS and the total mindfulness activities score. The FFMQ or the MAAS did not predict participation in any of the self-reported nonmindfulness activities.

The researchers rated Judgment survey comments for each photo \( (n = 5) \) on a 7-point Likert-type scale where 1 was extremely positive, 7 was extremely negative, and 4 was neutral. Scoring of expressed judgments differentiated between description, preferences, and outright derogatory judgments. Higher total judgment scores, therefore, were associated with more negative and derogatory judgments. Each comment was read and rated independently \( (n = 4 \text{ researchers}) \) and the average of the ratings was taken if there was disagreement. The average total judgment score was 23.13 \((SD = 2.93)\). A total “judgment score” was calculated for each participant by adding five averaged ratings of the participant’s comments on the Judgment survey. A frequency analysis demonstrated relatively normal distribution for “total judgment scores” (see Figure 3); many comments were positive or neutral, but a significant proportion of the comments were negative \( (n = 68; \text{mean judgment scores above 4}) \) or very negative \( (n = 20; \text{mean above 5}) \). For example, derogatory comments such as “Slut” or “Whore” in reference to the anonymous female, and comments such as “lesbian fag” in reference to Justin Bieber were frequently encountered. To conduct a simple regression between FFMQ, MAAS, and judgment scores, the judgment scores were first normalized. Total judgment scores for each subject were divided by 5 (the number of comments made by each participant) to produce an average judgment score. The difference between the average judgment score and 4 (the neutral point of our rating scale) was calculated. It was found that the normalized judgment scores did not have a significant regression relationship with the FFMQ total score, or the MAAS scores (see Table 1). A similar regression was assessed between the normalized judgment scores and each of the five facets of the FFMQ. Significant relationships between normalized judgment scores and FFMQ subscales were found for only two of the five facets, “act with awareness” (Figure 4) and “non-judgment of inner experience” (Figure 5). The relationship between normalized judgment scores and self-reported mindfulness activities such as, yoga, meditation, and martial arts was assessed (Figure 6). Because of relatively low representation of any individual mindfulness activity, self-reported involvement in yoga, meditation, and martial arts were summed. The relationship of “normalized judgment scores” to reported mindfulness involvement was found to be significant, \( F(1, 96) = 4.17, p = .04 \). Normalized judgment scores were not significantly related to any other self-reported activities (TV watching, listening to music, shopping, working out, reading, outdoor recreation, and crafts). Researchers then analyzed whether the MAAS or the FFMQ predicted participation in any of the listed activities. A significant relationship was indicated between the FFMQ and total mindfulness activity scores (mean mindfulness activities score = 5.39/std 2.55), \( F(1, 98) = 5.36, p = .02 \), but was not observed between the MAAS and the total mindfulness activities score. The FFMQ or the MAAS did not predict participation in any of the self-reported nonmindfulness activities.

Although positive judgments might be considered automatic social responses, we considered the idea that positive judgments, in some way, differed from automatic negative judgments. Simple regressions were conducted in which subjects who had positive judgment scores (generally made positive judgments about pictured individuals) were eliminated from analysis \( (n = 12) \). A regression of this data subset (the remaining normalized judgment scores that excluded the positive subjects) revealed significant regressions between these judgment scores and the FFMQ total \( (r = .211) \), \( F(1, 86) = 3.95, p = .05 \), and between the FFMQ subscale for act with awareness \( (r = .308) \), \( df(1, 75), F = 7.7, p = .006 \), and a trend relationship with FFMQ nonjudgment scores \( (r = .204) \), \( df(1, 75), F = 3.22, p = .07 \). Regression analysis of the normalized data, without participants who demonstrated positive judgment scores with total mindfulness activities was also significant \( (r = .304) \), \( F(1, 86) = 8.6, p = .004 \). A trend relationship between the negative scores with MAAS scores \( (r = .202) \), \( F(1, 84) = 3.97, p = .057 \), was also observed.

Additional simple regressions were run to assess the relationship between self-reported mindfulness scores and “judgment scores” for celebrity versus anonymous photos. The results were not significant; participants judged people similarly regardless of whether the pictured individual was known or unknown. In addition, gender and age (though our age range was fairly truncated) did not appear to play a role in these effects.

Each photograph was accompanied by rating scales for participants to provide further evaluations of the pictured individuals. Although they were meant to be part of the experimental disguise, these ratings were assessed. The total ratings across intelligence, style, and morality were summed, and a regression was conducted between summed ratings and

**Figure 3.** The distribution of “judgment” scores was normally distributed.
the judgment scores derived from their open-ended comments. The relationship between these ratings and judgment scores demonstrated a strong positive relationship (Table 2 and Figure 8); as FFMQ total scores increased, so did positive ratings on these scales. Likewise, there was a significant regression relationship between scaled responses and FFMQ total (see figure 7), but not between these scaled response ratings and other FFMQ subscales or MAAS scores (Table 2).

**Discussion**

The hypothesis of the present study was that mindfulness should be inversely related to negative social judgments because mindfulness training reduces vulnerability to automatic responses (Bodhi, 1984; Grossman, 2010; Kabat-Zinn, Massion, Kristeller, Peterson, Fletcher, Pfert, Santorelli, 1992; Winter et al., 1985) and has been related to increased empathy and compassion. Negative social judgments about people who are not directly known to us are likely to reflect automatic emotional reactions (e.g., Devine, 1989; Murphy & Zajonc, 1993). We recognize that one might refrain from judging for reasons unrelated to mindfulness, but we contend that in general, the mindfully disposed individual should be less likely to express such judgment. We found meaningful regressions between “judgment scores” and two subcomponents of the FFMQ (“act with awareness” and “non-judgment...
These two facets of the FFMQ do seem most logically related to automatic social judgment. We also found that the tendency to judge negatively was inversely correlated with self-reported involvement in mindfulness activities (meditation, yoga, and martial arts). This strengthens our confidence that social judgment measures are meaningfully related to mindfulness (the same relationship was observed between FFMQ total scores and mindfulness activities, but not for the MAAS). Yet, mindfulness practice did not assure lower judgment scores. Therefore, we may question the validity of self-reported mindfulness involvement, or we may question the notion that practice in, and of, itself guarantees actual mindfulness.

The fact that we did not see a significant relationship between MAAS scores or FFMQ total scores and our social judgment scores suggests possible issues in the self-report of mindfulness (Quickel et al., 2014, and see Grossman, 2011; particularly that mindfulness surveys do not directly measure automatic response tendencies or judgment of other people). In addition to issues of bias, mindfulness surveys also require accurate self-knowledge and memory. This requirement may be especially difficult given that we may recall inaccurately and that mindfulness is likely to vary across time and context. A wider issue may exist in the debated connections between mindfulness as exercised and measured in our Western culture versus “right mindfulness” that arises from Buddhist ethical traditions (Greenberg & Mitra, 2015). Greenberg and Mitra (2015) among others argue that mindfulness without ethicality essentially is not mindfulness.

We were concerned in the present study about the potential subjectivity associated with quantifying open-ended judgments. To address this concern, we utilized an independent panel rating process. Although this does not eliminate concerns, we did find that our raters had very high inter-rater reliability ($r = .87$). Furthermore, the regression between our ratings of judgment and the participants summed intelligence, style, and morality ratings were very strong. This can be taken as support for the validity of our panel ratings.

If one accepts the logic that mindfulness should decrease automatic social judgments, then the failure to find a significant relationship between judgment scores and either the FFMQ total, other FFMQ subscales, or the MAAS scores further suggests difficulties with these widely used self-report measures of mindfulness. Self-report measures of personal, internal, and subjective attributes are particularly vulnerable to the influence of demand characteristics and subject bias (Luchins, 2011; Vartanian & Powlishta, 2001), yet, it appears that the use of mindfulness surveys is rarely, if ever, accompanied by procedures to reduce this potential issue. Many studies of mindfulness are likely to have unintentionally included demand characteristics by studying people who are engaged in certain mindfulness activities or by

### Table 2. Regression Results for Total Scaled Responses (Intelligence, Style, and Morality Ratings) and Judgment Scores, FFMQ, and MAAS.

| Normalized judgment scores | FFMQ | MAAS |
|---------------------------|------|------|
| $R$                       | .259 | .242 | .180 |
| $R^2$                     | .509 | .058 | .032 |
| $F$ value                 | 32.4 | 5.77 | 3.11 |
| $p$                       | .0001* | .018* | .28 |

Note. This table reflects the summed ratings provided by each participant on scales asking them to rate each photograph target on intelligence, style, and morality. These summed ratings were significantly related to their open-ended comments (judgment scores) and FFMQ total score but were not significantly related to any FFMQ subscale or to the MAAS. FFMQ = Five Facets of Mindfulness Questionnaire; MAAS = Mindful Attention Awareness Scale.
Conclusion

We have constructed a new measure that we argue represents one overt reflection of right mindfulness. Automatic social judgments are easily elicited from participants in a way that disguises purpose and, therefore, avoids some of the potential pitfalls of self-report approaches to measuring mindfulness. Our results indicate that automatic social judgments are not related to FFMQ total scores or to MAAS scores but are related to the FFMQ subscales “act with awareness” and “non-judge.” Social judgment scores did meaningfully predict involvement in mindfulness type activities such as yoga.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research and/or authorship of this article.

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Author Biographies

Robert Lindsay Hakan is a faculty member in the Department of Psychology at UNCW. He studies Cognitive Bias and Mindfulness.

Julia M. Neal, MS, CRC, is currently a research coordinator in the Traumatic Stress and Health Research Laboratory at the Durham Veterans Affairs Medical Center. Her research interests include substance use, chronic disease, comorbid physical and psychiatric disabilities, health and exercise psychology, and mindfulness-based stress reduction therapy for psychiatric disabilities.”

John Lothes is a faculty member in the departments of Psychology and Department of Health and Applied Human Sciences at UNCW. He conducts research on mindfulness and DBT. John started and helps run a DBT informed Partial Hospital, Substance Abuse Intensive Outpatient Program and is a therapy provider in Wilmington, NC.