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# Personality inventory faking: A four-dimensional simulation of dissimulation \*

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#### **Abstract**

This research explored the multi-dimensionality of faking. Undergraduates (N = 238) responding to a personality inventory were randomly assigned to answer honestly, positively, or negatively for one of four occupations. Discriminant function analysis revealed four orthogonal dimensions of faking: personal effectiveness, sociability, bold innovation, and open disclosure. All faking dimensions related significantly to observed validity indices. Implications for the structure and detection of faking are discussed. © 2005 Elsevier Ltd. All rights reserved.

Keywords: Faking; Dissimulation; Multi-dimensionality; Social desirability; Personality; Impression management

#### 1. Introduction

Self-report assessment of non-cognitive individual differences is ubiquitous in Western society. Few adults have not completed a vocational interest, personality, personnel, or clinical evaluation instrument sometime during their lives. Yet what evidence is there that an individual's assessment has validity and does not merely index self-presentation skills? Although published literature and

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test publishers' manuals may attest to the validity of an instrument for particular purposes and populations, how can we ascertain whether a specific individual's protocol is a true indicator of the self? This paper explores one facet of test invalidity, the structure of experimental faking on self-reported personality.

Within psychological testing, sources of invalidity are challenges for inventory developers and users. Paulhus (1991) indicates deviant responding, careless responding, consistent responding, omitting items, acquiescence, extremity bias, and socially desirable responding as major response biases that may disrupt accurate measurement. Socially desirable responding has existed as a concern for decades and is conceptualized as a multi-factorial issue (Holden & Fekken, 1989; Paulhus, 1984). In particular, Paulhus (1984) differentiates between self-deceptive enhancement and impression management processes. Included within impression management are self-presentation strategies associated with faking (Paulhus, 2002).

Is faking an issue for self-report assessment? Although some see social desirability's effect on validity as a red herring (e.g., Ones, Viswesvaran, & Reiss, 1996), others disagree (e.g., Rosse, Stecher, Miller, & Levin, 1998) indicating that, even if validity for a group is unchanged, faking can influence test validity for subgroups or individuals (Brown & Harvey, 2003). Within clinical assessment, concern about faking on self-report inventories also exists. Rogers (1997) asserts that the prevalence of invalid response styles is non-trivial. In any clinical evaluation, an assessment of individual protocol validity is fundamental, especially when motivations to fake may be present (Ben-Porath, 1992).

In practice, concern about individual protocol validity is evident. Entire inventories exist to assess response styles rather than psychological constructs. For example, the Balanced Inventory of Desirable Responding (BIDR; Paulhus, 1998) quantifies two kinds of self-promotion. Of course, standard inventories include validity indices: the MMPI-2 has seven indices of protocol acceptability, the Millon Clinical Multi-axial Inventory–III contains four validity scales, and the 16 Personality Factor Questionnaire has three validity indices (Holden, 2000). In contrast, the NEO-Personality Inventory has been criticized clinically because of its paucity of validity indicators (Ben-Porath, 1992).

If faking is so important that acceptable inventories require validity indices, questions concerning the structure of faking arise. Theoretically, faking has sometimes been regarded as multi-faceted. Kroger and Turnbull (1970, 1975) indicate that differential role taking could underlie test faking. Jones and Pittman (1982) suggest that, for social behavior, self-presentation strategies include ingratiation, intimidation, self-promotion, exemplification, and supplication. Lanyon (1996) argues that six types of deceptiveness (deliberate endorsement of extreme virtue, deliberate endorsement of extreme adjustment, unaware self-enhancement, patient stereotype, general symptom overendorsement, and random responding) exist. Nichols and Greene (1997) review various dimensions (e.g., generic versus specific) that include or overlap with faking.

Empirically, examples suggest that faking is not unidimensional. For clinicians' evaluations of forensic samples, Rogers and Cruise (2000) indicate distinct deception components: implausible presentation, denial of criminality, and conning and manipulation. Experimentally, positive and negative faking are separate dimensions, not a continuum, for self-report (Holden, Book, Edwards, Wasylkiw, & Starzyk, 2003; Holden & Kroner, 1992). Within the MMPI-2, scales of *L*, *F*, and *K* scales are not just conceptually distinct but also load on orthogonal dimensions (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989, pp. 99–100).

Within structured personality inventories, the construction of validity indicators is primarily atheoretical. Conceptually, impression management may be multi-faceted (Jones & Pittman, 1982; Rogers & Cruise, 2000), but operationally, faking is treated as unidimensional and measured on a rational basis. Generally, single validity measures are created. When multiple indices are developed, they are constructed on an index-by-index basis without consideration of dimensional colinearity. Consequently, validity indices within an inventory, although conceptually different, demonstrate substantial statistical overlap.

The dimensionality of faking remains to be empirically clarified. The present study examines whether personality inventory faking can be multi-dimensional. Is it possible experimentally to create orthogonal faking components? If so, what implications does this have for naturally occurring faking? Hypotheses were guided by multi-dimensional theorizing (i.e., Kroger & Turnbull, 1970, 1975) and empirical findings (Holden & Kroner, 1992; Holden et al., 2003) concerning faking and the structure of validity scales (Holden & Fekken, 1989; Paulhus, 1984). We hypothesized that:

- 1. Orthogonal dimensions of faking can be created. Dimensionality will exceed the bidimensionality previously reported.
- 2. Given the putative bidimensionality of social desirability measures, validity scales will significantly relate to a maximum of two faking dimensions.

#### 2. Method

# 2.1. Participants

Undergraduates volunteers (N = 238; 198 women, 40 men) participated for introductory psychology course credit. Their mean age was 19.35 years (SD = 3.79).

## 2.2. Target descriptions

Four occupations were selected based on their independence from each other for associated personality characteristics (Jackson, Peacock, & Holden, 1982; Siess & Jackson, 1970): Life Insurance Salesperson, Advertising Person, Industrial Supervisor, and Math-Science High School Teacher.

#### 2.3. Measures

Self-report measures included the NEO-PI-R (Costa & McCrae, 1992) and four validity indices. The NEO-PI-R assesses the five-factor personality model and comprises 240 items scored on 30 facet scales and 5 domain scales. Psychometric strengths include domain scale alpha reliabilities exceeding .86, 3-week test-retest reliabilities above .78, and validities, correlations with peer and spousal reports, surpassing .35 and .33, respectively (Holden, 2000).

Validity indices were the HPSI Total (Holden, 1996), the Self-Deceptive Enhancement and Impression Management scales of the Paulhus Deception Scales (PDS; formerly the BIDR, Paulhus, 1998), and the PRF Desirability scale (Jackson, 1984). The HPSI Total has demonstrated

effectiveness for detecting faking (Holden et al., 2003; Holden, Starzyk, McLeod, & Edwards, 2000). The Self-Deceptive Enhancement scale assesses "an unconscious favorability bias closely related to narcissism" while the Impression Management scale measures a "...form of dissimulation known as faking or lying" (Paulhus, 1998, p. 9). The Impression Management scale has demonstrated sensitivity to self-presentation demands (Paulhus, 1984; Paulhus, Bruce, & Trapnell, 1995). The PRF Desirability scale (Jackson, 1984) quantifies the tendency to present one's self in desirable terms. Its validity has been demonstrated through associations with other social desirability scales (Holden & Fekken, 1989).

#### 2.4. Procedure

Participants were randomly assigned to 1 of 12 groups representing a two-factor (four occupations crossed with three instruction levels), between-subjects design. Each participant received 1 of 4 occupational descriptions with 1 of 3 sets of instructions. Occupation information (see Appendix) comprised a job description from the Canadian Classification and Dictionary of Occupations (Jackson et al., 1982). Participants were to imagine that they were students being assessed for career counseling through a university counseling service. Respondents were to imagine that a parent, a grandparent, and another relative had all trained for the targeted occupation (with the specified job description supplied) and participants were instructed to answer materials honestly, positively, or negatively for the specified occupation. All respondents were warned about indices, which they should avoid activating, designed to detect faking.

### 3. Results

NEO-PI-R facet and domain scale means by group are displayed in Table 1. As a manipulation check, multi-variate analysis of variance was undertaken using instructions and occupations as between-subjects factors and the 30 NEO-PI-R facet scale scores as dependent measures. No effect for occupation emerged, Wilks'  $\lambda = .616$ , F(90,584.45) = 1.14, p > .05. Instructions, Wilks'  $\lambda = .132$ , F(60,390) = 11.40, p < .01, and the interaction of occupation and instructions, Wilks'  $\lambda = .198$ , F(180,1158.62) = 2.03, p < .01, were significant, confirming that faking instructions affected scores and that the faking effect varied by occupation. Eta-squared values of .38, .87, and .80 for occupation, instructions, and their interaction, respectively, indicated substantial effect sizes for instructions and the occupation by instructions interaction. A similar pattern was observed with univariate analyses of facet scales for the effects of occupation (all ps > .05), instructions (all ps < .05), and their interaction (15 of 30 facet scales had ps < .05).

To ascertain the dimensionality of faking, discriminant function analysis used NEO-PI-R facet scales as predictors of membership in 1 of the 12 experimental groups. Of 11 possible functions, the pool was no longer significant after removing the four largest functions (86.6% of the total group variance). Wilks' lambda values for the pool of functions were:  $\lambda_1 = .017$ ,  $\chi^2(330, N = 236) = 868.83$ , p < .01;  $\lambda_2 = .079$ ,  $\chi^2(290, N = 236) = 543.01$ , p < .01;  $\lambda_3 = .159$ ,  $\chi^2(252, N = 236) = 393.02$ , p < .01;  $\lambda_4 = .275$ ,  $\chi^2(216, N = 236) = 276.13$ , p < .01. Consequently, four functions were retained and rotated to a varimax criterion. Figs. 1 and 2 present group centroids in discriminant space. Function 1 (53.3% of the explained variance), defined by NEO-PI-R facet

Table 1 NEO-PI-R scale means as a function of instructions

Scale	Instructional condition <sup>a</sup>											
	L+	L	L-	A+	A	A-	I+	I	I–	M+	M	M-
N1: Anxiety	14.12	18.10	19.10	10.70	18.90	20.90	11.38	17.90	20.22	11.37	18.16	18.75
N2: Angry-Hostility	10.94	13.84	19.40	9.70	15.52	16.60	9.48	13.35	22.30	7.11	13.05	19.90
N3: Depression	10.76	15.00	18.80	8.21	13.80	21.25	8.14	15.40	20.30	8.63	15.42	17.05
N4: Self-Consciousness	12.06	16.50	20.70	9.60	15.25	20.80	9.80	17.50	21.61	11.11	17.32	19.45
N5: Impulsiveness	14.53	16.60	20.65	14.60	17.45	18.01	10.77	17.15	21.40	10.84	17.21	19.90
N6: Vulnerability	7.68	12.20	20.29	6.80	12.15	20.70	4.52	13.25	23.25	6.53	14.00	19.85
E1: Warmth	25.29	23.35	14.85	26.75	22.35	12.60	25.00	23.15	11.40	24.89	23.89	14.55
E2: Gregariousness	21.76	18.79	14.25	25.25	18.80	11.47	22.38	17.95	8.15	22.53	19.95	11.85
E3: Assertiveness	23.29	17.45	12.20	24.48	17.40	7.81	25.10	16.65	8.05	21.95	17.95	11.35
E4: Activity	18.71	17.00	16.31	22.04	19.05	12.05	19.71	17.40	13.68	18.95	18.42	16.10
E5: Excitement- Seeking	17.94	19.10	20.70	24.45	20.85	11.70	17.14	17.85	17.20	17.68	19.84	20.55
E6: Positive Emotions	20.18	21.45	18.05	24.30	20.95	13.55	21.10	21.70	14.20	20.53	22.68	16.60
O1: Fantasy	14.18	19.20	24.00	21.20	19.05	12.15	14.95	20.11	20.32	13.79	20.26	21.50
O2: Aesthetics	14.96	18.70	20.55	23.70	18.40	13.25	17.62	17.90	17.20	17.21	18.47	19.99
O3: Feelings	20.41	21.65	19.80	23.34	22.75	14.75	20.71	23.85	18.25	19.42	22.79	20.85
O4: Actions	15.41	15.40	16.95	20.45	16.25	10.70	18.14	14.65	16.05	16.79	15.95	16.35
O5: Ideas	19.12	19.20	17.60	23.70	19.40	13.35	22.71	19.45	13.85	25.58	19.92	13.20
O6: Values	19.75	21.96	17.72	21.97	21.90	16.07	21.40	21.05	17.60	20.26	22.63	16.68
A1: Trust	18.82	19.10	14.80	19.95	17.35	14.50	18.81	18.05	11.86	21.68	20.89	12.80
A2: Straight- forwardness	15.29	20.15	20.94	15.40	18.35	22.25	16.71	18.95	15.93	22.53	19.95	13.25
A3: Altruism	22.06	23.90	16.78	23.65	23.30	16.75	23.19	24.20	12.60	25.32	24.37	15.28
A4: Compliance	18.82	17.00	14.35	16.65	15.50	17.25	18.29	17.55	12.90	21.37	17.05	11.95
A5: Modesty	15.94	19.70	17.06	14.25	18.30	20.41	16.95	20.25	16.80	19.05	16.68	13.15
A6: Tender- Mindedness	20.18	19.75	17.95	18.15	19.95	18.80	20.86	20.60	17.23	20.32	19.53	16.91
C1: Competence	24.82	20.50	12.05	25.40	21.50	12.11	27.81	20.35	10.45	26.42	21.74	12.96
C2: Order	22.53	17.15	9.90	20.10	17.80	11.85	24.90	18.25	10.66	21.95	17.21	10.95
C3: Dutifulness	23.12	21.45	13.45	24.35	21.45	14.60	26.67	21.25	10.10	25.26	21.26	12.00
C4: Achievement- Striving	25.12	18.80	12.15	24.00	21.30	11.95	26.13	19.50	10.05	23.89	20.16	12.15
C5: Self-Discipline	24.88	18.20	10.11	24.90	20.10	9.15	28.05	17.50	7.85	25.73	19.03	10.15
C6: Deliberation	22.81	17.70	9.55	20.70	18.95	14.65	24.71	18.05	9.95	23.16	17.68	10.94
N: Neuroticism	69.54	92.24	118.94	59.61		118.26			129.08	55.58		114.90
E: Extraversion	126.68	117.14	96.36	147.26	119.40	69.18	130.43	114.70	72.68	126.53	122.74	91.00
O: Openness	102.33	116.11	116.62	134.36	117.75	80.27	115.54	117.01				108.56
A: Agreeableness	110.17	119.60	101.89	108.05	112.75	109.96	114.80	119.60	87.33	130.26	118.47	83.34
C: Conscientiousness	141.25	113.80	67.21	139.45	121.10	74.31	158.27	114.90	59.06	146.41	117.08	69.16

<sup>&</sup>lt;sup>a</sup> L, A, I, M, represent Life Insurance Salesperson, Advertising Person, Industrial Supervisor, and Math-Science High School Teacher, respectively. "+", "", and "–" indicate instructions to respond positively, honestly, or negatively for that occupation.

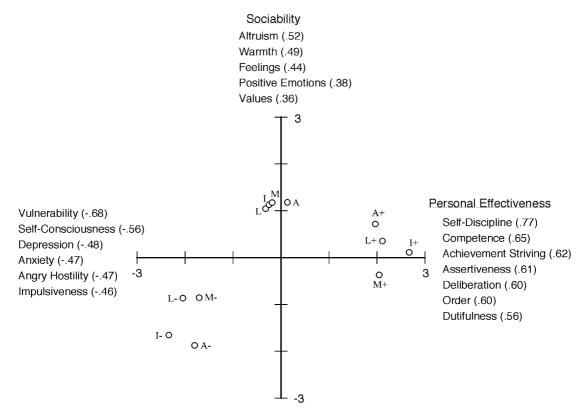


Fig. 1. Group centroids in first 2 of four-dimensional faking space: Personal Effectiveness and Sociability. (Scales with loadings ≥ .30 are listed below the dimensional label with loadings parenthesized.) L, A, I, M, represent Life Insurance Salesperson, Advertising Person, Industrial Supervisor, and Math-Science High School Teacher groups, respectively. "+", "", and "-" indicate instructions to respond positively, honestly, or negatively for that occupation.

scales of Self-Discipline, negative Vulnerability, Competence, Achievement-Striving, Assertiveness, and Deliberation is interpreted as a Personal Effectiveness dimension that distinguishes individuals faking to be recommended for any occupation from those avoiding such recommendations. Altruism, Warmth, Feelings, Positive Emotions, and Values define Function 2 (20.6% of the explained variance), interpreted as Sociability. This dimension differentiates honest responders from all others, particularly those faking to avoid any career recommendation. For Function 3, labeled as Bold Innovation (14.7% of the explained variance), Excitement-Seeking, Fantasy, Actions, Aesthetics, Activity, and negative Modesty are prominent. Respondents faking to be recommended for or against an advertising career and against a life insurance sales career are relatively extreme on this dimension. Finally, Function 4 (11.4% of the explained variance), interpreted as Open Disclosure, is characterized by Straightforwardness, Ideas, and Compliance. This dimension is positively associated with faking to be recommended for a high school math/science teaching career and negatively associated with the responding of life insurance sales occupation aspirants.

Given that four significant, independent faking dimensions were induced, it is important to note how responding on these dimensions is detected by and related to the validity indices. Across the

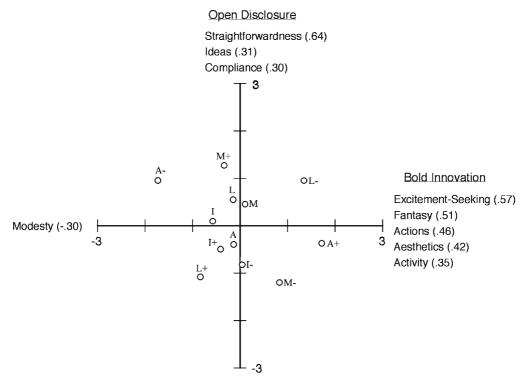


Fig. 2. Group centroids in last 2 of 4-dimensional faking space: Bold Innovation and Open Disclosure. (Scales with loadings ≥ .30 are listed below the dimensional label with loadings parenthesized.) L, A, I, M, represent Life Insurance Salesperson, Advertising Person, Industrial Supervisor, and Math-Science High School Teacher groups, respectively. "+", "", and "-" indicate instructions to respond positively, honestly, or negatively for that occupation.

12 groups and among the validity indices, the HPSI Total and PRF Social Desirability scales were generally most strongly correlated (range between -.59 and -.88) whereas HPSI Total and Self-Deceptive Enhancement scales were generally least correlated (range between -.48 and -.04). Table 2 provides validity scale means by group. In significantly distinguishing among groups, the HPSI Total, F(11,225) = 21.36, p < .01, Self-Deceptive Enhancement, F(11,225) = 4.19, p < .01, Impression Management, F(11,225) = 10.64, p < .01, and PRF Social Desirability, F(11,225) = 29.89, p < .01, scales accounted for 51.1%, 17.0%, 34.2%, and 59.4%, respectively, of the variance. Table 3 provides correlations between the validity indices and discriminant functions, unrotated and rotated. Correlations with the unrotated functions are important because they are associations with multi-dimensional space where variance has not been redistributed but rather retains the sequential maximization of extracted independent linear combinations. The first unrotated function (52.7% of the total variance) had large associations (Cohen, 1992) with the HPSI Total and PRF Social Desirability indices and medium correlations with the two PDS scales. Whereas the second and fourth unrotated functions (14.9% and 8.2% of the total variance, respectively) had medium effect size correlations with the Impression Management scale, the third unrotated function (10.7% of the total variance) had only small correlations with each validity index.

Table 2 Validity scale means as a function of instructions

Scale	Instructional condition <sup>a</sup>											
	L+	L	L-	A+	A	A-	I+	I	I-	M+	M	M-
HPSI Total	32.85	41.45	65.64	28.81	43.46	69.44	27.60	38.95	77.10	27.37	41.41	74.15
Self-Deceptive	3.50	2.00	1.65	4.65	2.85	1.40	5.00	1.75	1.15	3.00	1.74	2.45
Enhancement												
Impression Management	8.44	6.35	6.00	8.65	5.10	8.75	10.62	7.35	2.90	12.21	7.63	2.35
PRF Desirability	12.76	11.25	6.95	13.05	10.90	6.65	14.14	11.40	3.95	14.47	11.47	4.50

<sup>&</sup>lt;sup>a</sup> L, A, I, M, represent Life Insurance Salesperson, Advertising Person, Industrial Supervisor, and Math-Science High School Teacher, respectively. "+", "", and "–" indicate instructions to respond positively, honestly, or negatively for that occupation.

Table 3
Correlations of validity indices with discriminant functions

	HPSI Total	Self-Deceptive Enhancement	Impression Management	PRF Desirability	Magnitude of correlation	
					Largest	Average
Unrotated solution						
Function 1	$76^{**}$	.38**	.43**	.78**	.78	.62
Function 2	.06	00	34**	06	.34	.12
Function 3	$20^{**}$	11	.18**	.20**	.20	.17
Function 4	.10	$17^{**}$	$30^{**}$	11	.30	.17
Varimax-rotated solution	n					
Personal Effectiveness	$72^{**}$	.41**	.47**	.74**	.74	.60
Sociability	$50^{**}$	.09	.11	.51**	.51	.32
Bold Innovation	.06	.11	18 <sup>**</sup>	05	.18	.10
Open Disclosure	15 <sup>*</sup>	.02	.40**	.15*	.40	.18

p < .05.

For varimax rotation of the discriminant space, the Personal Effectiveness function had large correlations with the PRF Social Desirability and (negative) HPSI Total scales, and medium associations with Self-Deceptive Enhancement and Impression Management scales. Sociability related with a large effect size to PRF Social Desirability and (negative) HPSI Total scales. Bold Innovation had as its only significant association a small negative correlation with the Impression Management scale, while Open Disclosure had a medium association with the Impression Management scale and small association with the PRF Social Desirability and (negative) HPSI Total scales.

## 4. Discussion

Similar to research on the number and nature of dimensions of personality, practitioners and researchers using structured self-report can query about the nature of faking. How many faking

<sup>\*\*</sup> p < .01.

dimensions exist and what are they? At a highest level, there could be one continuum (Greene, 1997) with positivity (e.g., defensiveness) and negativity (e.g., malingering) at opposite poles of an accuracy-centred dimension. The MMPI F scale could operationalize such a continuum. At a lower level, two separate dimensions may emerge and evidence indicates that these induced orthogonal continua may include faking good and faking bad (Holden & Kroner, 1992). Experimentally produced dimensions of faking good and bad can be captured by the Paulhus Impression Management and HPSI Total scales, respectively (Holden et al., 2003). Need we stop with two faking dimensions? No! Findings indicate that faking in four-dimensional space can be activated.

Current results produce four orthogonal faking dimensions: personal effectiveness, sociability, bold innovation, and open disclosure. Concordant with our first hypothesis, the construction of more than two orthogonal faking dimensions is possible. Prior to discussing the generalizability of these dimensions, their relationship to validity indices merits comment.

Each faking dimension, unrotated or rotated, related significantly to a validity scale. The magnitude of the largest correlations between a particular dimension and any validity index ranged between .20 and .78 and between .18 and .74 for the unrotated and rotated solutions, respectively. Second, the Impression Management scale significantly related to every retained, unrotated faking dimension. The Impression Management scale's merits are particularly noteworthy given recent challenges to the BIDR scales' construct validity. In particular, Pauls and Crost (2004) suggest that the BIDR scales should not be differentiated on the basis of type of deception such as self or other, conscious or unconscious. Instead, they distinguish between defensive and conforming communion management (Impression Management scale) and positive and offensive agency management self-presentation (Self-Defensive Enhancement scale) strategies. Third, for the two largest unrotated faking dimensions (67.6% of the total group variance), their strongest association with a validity scale was a medium to large effect size. Thus, contradicting our second hypothesis, our uncovered domain of faking was detectable using the chosen validity indicators. Therefore, despite their relative unidimensionality (Holden et al., 2000), validity measures can detect variation along multiple mathematically independent linear combinations. This versatility bodes well for the utility of standard validity indicators. Nevertheless, limitations are also to be noted. For example, the third unrotated dimension of faking (marked by NEO-PI-R facet scales of Altruism, Straightforwardness, and Modesty) and the rotated Bold Innovation distortion dimension had, at most, significant associations of small effect size with validity indices.

Does our constructed faking dimensionality generalize to natural faking? Choice of targets, stimuli, participants, and instructions all bear on this issue. Selected targets were real occupations for which previous research indicated the independence of associated personality characteristics. Supplied target information used standard occupational dictionary descriptions. Stimuli were psychometrically sound Big Five personality measure items. Participants were first-year undergraduates for whom occupational choice is a relevant and often still emergent issue. Many such students have yet to commit to a particular course of study let alone to a specific occupation. Thus, the provided scenario was not implausible.

Despite the viability of scenario components, their combination and the instructions are artificial. From one perspective, generalizability of results to natural faking is unknown. From another perspective, ecological validity is not the complete issue. Rather than only asking what the structure of personality test faking is, it is also important to ask what the structure can be. It can be

more than a unidimensional continuum of positivity versus negativity and more than a twodimensional space of faking good and faking bad. Dissimulation can be four dimensions and perhaps more!

Similarities of obtained dimensions to previous theorizing are not strong. Lanyon's (1996) deceptiveness strategies for test respondents and Rogers and Cruise's (2000) deception components for clinicians' evaluations of forensic patients do not relate well to our obtained structure. Some associations with the impression management strategies of Jones and Pittman (1982) may be drawn. Specifically, our personal effectiveness and sociability dimensions appear similar to strategies of self-promotion and ingratiation, respectively. Further, findings are consistent with Nichols and Greene (1997) and Kroger and Turnbull (1970, 1975). Nichols and Greene distinguish between readily detectable generic deception and specific dissimulation that can be more difficult to identify. Related to this, Kroger and Turnbull (1975) hypothesize that test respondents fake by assuming specific social roles and show that this role-playing may not be detected by validity indices. The present approach focused on specific occupational roles previously found to load on orthogonal personality dimensions, and provided respondents with relevant occupational information. Consequently, manipulations were extremely specific and this may have contributed to the obtained multi-dimensionality and its nature. Thus, general questions still remain regarding:

- 1. The frequency of naturally occurring personality inventory faking.
- 2. The relative frequency of different types of real-world test faking.
- 3. Population differences in naturally occurring test faking.
- 4. Context differences in real-world test faking.

In summary, this study demonstrates an experimental hyperspace of faking on a self-report personality measure. A four-dimensional space emerged, defined by orthogonal dimensions of personal effectiveness, sociability, bold innovation, and open disclosure. Despite dimensional orthogonality, standard validity indices were related to these independent facets of faking, particularly the largest aspects. The ecological validity of the general multi-dimensionality of faking and the specific structure observed here remain to be fully explored.

## **Appendix. Occupational descriptions**

A Life Insurance Salesperson solicits and sells all types of life insurance. He/she takes into account clients' present insurance and government benefits, to establish a plan for financial security. A Life Insurance Salesperson advises clients about life insurance, pensions, taxation, and family finance. He/she assures that all forms are complete and schedules any required medical examinations. A Life Insurance Salesperson will suggest a method of premium payment and options for any insurance settlements.

An Advertising Person assists in planning advertising programs to promote the sale of a company's products. He/she will consult with company officials, sales departments, and advertising agencies to develop promotional plans. An Advertising Person prepares advertising brochures and manuals for publication. He/she writes copy, does layout work, prepares sales kits, sets up displays, and writes sales outlines.

An Industrial Supervisor supervises and coordinates the activities of workers. He/she studies production schedules and estimates staff-hour requirements. An Industrial Supervisor interprets company policies to workers and enforces safety regulations. He/she suggests changes in working conditions and the use of equipment to increase efficiency of shop, department, or work crews. An Industrial Supervisor recommends personnel actions such as promotions, transfers, discharges, and disciplinary measures.

A Math-Science (High School) Teacher instructs students in mathematics and science in public secondary schools. He/she prepares teaching outlines for courses of study, assigns lessons, and corrects homework papers. A Math-Science (High School) Teacher administers tests to evaluate students' progress and issues reports to inform parents of students' progress.

## References

- Ben-Porath, Y. S. (1992). "Normal" personality inventories in clinical assessment: General requirements and the potential for using the NEO Personality Inventory. *Psychological Assessment*, 4, 14–19.
- Brown, R. D., & Harvey, R. J. (2003, April). *Detecting personality test faking with appropriateness measurement: Fact or fantasy*? Paper presented at the Annual Conference of the Society for Industrial and Organizational Psychology, Orlando, FL.
- Butcher, J. N., Dahlstrom, W. G., Graham, J. R., Tellegen, A., & Kaemmer, B. (1989). *Manual for administration and scoring of the MMPI-2*. Minneapolis MN: University of Minnesota Press.
- Cohen, J. (1992). A power primer. Psychological Bulletin, 112, 155-159.
- Costa, P. T., Jr., & McCrae, R. R. (1992). Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factory Inventory (NEO-FFI). Odessa, FL: Psychological Assessment Resources.
- Greene, R. L. (1997). Assessment of malingering and defensiveness by multiscale personality inventories. In R. Rogers (Ed.), *Clinical assessment of malingering and deception* (2nd ed., pp. 169–207). New York: Guilford.
- Holden, R. R. (1996). *Holden Psychological Screening Inventory (HPSI)*. North Tonawanda, NY: Multi-Health Systems.
- Holden, R. R. (2000). Are there promising MMPI substitutes for assessing psychopathology and personality? Review and prospect. In R. H. Dana (Ed.), *Handbook of cross-cultural and multicultural personality assessment* (pp. 267–292). Mahwah, NJ: Lawrence Erlbaum.
- Holden, R. R., Book, A. S., Edwards, M. J., Wasylkiw, L., & Starzyk, K. B. (2003). Experimental faking in self-reported psychopathology: Unidimensional or multidimensional? *Personality and Individual Differences* 35, 1107–1117.
- Holden, R. R., & Fekken, G. C. (1989). Three common social desirability scales: Friends, acquaintances, or strangers? Journal of Research in Personality, 23, 180–191.
- Holden, R. R., & Kroner, D. G. (1992). Relative efficacy of differential response latencies for detecting faking on a self-report measure of psychopathology. *Psychological Assessment*, 4, 170–173.
- Holden, R. R., Starzyk, K. B., McLeod, L. D., & Edwards, M. J. (2000). Comparisons among the Holden Psychological Screening Inventory (HPSI), the Brief Symptom Inventory (BSI), and the Balanced Inventory of Desirable Responding (BIDR). Assessment, 7, 163–175.
- Jackson, D. N. (1984). Personality Research Form manual (3rd ed.). Port Huron, MI: Sigma Assessment Systems.
- Jackson, D. N., Peacock, A. C., & Holden, R. R. (1982). Professional interviewers' trait inferential structures for diverse occupational groups. *Organizational Behavior and Human Performance*, 29, 1–20.
- Jones, E. E., & Pittman, T. S. (1982). Toward a general theory of strategic self-presentation. In J. Suls (Ed.). *Psychological perspectives on the self* (Vol. 1, pp. 231–262). Hillsdale, NJ: Lawrence Erlbaum.
- Kroger, R. O., & Turnbull, W. (1970). Effects of role demands and test-cue properties on personality test performance: Replication and extension. *Journal of Consulting and Clinical Psychology*, 35, 381–387.

- Kroger, R. O., & Turnbull, W. (1975). Invalidity of validity scales: The case of the MMPI. Journal of Consulting and Clinical Psychology, 43, 48–55.
- Lanyon, R. I. (1996). Assessment of specific deception strategies used by personality inventory respondents. American Journal of Forensic Psychology, 14, 37–53.
- Nichols, D. S., & Greene, R. L. (1997). Dimensions of deception in personality assessment: The example of the MMPI-2. *Journal of Personality Assessment*, 68, 251–266.
- Ones, D. S., Viswesvaran, C., & Reiss, A. D. (1996). Role of social desirability in personality testing for personnel selection: The red herring. *Journal of Applied Psychology*, 81, 660–679.
- Paulhus, D. L. (1984). Two-component models of socially desirable responding. *Journal of Personality and Social Psychology*, 46, 598–609.
- Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.). *Measure of personality and social psychological attitudes* (Vol. 1, pp. 17–59). San Diego: Academic Press.
- Paulhus, D. L. (1998). Paulhus Deception Scales (PDS): The Balanced Inventory of Desirable Responding—7. North Tonawanda, NY: Multi-Health Systems.
- Paulhus, D. L. (2002). Socially desirable responding: The evolution of a construct. In H. I. Braun, D. N. Jackson, & D. E. Wiley (Eds.), The role of constructs in psychological and educational measurement (pp. 49–69). New York: Guilford.
- Paulhus, D. L., Bruce, M. N., & Trapnell, P. D. (1995). Effects of self-presentation strategies on personality profiles and their structure. *Personality and Social Psychology Bulletin*, 21, 100–108.
- Pauls, C. A., & Crost, N. W. (2004). Effects of faking on self-deception and impression management scales. *Personality and Individual Differences*, 37, 1137–1151.
- Rogers, R. (1997). Introduction. In R. Rogers (Ed.), *Clinical assessment of malingering and deception* (2nd ed., pp. 1–19). New York: Guilford Press.
- Rogers, R., & Cruise, K. R. (2000). Malingering and deception among psychopaths. In C. B. Gacono (Ed.), *The clinical and forensic assessment of psychopathy: A practitioner's guide* (pp. 269–284). Mahwah, NJ: Lawrence Erlbaum.
- Rosse, J. G., Stecher, M. D., Miller, J. L., & Levin, R. A. (1998). The impact of response distortion on preemployment personality testing and hiring decisions. *Journal of Applied Psychology*, 83, 634-644.
- Siess, T. F., & Jackson, D. N. (1970). Vocational interests and personality: An empirical integration. *Journal of Counseling Psychology*, 17, 27–35.