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The Bidimensional Impression Management Index (BIMI): Measuring Agentic and Communal Forms of Impression Management

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Measures of impression management have yet to incorporate two-factor models of person perception. The 2 primary factors are often labeled *agency* and *communion*. In Study 1, we assembled a new measure of impression management—the Bidimensional Impression Management Index (BIMI): It comprises 2 subscales designed specifically to tap agentic and communal content. Both subscales showed adequate alpha reliabilities under both honest and faking conditions. In Study 2, the BIMI was cross-validated in a new sample: The subscales remained relatively independent, and their reliabilities remained solid. A coherent pattern of personality correlates also supported the validities of both subscales. In Study 3, the differential sensitivity of the 2 subscales was demonstrated by manipulating the job type in simulated job applications. Implications and applications of the BIMI are discussed.

Concern over socially desirable responding (SDR), the tendency to give positive self-descriptions, was piqued by Edwards (1953) and has continued unabated. To measure this tendency, an array of measures accumulated in a rather haphazard fashion until structural analyses settled on two broad factors (Wiggins, 1964). Later Paulhus (1984) interpreted the two factors as *self-deception*, an unconscious self-favorability, and *impression management*, the intentional distortion of self-descriptions. The corresponding subscales of the Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1991) have become the standard method for separating these two tendencies.

Since then, evidence has accumulated that the two BIDR subscales differ with respect to content (Paulhus, 2002): The content distinction maps on to the two fundamental personality constellations commonly labeled *agency* and *communion* (Bakan, 1966): Agency refers to achievement striving and differentiating oneself from others whereas communion refers to an integration with and concern for others. Under a variety of names, these relatively independent axes have been helpful in orienting such concept domains as personality constructs (Abele & Wojciszke, 2007; Wiggins, 1991), self-presentation (Gebauer, Sedikides, Verplanken, & Maio, 2012; Paulhus & Trapnell, 2008; Vecchione & Alessandri, 2013), and interpersonal behavior (Gifford & O'Connor, 1987; Moskowitz, 1994). Corresponding labels in the social judgment literature include competence versus warmth (Fiske, 2009) and intellectual versus social goodness (Rosenberg & Sedlak, 1972). Of particular importance here are the distinctive values associated with agency and communion (Trapnell & Paulhus, 2012; Wojciszke, 2005).

In SDR research, the agency-communion distinction has already been applied to self-deceptive biases (Paulhus & John, 1998; Vecchione & Alessandri, 2013). The agentic bias (egoism) involves exaggerating one's social or intellectual status whereas the communal bias (moralism) involves denying socially deviant impulses and claiming pious attributes. Relatively less research has investigated the role of these two fundamental biases in impression management. As a result, there are no measurement instruments specifically designed to distinguish agentic from communal forms of impression management.

Closest is a paper by Holden and Fekken (1989). They found two factors in an analysis of several SDR scales. Their labels—*Self Capability* and *Interpersonal Sensitivity*—are not unlike agency and communion. This parallel is further supported by the authors' finding that the strongest personality facet correlates of the first factor were clear-thinking, concentration, and calmness; for the second factor, they were considerateness, patience, and integrity. Clearly, these facets resound with agency and communion, respectively.

Despite 60 years of research, many researchers remain concerned about the nature of SDR (for a collection of recent perspectives, see Ziegler, MacCann, & Roberts, 2012). The tailored form of SDR—impression management—includes outright faking. That literature encompasses a range of topics, including the effects of faking on personality scores (Holden, 2008; Ziegler, Schmidt-Atzert, Buhner & Krumm, 2007), the "fakeability" of measures (McFarland & Ryan, 2000; Ziegler et al., 2007), personality traits of fakers (Davis, Thake, & Weekes, 2012; Nguyen, Biderman & McDaniel, 2005; Uziel, 2010), and the psychological processes behind faking (Goffin & Boyd, 2009; McFarland & Ryan, 2006). One firm conclusion from such studies is that unitary impression management scales cannot explain the multidimensionality of faking (Holden, Book, Edwards, Wasylkiw, & Starzyk, 2003).

The importance of impression management to all these topics encouraged us to update and extend current measures to include both agentic and communal versions. Here we present three

studies designed to create and validate a bidimensional measure of impression management.

STUDY 1: ITEM SELECTION

The creation of item sets for agentic and communal forms of impression management required a combination of rational and empirical selection methods. We began with a set of 40 evaluatively-laden items specifically written with either agentic or communal content. Items were retained to the extent that they were sensitive to faking instructions: Their means had to change between "respond honestly" and "fake good" instructions. The most responsive items were selected until we had 10 with agentic and 10 with communal content.

The purpose of limiting the item set to 10 each was to keep the instrument short enough for practical use. At the same time, each subscale would have to be internally consistent and include at least some items that were reverse-coded. The scales would also have to perform acceptably within gender and ethnic groups. Given their distinctive agentic and communal content, we predicted that the subscales would show only modest intercorrelations in the honest condition. This prediction follows from the fact that agentic and communal traits tend to be orthogonal and that trait variance predominates under honest conditions (Paulhus, Bruce, & Trapnell, 1995).

Method

Participants. Data were collected from 214 students at the University of British Columbia (age range = 17–38 years, $M =$ 20.21): They were representative of the student body as a whole in terms of gender and ethnicity. Each participant received a half-percent extra credit for participating in the study.

Materials. A pool of 40 items, drawn from Paulhus (2002), had previously been written to tap either agentic or communal forms of SDR. All were written with extreme evaluative implications. Those with agentic content included "I am always brave in theatening situations" and "I have mastered every challenge put before me in life." Items with communal content included "I don't gossip about other people's business," and "When I hear people talking privately, I avoid listening." Half of the items were written as reversals.

Procedure. Participants completed the study via an online survey. They were asked to rate their agreement with each item on a 7-point Likert scale, ranging from 1 (*not true*) to 7 (*very true*). Beforehand, participants were randomly assigned to either an honest or fake good condition. In the honest condition, they were instructed to "respond truthfully" to all items. In the fake good condition, they were instructed to respond "with a positive bias."

Note that we did not use the term *socially desirable*—the standard instruction in traditional faking research (e.g., Wiggins, 1964). That term implicated society at large (good person, upstanding citizen), thereby highlighting communal values (Paulhus & Trapnell, 2008). To ensure that our participants' response set incorporated agentic as well as communal values, we generalized the instructions to positive bias.

From the original 40 items, we selected those that shifted the most from the honest to the fake good condition. Ten items with the largest effect sizes were then chosen from each of the

TABLE 1.—Final Bidimensional Impression Management Index items: Agentic and Communal Management subscales.

Agentic Management
 1. My decisions are sometimes unwise. (R)
 2. I have met people smarter than myself. (R)
 3. I have mastered every challenge put before me in life.
 4. You can't win at everything. (R)
 5. My personality has a few problems. (R)
 6. I am always brave in threatening situations.
 7. Some people call me a genius.
 8. My leadership of the group guarantees the group's success.
 9. I sometimes need other people's help to get things done. (R)
 10. I'm usually the one to come up with the big ideas.
Communal Management
 1. I have done things that I don't tell other people about. (R)
 2. I don't gossip about other people's business.
 3. There have been occasions when I have taken advantage of someone. (R)
 4. I have said something bad about a friend behind their back. (R)
 5. I sometimes tell lies if I have to. (R)
 6. I never swear.
 7. I never cover up my mistakes.
 8. When I hear people talking privately, I avoid listening.
 9. I have never dropped litter on the street.
 10. I often drive faster than the speed limit. (R)

Note. Respondents are asked to rate their agreement on 7-point scales. Reversals are indicated with (R).

agentic and communal item sets. These 20 items formed the subscales labeled *Agentic Management* (AM) and *Communal Management* (CM).

Results

Manipulation check. To confirm the effectiveness of the experimental manipulation, we compared the mean of all 40 items across the honest and fake good conditions (recall that possible means ranged from 1 to 7). Reversals were rescored so that all items were oriented in the socially desirable direction. The item mean under fake good instructions ($M = 4.90$, $SD = 1.0$) was far from the maximum value of 7.0 but significantly higher than the mean under honest instructions ($M = 2.92$ $SD = .55$), $t(211) = 11.46$, $p < .001$, $d = 2.61$. These results confirm that participants were responsive to the faking manipulation.

Empirical selection. The BIMI items were selected by choosing those that increased the most from the honest to the fake good condition. Among those from the agentic pool, the 10 items with the largest effect sizes were chosen to form the Agentic Management subscale. The same procedure was followed to select the 10 Communal items. For selected items, the effect sizes ranged from $d = .58$ to 1.64: Even the smallest of these values exceeded Cohen's (1992) cutoff of .50 for a large effect size. The final list of items selected to form the BIMI can be found in Table 1.

Group norms. To examine the impact of gender and ethnicity, participants were divided into groups based on gender (male/female) and ethnic heritage (European/East Asian). Table 2 displays the AM and CM means for these subgroups. Main effects were examined for gender and ethnicity in both conditions.

On AM, group differences were mostly trends. Under honest conditions, males reported marginally higher AM scores than did females, $t(99) = 1.79$, $p = .08$, $d = .36$ and Europeans

TABLE 2.—Study 1: Agentic and communal management means by gender and ethnicity.

	Honest		Fake Good	
	Agentic Management	Communal Management	Agentic Management	Communal Management
European male	2.6	3.0	5.1	5.5
European female	2.9	3.2	4.9	5.2
East Asian male	2.7	3.2	4.9	4.9
East Asian female	2.7	2.7	4.4	4.4
Overall	2.8 (.77)	3.0 (.98)	4.8 (1.1)	5.0 (1.2)

Note. Tabled values are item means of agreement to 7-point Likert scales anchored by 1 (*totally disagree*) and 7 (*totally agree*). Pooled standard deviations are shown in parentheses.

reported higher AM than East Asians, $t(94) = 1.48$, $p = .14$, $d = .31$. In the fake good condition, however, large effects were found for both ethnicity and gender. Males reported higher AM than females, $t(101) = 2.97$, $p < .01$, $d = .60$ and Europeans reported higher CM than Asians, $t(93) = 2.24$, $p < .05$, $d = .46$. There were no other significant differences for gender or ethnicity in the fake good condition.

Reliabilities. Alpha reliabilities were calculated for the BIMI total as well as each subscale, in the honest and fake good conditions. Note from Table 3 that reliabilities reached or exceeded .70 for all measures in both conditions.

Intercorrelations. The correlation between the AM and CM subscales was calculated in each condition. As predicted, its value was modest in the honest condition: $r(103) = .18$, $p = .10$. However, its value in the fake good condition ($r = .44$) was significantly higher: $Z = 2.07$, $p < .02$, one-tailed.

Discussion

Study 1 generated a new self-report instrument—the BIMI—specifically designed to distinguish agentic and communal forms of impression management. The AM subscale consists of 10 items reflecting deliberate exaggeration of the respondent's social or intellectual status, including such qualities as competence and fearlessness. The CM subscale consists of 10 items reflecting deliberate repudiation of socially undesirable impulses and minimization of faults. Table 1 lists the items separately by subscale.

Psychometrics. Note that item sets selected by contrasted groups do not necessarily show strong internal consistencies (Nunnally & Bernstein, 1978). Nonetheless, adequate values

TABLE 3.—Alpha reliabilities of Bidimensional Impression Management Index subscales from Studies 1 through 3.

	Honest			Fake Good		
	AM	CM	Total BIMI	AM	CM	Total BIMI
Study 1	.70	.75	.73	.87	.89	.90
Study 2	.68	.75	.83	.89	.89	.93
Study 3	.72	.77	.77	.90	.91	.88

Note. Sample sizes were 212, 110, and 108, respectively. AM = Agentic Management; CM = Communal Management; BIMI = Bidimensional Impression Management Index.

were achieved by each subscale and the total BIMI score. Their minimal intercorrelation in the honest condition indicates that AM and CM are tapping distinct constructs. This distinctiveness corroborates the validity of our original rational categorization into agency and communion items.

Consistent with previous research, both reliabilities and the intercorrelations were higher in the fake good condition than in the honest condition. Invariably, self-presentation inductions inflate correlations among evaluative dimensions (Dunnett, Koun, & Barber, 1981; Holden et al., 2003; Paulhus et al., 1995; Wiggins, 1964). At first glance, this phenomenon seems paradoxical: After all, instructions to fake good should homogenize responses resulting in range restriction and, therefore, reduced correlations with other variables. One possibility is that these inflated correlations ensue from a subset of outliers who fail to follow the faking instructions (Paulhus et al., 1995). Other possibilities include: (a) some respondents are incompetent fakers and (b) faking styles are more heterogeneous than previously assumed (Holden et al., 2003).

To investigate the possibility of such outliers, we examined scatterplots of the relation between the Agentic and Communal subscales in the faking condition. These plots did indeed show evidence of a subgroup (about 11%) whose scores remained in the honest response range. Compared to other respondents, their scores were substantially lower on both subscales: The presence of this subgroup induced bimodal distributions with a common "low-low" cluster. Consistent with data reported by Paulhus and colleagues (1995), the result was a high intercorrelation between the two variables.

Group differences. Overall, patterns within subgroups mirrored the overall patterns. For example, in each demographic subgroup, mean BIMI scores were higher in the fake good condition than in the honest condition. The fact that both subscales were reactive to the fake good instructions makes it clear that respondents see both agency and communion as desirable qualities.

Some demographic differences did appear—primarily on AM. In the honest condition, males and Europeans scored slightly higher than females and East Asians, respectively. No demographic effects were observed for CM. In the fake good condition, the male advantage in AM was especially pronounced. Apparently, males more than females see a direct connection between agency and a positive self-portrayal. This result is consistent with the research linking agency to self-perceived masculinity (Wiggins & Holzmuller, 1981), as well as research indicating that males score higher on egoistic biases (Aube, Koestner, Hodgins, & Craig, 1994; Beyer & Bowden, 1997). Female respondents more than males might be ambivalent about proclaiming strong agency.

The fake good condition also yielded a significant ethnicity effect: Those of European-heritage scored higher on CM. On the surface, that result seems inconsistent with some previous research (e.g., Kwan, Bond, & Singelis, 1997). However, the effect disappeared when AM was partialed out. Overall, the ethnicity differences might reflect the fact that individuals raised in the West are more knowledgeable about to how to impression manage in the Western job context (Paulhus, Westlake, Calvez, & Harms, in press).

STUDY 2: STRUCTURE AND CORRELATES OF THE BIMI

In Study 1, we created the BIMI to distinguish agentic and communal forms of impression management. The purpose of Study 2 was to advance its construct validity by cross-validating the Study 1 results in a new sample. Otherwise, one might attribute the solid performance of the subscales in Study 1 to capitalization on chance in the item selection process.

Accordingly, our first two hypotheses concern the replication of Study 1. We predict that the means of both subscales will be higher in the fake good than in the honest condition (Hypothesis 1). We also predict that the intercorrelations and reliabilities of the BIMI will be higher in the fake good condition than in the honest condition (Hypothesis 2).

When self-presentation demand is minimal, scores on impression management scales are more likely to reflect actual personality content (Paulhus & Vazire, 2007; Pauls & Stemmler, 2003; Piedmont, McCrae, Riemann, & Angleitner, 2000; Uziel, 2010). Hence, we predict that, in the honest conditions, the BIMI subscales will exhibit personality correlates consistent with previous trait research—albeit with weaker associations (Hypothesis 3). Specifically, we predict that AM will be positively associated with extraversion and openness as well as narcissism and psychopathy. By contrast, we predict that CM will be positively associated with the Big Five factors of agreeableness and conscientiousness, and negatively correlated with narcissism and psychopathy (see Paulhus & John, 1998).

When self-presentational demand is strong, as in the fake good condition, respondents are following instructions rather than reporting their traits. Hence, the trait correlates of the BIMI subscales should approach zero (Hypothesis 4).

Method

Participants. Participants were 110 students from the University of British Columbia (mean age = 20.1). They were representative of the student body as a whole in terms of gender and ethnicity. Participants received a bonus on their course grade for participation.

Materials. The questionnaire package included the 20-item BIMI created in Study 1: AM (10 items) and CM (10 items). Also included was the Big Five Inventory (BFI), a 44-item instrument tapping the Big Five personality traits (extraversion, agreeableness, conscientiousness, neuroticism, and openness; John & Srivastava, 1999). The authors reported alpha reliabilities ranging from .75 to .90 across the five scales. Their construct validity is also well-established: That includes substantial evidence for convergent relations with other Big Five measures, as well as corroboration with peer ratings (John & Srivastava, 1999).

The Mach IV inventory (Christie & Geis, 1970) was used to measure Machiavellianism. It consists of 20 items rated on 5-point Likert scales. The psychometric properties are well-established, and the instrument has become the 'gold standard' for assessing Machiavellianism (for the most recent review, see Jones & Paulhus, 2009).

The Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979) was used to measure narcissism. The 40 items are in forced-choice format, where participants are asked to choose from a pair of statements the one that they agree with the most.

The original authors reported an alpha reliability of .84. An updated review is provided by Paulhus and Jones (in press).

The Self-Report Psychopathy scale (SRP–III; Paulhus, Neumann, & Hare, in press) was used to measure psychopathy. It consists of 64 items rated on 5-point Likert scales. The authors report alpha values ranging from .86 to .93 and a two-month test-retest correlation of .80. A recent corroboration of its structure, reliability, and validity was reported by Neal and Sellbom (2012).

Procedure. Participants completed the study on the internet via an online web-survey. Initially, all participants completed self-ratings on the BFI, Mach IV, NPI, and SRP–III.

Participants were then asked to complete the 20 BIMI items on 7-point Likert scales, ranging from 1 (*not true*) to 7 (*very true*). Beforehand, participants were randomly assigned to either honest or fake good conditions. In the honest condition, participants were instructed to rate their personality truthfully. In the fake good condition, participants were instructed to rate themselves with a positive bias.

Results

Cross-validation. To evaluate Hypothesis 1, we compared the means of the AM and CM subscales across the instructional conditions. As expected, the AM mean in the fake good condition ($M = 4.10$, $SD = 1.36$) was higher than in the honest condition ($M = 3.13$, $SD = .70$), $t(99) = 3.42$, $p < .001$, $d = .72$. Similarly, the CM mean was higher in the fake good condition ($M = 4.00$, $SD = 1.4$) than in the honest condition ($M = 3.28$, $SD = .86$), $t(99) = 2.93$, $p < .01$, $d = .71$. These results indicate that the items selected in Study 1 were also able to discriminate faking conditions in Study 2.

To evaluate Hypothesis 2, alpha reliabilities were calculated for the overall scale as well as subscales, in both the honest and fake good conditions. Table 3 displays the reliabilities in all conditions. As in Study 1, the reliabilities of both subscales and the total score were adequate in the honest condition but substantially higher in the fake good condition.

Also supporting Hypothesis 2, the pattern of intercorrelations in Study 2 was similar to that in Study 1. The subscales were significantly correlated in both the honest condition, $r(42) = .41$, $p < .001$ and in the fake good condition: $r(55) = .79$, $p < .001$.[1] But, again, the latter value was significantly higher, $Z = 2.47$, $p < .01$, one-tailed.

Personality correlates. Table 4 displays the personality correlates of AM and CM in the honest condition. As predicted by Hypothesis 3, the correlates are consistent with a trait interpretation. AM is positively associated with Extraversion whereas CM is associated with Conscientiousness and (marginally) with Agreeableness. Contrary to our prediction, AM showed no correlation with Openness.

Given their positive intercorrelation, however, the AM and CM subscales could have been acting as mutual suppressors, thereby masking the personality correlates. To determine their unique contributions, Table 4 also includes partial correlations

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[1]Note that both values are higher than the corresponding values in Study 1. In short, the subscale intercorrelations were higher in the replication sample than in the selection sample.

TABLE 4.—Study 2: Correlations of Bidimensional Impression Management Index subscales with personality scales in honest condition.

Scale	Agentic Management	Communal Management	Agentic Management (Partial)	Communal Management (Partial)
Machiavellianism	.21	.21	.12	.21
Narcissism	.40**	.10	.41**	−.13
Psychopathy	.31*	−.15	.45**	−.37*
Extraversion	.28*	.14	.19	.03
Agreeableness	.06	.22	−.06	.22
Conscientiousness	.38*	.35*	.25*	.20
Stability	.09	−.11	.17	−.18
Openness	.01	−.04	.03	−.05

Note. $n = 54$. In Columns 4 and 5, the other subscale is partialed out.
$^*p < .05.$ $^{**}p < .01$ (two-tailed tests).

of each subscale with the personality variables. A mutual suppressor effect was observed in predicting psychopathy.

Also predicted by Hypothesis 4 was a null pattern of personality correlates in the faking condition. Consistent with that prediction, Table 5 shows that none of the raw correlations reaches significance. As in the honest condition, however, the partial correlations reveal a strong suppressor effect in predicting psychopathy.

Discussion

Cross-validation. Study 2 was designed to cross-validate the BIMI by assessing its performance in a new sample. The items chosen in Study 1 because of their sensitivity to faking instructions also shifted in the same direction in Study 2. This result supports the value of the BIMI for discriminating honest from faked responses. This capability applies to both the AM and CM subscales.

Note that the honest means for both subscales remained relatively low. This result was to be expected given the method used to select the items (i.e., selected items were those whose means increased the most from the honest condition to the fake good condition). As Wiggins (1964) explained, sensitivity to faking good requires room to increase in value. Hence, those items with low means in the honest condition have an advantage. Interestingly, such items tended to have verbal constraints, requiring that the respondent "always" or "never" engaged in the behavior. In Edwards's (1957) terms, the ideal faking items

TABLE 5.—Study 2: Correlations of Bidimensional Impression Management Index subscales with personality scales in fake good condition.

Scale	Agentic Management	Communal Management	Agentic Management (Partial)	Communal Management (Partial)
Machiavellianism	.06	−.04	.16	−.15
Narcissism	.03	−.12	.21	−.24
Psychopathy	.11	−.17	.41**	−.42**
Extraversion	.04	−.05	.07	.08
Agreeableness	−.15	.04	−.20	.20
Conscientiousness	−.08	−.03	−.09	.05
Stability	.05	.03	.04	−.01
Openness	.18	.18	.07	.06

Note. $n = 56$. In Columns 4 and 5, the other subscale is partialed out.
$^*p < .05.$ $^{**}p < .01$ (two-tailed tests).

refer to behaviors and thoughts that are common but undesirable (gossiping) or uncommon but desirable (bravery).

The subscale intercorrelations were somewhat higher in than in the selection study. Nonetheless, as before, the subscale intercorrelations were highest in the fake good condition. As discussed earlier, this finding is in line with previous research suggesting that correlations between dimensions are artificially inflated in self-presentation conditions (Paulhus et al., 1995).

Personality correlates. As expected, the BIMI subscales tended to exhibit personality correlates in the honest condition. The positive associations of AM with narcissism and psychopathy are consistent with the tendency for self-promotion in both of these dark personalities (Paulhus & Williams, 2002). In a followup regresssion with all three Dark Triad members as predictors, only narcissism retained a significant link with AM, consistent with the agency theory of narcissism (Campbell & Foster, 2007).

Interestingly, an unpredicted negative association of psychopathy with CM emerged as a suppressor effect. That result is consistent with the fact that psychopaths tend to present themselves as tough and mean in contrast to the positive identity typically reported by non-psychopaths (Buckels & Paulhus, 2013; Kitching & Paulhus, 2008).

Links with the Big Five personalities were also trait-like. CM was associated positively with conscientiousness and, to a lesser extent, with agreeableness. We also found the predicted positive associations of AM with extraversion but no association with openness to experience. Those high on openness might be so independent in their reflections and confident in their beliefs that they eschew the exaggerated form of self-presentation embodied in the BIMI items (Trapnell & Campbell, 1999).

As expected, personality correlates largely vanished in the fake good condition. When situational press is strong enough, the impact of personality factors tends to diminish (Cooper & Withey, 2009). By contrast, personality tends to intrude when situational press is weak. In that case, SDR can be given substantive rather than stylistic interpretations (Pauls & Stemmler, 2003; Wiggins, 1964).

STUDY 3: FAKING JOB APPLICATIONS

Another approach to elaborating SDR has been pioneered by Holden and colleagues (Jackson, Peacock, & Holden, 1982; Holden & Evoy, 2005). By comparing how people fake applications for diverse jobs, one can derive the underlying evaluative dimensions. Holden and Evoy (2005), for example, asked participants to simulate applications to four occupations chosen to pull for a variety of personality characteristics: life insurance salesperson, advertising specialist, industrial supervisor, and high school science teacher. Discriminant function analysis revealed four orthogonal dimensions of faking: personal effectiveness, sociability, bold innovation, and open disclosure.

In Study 3, we followed that procedure with a more targeted set of credentials. We selected jobs that a priori required agentic or communal personality characteristics. We then calculated mean AM and CM scores of participants faking applications to these two types of jobs. If the subscales are valid, then AM scores should be higher when participants are faking jobs calling for agentic qualities whereas CM scores should be higher for jobs pulling for communal qualities.

We also included two control groups to provide anchor points for the other conditions. The group instructed to simply fake good should exhibit the highest AM and CM scores and those instructed to respond honestly should elicit the lowest scores on both subscales.

Method

Participants. Of the 215 accessing the survey via Amazon's mTurk site, 209 participants were retained: We dropped those who failed the manipulation check (see below). The sample included 100 men and 109 women ranging in age from 18 to 69 ($M = 28.2$ years).

Procedure. All participants completed the BIMI twice, following different instructions each time. They were randomly assigned to one of two conditions: In Condition 1 ($n = 101$), participants simulated being applicants for an agentic job and a communal job. Condition 2 ($n = 108$) provided two controls: Participants were instructed first to answer honestly and then to fake good.[2] In those control conditions, the context of job applications was not mentioned. Response format was degree of agreement on 1–7 scales (see Table 1).

We selected job examples prototypical of agency and communion. Seven judges familiar with the concepts were asked to rate a variety of jobs nominated as exemplars of agency and communion. The highest ratings for agency were given to criminal investigator and stockbroker. Highest ratings for communal exemplars were given to daycare provider and charity worker. A randomly assigned example from each category was presented to participants in Condition 1: They were asked to fake good, that is, respond as the ideal candidate for each job.

Finally, to confirm whether participants had read the instructions, an open-ended question was included as a manipulation check. It asked them to confirm the instructions they had received on the previous page (e.g., honest, global fake good, ideal job candidate). Our subsequent review of their responses led us to exclude from our analyses those who could not confirm which instructions they had received.

Results

The experimental results are presented in Table 6 and Figure 1. As expected, the two control groups provided book-ends for the job application profiles: Means were highest for global fake-good instructions and lowest for honest responding. For example, AM was lowest in the honest condition ($M = 3.41$) and highest in the fake good condition ($M = 5.72$), $p < .01$,[3] $d = 2.56$. Similarly, the CM mean was lowest in the honest condition ($M = 3.50$) and highest in the fake good condition ($M = 6.41$), $p < .01$, $d = 2.99$. In short, these control conditions operated as expected.

Job application profiles. We analyzed responses in a two-way, within-subjects analysis of variance. The BMI subscales (AM vs. CM) were treated as one factor and job type (agentic vs. communal) as a second factor. Results revealed a main effect of job type such that BIMI scores were higher for communal jobs ($M = 4.98$) than for agentic jobs ($M = 4.74$), $F(1, 84) =$

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[2]This order tends to show the clearest faking effects (Nguyen et al., 2005).
[3]Unless otherwise indicated, all tests are two-tailed.

TABLE 6.—Study 3: Subscale means by job application condition.

	n	Agentic Management	Communal Management
Agentic jobs			
Detective	56	5.27 (1.11)	4.59 (1.13)
Stockbroker	45	5.01 (1.16)	4.06 (1.39)
Overall	101	5.14 (1.13)	4.33 (1.27)
Communal jobs			
Child care provider	53	4.64 (1.02)	5.44 (1.21)
Nonprofit/charity	48	4.42 (.78)	5.37 (1.23)
Overall	101	4.56 (.92)	5.42 (1.21)
Control conditions			
Honest	108	3.41 (.86)	3.50 (1.06)
Fake good	108	5.72 (.97)	6.41 (.86)

Note. Total $N = 209$. Tabled entries are item means on 1–7 point scales. The overall means are not weighted by sample size of the individual conditions. The agentic and communal job conditions involved the same participants (i. e., repeated measures).

3.76, $p = .04$. The main effect for subscale was not significant, $F(1, 84) = .22$, $p = .65$.

Most important, the two factors interacted significantly, $F(1, 84) = 77.9$, $p < .001$. Simple main effects revealed that, as expected, scores on AM were higher when applying for an agentic job ($M = 5.14$), than for a communal job ($M = 4.56$), $F(1, 84) = 49.8$, $p < .001$, $d = .67$. Similarly, as expected, scores on CM were higher when applying for a communal job ($M = 5.42$) than for an agentic job ($M = 4.33$), $F(1, 84) = 33.1$, $p < .001$, $d = .90$.

In sum, Study 3 showed that the BIMI subscales are differentially responsive to the faking context. Each subscale captures faking tendencies best in its own domain. The study also confirmed the utility of the job application technique for uncovering dimensions of desirability (Holden & Evoy, 2005).

GENERAL DISCUSSION

Research on SDR has generally assumed that content is unimportant: That is, the tendency to respond desirably should be consistent across content domains. Developers of all the popular individual difference measures (the Marlowe-Crowne, the BIDR, the Edwards SD scale) have made this assumption. Rather than content domain, other moderators proved to be important: For example, self- versus other-deception (Sackeim & Gur, 1978), attribution vs. repudiation (Roth, Snyder, & Pace, 1986), or motivation type (Holden, 1998).

Only recently has the importance of content been acknowledged. For example, the self-deceptive component of SDR has been partitioned into the content dimensions reflecting agency and communion (Paulhus & John, 1998). Whereas the bias associated with agency has an egoistic flavor, the bias associated with communion is moralistic (Vecchione & Alessandri, 2013; Wojciszke, 2005). In this article, we pursued that same distinction within the impression management domain.

Our Study 1 generated relatively independent measures of AM and CM. Study 2 confirmed their relative independence although the correlation rose from .27 to .49. Each subscale was sufficiently reliable under both honest and faking instructions. Study 3 demonstrated the differential sensitivity of the subscales to different types of job applications.

At first blush, the pattern of means across the three studies seems odd: They gradually rise from Study 1 to Study 3 in both
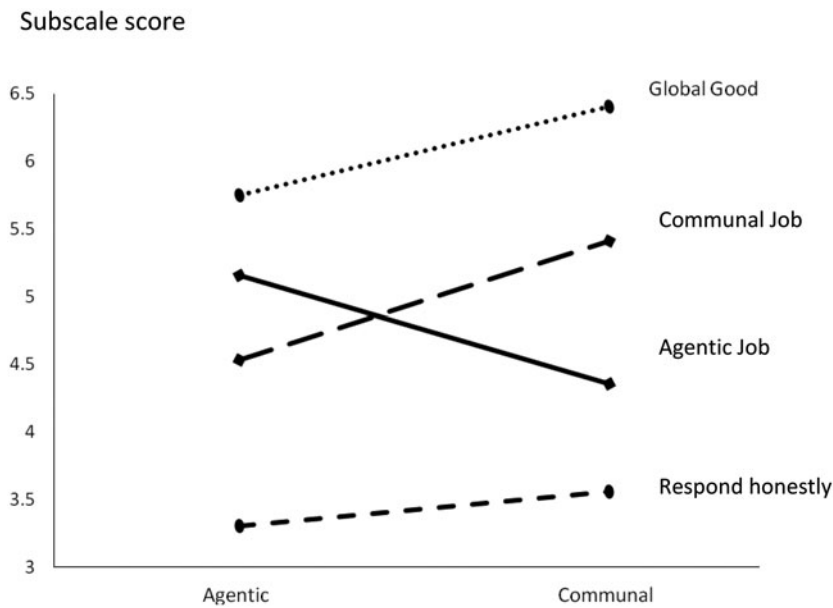
Subscale score

FIGURE 1.—Item means on Agentic and Communal subscales separated by instructional condition. Total $N = 209$. Item response format was 1–7-point Likert scale.

the honest and faking conditions. However, the pattern becomes coherent after consideration of three points:

1. The item selection criterion in Study 1 was that the item possesses a large effect size: Hence items with low honest and high fake-good values would tend to be chosen. Averaged across subscales, the resulting means were 2.9 and 4.9 in the honest and fake-good conditions.
2. The replication sample (Study 2) would naturally show a moderation in these values. As expected, the honest means were higher (3.2) and the fake good means were lower (4.1) than in Study 1.
3. Study 3 was also a replication sample, but in this case composed of community participants. Less sophisticated, they scored highest of all three studies in the honest (3.5) and, especially, the fake good condition (6.1). These values are consistent with previous research indicating that self-reports of non-students tend to be more positive than those of students (Schuman & Presser, 1981).

Based on these considerations, we recommend that the honest means from Study 2 and Study 3 be used as norms for student and community samples, respectively.

Content vs. style. Note that creation of the BIMI does not alleviate traditional concerns about distinguishing content from style. Although some respondents score high on AM or CM because they are exaggerating their positive traits, others might score high because they are honestly reporting possession of those positive traits. The stylistic interpretation has led many researchers as far back as Edwards (1953) to assume that correlations with SDR scales invalidate other measures (Davis, Thake, & Vilhena, 2010). Some attempted to rectify this confound by partialing SDR scores out of personality scores (e.g., Pauls & Stemmler, 2003). However, several lines of research have shown that removing the effects of social desirability from personality measures does not improve the criterion-related va-

lidity of these constructs (Li & Bagger, 2006; Piedmont et al., 2000). Accordingly, the partialing of BIMI scores to "correct" personality measures for bias should be discouraged.

Applications. These limitations notwithstanding, we anticipate that the BIMI will be useful in clarifying both state and trait determinants of SDR scores. As with the earlier Impression Management (IM) scale, the BIMI can gauge the situational demand for impression management. Social psychologists, in particular, can use the BIMI subscales as manipulation checks to compare the impact of situational variables across conditions (e.g., Ho & Sidanius, 2010). In survey research, mean scores on desirable attributes should rise as self-reports become less anonymous (Paulhus, 1991). Again, the key advantage of the BIMI is its ability to determine whether the contextual pressure is of an agentic or a communal nature.

In individual differences research, the BIMI can be used to determine the evaluative implications of a self-report instrument. Future work on that topic must fully embrace the notion that conceptions of social desirability must be distinguished by their relative emphasis on agency and communion (Trapnell & Paulhus, 2012; Wojciszke, 2005). For example, correlations of AM and CM with a newly created measure of interpersonal appeal could reveal whether the measure involved agentic or communal appeal or both. Thus the BIMI can be used to determine, not only how "fakeable" questionnaires are, but what type of faking they are susceptible to. For some purposes, the total BIMI might be useful as a substitute for the earlier IM scale.

Use of the BIMI could also clarify the recent debate about the personality contributions to scores on the older BIDR IM scale. Whereas Uziel (2011) found evidence for prosocial attributes, Davis et al. (2012) found antisocial correlates of high IM scores. The answer may lie in the fact that IM confounds the two components: The agentic component may have antisocial elements whereas the communal component contains prosocial elements.

In addition, the scale can also be used to inform research on faking behavior (Nguyen et al., 2005). With the recognition that impression management can be separated into agentic and communal biases, previous work on faking behavior needs to be re-examined. Preferable to correlational work, this experimental work is targeted at uncovering the psychological processes behind faking. Inclusion of AM and CM in faking research would provide a more nuanced analysis that identifies and separates agentic and communal biases.

Future research can apply this new conception by implementing faking instructions that specifically ask participants to fake in an agentic or communal manner. Too often, faking instructions are global and vague, instructing participants to present themselves "well adjusted," "better than you really are," or "as good as possible." Our methodological advance should also be incorporated into the statistical modeling of faking (Goffin & Boyd, 2009; Ziegler & Buhner, 2008).

Note that the BIMI scales were designed to capture only positive elements of impression management. The selection methodology (i.e., fake good) depends on upward distortion: Hence items with low base-rates under honest response conditions are more likely to be selected (Wiggins, 1959). A different approach will be required to tap negative distortion, that is, malingering (see Rogers, Gillis, & Bagby, 1990).

In sum, we hope that the advent of the BIMI will advance understanding of impression management. It highlights the fact that there are two fundamental themes inherent in any self-presentation behavior and researchers ignore this distinction at their peril.

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