Personality Inventory Item Responses Need Not Veridically Reflect "Actual Behavior" to be Valid

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Abstract

College students (62 male, 80 female) completed a version of the Hogan Personality Inventory (HPI) that was augmented with 6 10-item unlikely virtue scales whose content paralleled the 6 standard HPI scales. Despite the fact that the unlikely virtue scales described behavior that was implausible or even impossible, these scales correlated in a meaningful convergent/discriminant fashion with the standard scales and with peer ratings. The results support a social constructivist over a naive realist view of item responses.
Personality Inventory Item Responses Need Not Veridically Reflect "Actual Behavior" to be Valid

Since the beginning of personality assessment through self-report, people have been concerned that respondents cannot or will not always veridically report their actual behavior (Paulhus, 1986). Note, however, that this naive realist view assumes that "actual" behavior exists independently of any person's report of the behavior, and that a self-report is true or valid to the degree that it corresponds to the "actual" behavior.

An alternative to the naive realist view of self-reports described above is a constructivist view. Constructivism holds that "actual" behavior does not exist apart from individuals who observe and report upon the behavior. Rather, behavior is a "social construction" (cf. Berger & Luckmann, 1966; Habermas, 1972; Harre & Secord, 1972). In this view, what we call actual behavior or "literal truth" is a socially constructed consensus rather than an ontological absolute (Johnson, 1981). This view also holds that a personality item response need not correspond even to the social consensus of "actual behavior" or "literal truth" as long as it coheres with the overall constructed view of the person.

This paper presents data that helps weigh the merits of the naive realist and constructivist views of personality item response validity. The strategy of the present study builds upon a construct called "the unlikely virtue" (Paajanen, 1988; Tellegen, 1982). Unlikely virtue items describe behaviors that are socially desirable, but literally implausible. For example, responding "true" to the unlikely virtue item "I read over fifty scholarly books every year" would be interpreted automatically as an invalid response (by a literalistically-minded naive realist). Respondents who answer too many such items in the socially
desirable direction are assumed to be lying, and their entire protocol is disqualified. Note that the content of the unlikely virtue item is irrelevant to the test interpreter. Responses are simply valid or invalid, and a set of valid responses merely shows that the person was not lying—it says nothing substantive about personality.

A constructivist view of item response validity takes an entirely different view of unlikely virtue items. Because "actual behavior" does not exist in an absolute sense, claiming unlikely virtues in itself does not constitute invalid responding. Rather, a response is invalid only if it does not cohere with the way observers construe the respondent's personality. Here, item content becomes important. Answering "true" to "I read over fifty scholarly books every year" may indeed be considered valid if the respondent is perceived to be an intellectual person.

The typical (naive realist) and present (constructivist) views of unlikely virtues generate different predictions on the analysis of responses to unlikely virtue items. If, as naive realists claim, responses to such items merely show a tendency to lie, regardless of item content, we would expect the following:

1. Unlikely virtue scales will not correlate significantly with any standard personality scales (except, perhaps, a dishonesty scale).

2. Unlikely virtue scales using items from different content areas should all load on a separate (Lie) factor when factor-analyzed with a set of standard personality scales.

3. Unlikely virtue scales will correlate about zero with peer ratings of personality traits (except, perhaps, dishonesty).

If, as constructivists claim, item content of unlikely virtue items can
provide valid information about personality, we would find the following:

1. Unlikely virtue scales will correlate significantly with standard personality scales with similar content. Moreover, they will correlate in a convergent-discriminant fashion with a set of personality scales.

2. Unlikely virtue scales using items from different content areas will load on the same factor as standard personality scales with similar content.

3. Unlikely virtue scales will correlate significantly with a set of peer ratings of personality traits in a convergent-discriminant fashion.

Method

Subjects

Subjects were 142 introductory psychology students (62 male, 80 female) who completed the procedures as part of their course experience.

Instruments

Hogan Personality Inventory (HPI). All subjects took the HPI (Hogan, 1986), a 325 item, true-false, self-report personality inventory. The six standard content scales of the HPI include Intellectance, Adjustment, Prudence, Ambition, Sociability, and Likeability. All six scales have demonstrated good reliability and validity; evidence is documented in Hogan's manual. The HPI was augmented with six unlikely virtue scales written specifically for the present study. The content of each scale corresponds to the content of one of the standard scales. For example, one unlikely Intellectance item is "Most people think I'm a genius." Items were embedded after every fifth standard HPI item.

Bipolar Adjective Rating Scales (BARS). The BARS (Johnson, 1987) consists of forty-nine 7-point, Likert-scale adjective pairs designed to measure the same dimensions as the HPI. The BARS scale names corresponding to the HPI are
Mentality, Poise, Conventionality, Power, Sociality, and Likeableness. All subjects had two persons who knew them well rate them with the BARS. Ratings were kept confidential and returned directly to the investigators.

Procedure

All six standard HPI scales and the six specially constructed unlikely virtue scales were intercorrelated and subjected to a principal components factor analysis. Five factors with eigenvalues greater than unity were found and retained; the matrix was rotated to a varimax solution. The two peer ratings per subject were averaged, and the BARS scales were correlated with the standard and unlikely virtue HPI scales.

Results

Table 1 shows the intercorrelation matrix for the standard and unlikely virtue scales. In every case, the unlikely virtue scales' highest correlations (on the order of .40-.50) are with their standard scale counterparts. The factor analysis of this correlation matrix produced five factors, each of which was defined by one of the standard HPI scales, with the exception of the first factor, which is defined by Sociability and Ambition (two scales that usually correlate moderately—cf. Hogan, 1986). Each unlikely virtue scale, with the exception of Unlikely Likeability, loads primarily on the same factor as its standard conceptual counterpart. Unlikely Likeability has equal loadings on the Sociability/Ambition and Adjustment factors (see Table 2).

Insert Table 1 about here
Finally, the matrix of correlations between peer ratings and the HPI scales (see Table 3) indicates that in every case, the unlikely virtue scales show the highest correlation with the appropriate BARS counterpart.

Implications and Conclusions

All predictions from the social constructivist viewpoint were strongly confirmed. Unlikely virtue scales correlated in a convergent/discriminant fashion with a set of standard scales with parallel content, and loaded on the same factor in a factor analysis. Scores on the unlikely virtue scales showed small, but statistically significant, correlations with peer ratings, and that these correlations again showed convergent/discriminant validity. These findings challenge the naive realist view that item responses need to correspond to literal, actual behavior to be valid.
References

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Table 1

Intercorrelations of Standard and Unlikely Virtue HPI Scales

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<tr>
<th></th>
<th>Standard Scales</th>
<th>Unlikely Virtue Scales</th>
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<td></td>
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<td>ADJ 13 100</td>
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<tr>
<td></td>
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<td>AMB 34 21 -06 100</td>
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<td></td>
<td>SOC 11 06 -27 53 100</td>
<td>LIK -08 31 27 14 08 100</td>
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</tr>
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<td>UAM 31 24 01 39 34 -10 61 59 33 100</td>
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<td>USO 09 09 -05 38 40 10 38 36 15 51 100</td>
<td>ULI 00 08 19 08 05 22 24 34 39 35 40 100</td>
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Note. Decimal points omitted from all correlation coefficients. One-tailed significance levels are: .14 (p < .05); .19 (p < .01); .26 (p < .001).
Table 2

Factor Loadings for Five Factor Solution of HPI and Unlikely Virtue Scales

<table>
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<tr>
<th>Standard Scales</th>
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<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
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<td>LIK</td>
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</table>

Unlikely Virtues

| UIN             | 40       |          | 71       |          |          |
| UAD             | 46       |          |          | 57       |          |
| UFR             |          |          |          |          | 85       |
| UAM             |          |          | 63       |          |          |
| USO             |          |          | 73       |          |          |
| ULI             | 43       |          | 43       |          |          |

Note. Decimal points omitted from all factor loadings. Only loadings .40 or above are reported.
### Table 3

Correlations between unlikely Virtue Scales and Peer Ratings

<table>
<thead>
<tr>
<th></th>
<th>UNI</th>
<th>UAD</th>
<th>UPR</th>
<th>UAM</th>
<th>USO</th>
<th>ULI</th>
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<td>08</td>
<td>-09</td>
<td>-03</td>
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<td>Poise</td>
<td>08</td>
<td>20*</td>
<td>07</td>
<td>17*</td>
<td>-05</td>
<td>04</td>
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<td>25**</td>
<td>-01</td>
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<td>16*</td>
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<td>10</td>
<td>16*</td>
<td>06</td>
<td>23**</td>
<td>15*</td>
<td>04</td>
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<tr>
<td>Sociality</td>
<td>15*</td>
<td>26**</td>
<td>03</td>
<td>21**</td>
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<td>-10</td>
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<td>-10</td>
<td>-17*</td>
<td>20*</td>
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</table>

**Note.** Decimal points omitted from all correlation coefficients.

*p < .05  **p < .01
Appendix: Unlikely Virtue Items

Intellectance

(6) 1. I am smarter than most people.
(42) 2. Sometimes I think I am a genius.
(78) 3. I always got high scores on tests in high school.
(114) 4. Every subject in high school came easily to me.
(150) 5. Some people think I am brilliant.
(186) 6. I have an unusually broad range of knowledge.
(222) 7. I have unusually deep insight into things.
(258) 8. In my own way, I am an intellectual giant.
(294) 9. I am extremely well-read in the arts, humanities, and sciences.
(330) 10. I am a modern Renaissance man (or woman).

Adjustment

(12) 1. I never worry.
(48) 2. I feel perfectly relaxed when meeting new people.
(84) 3. I never feel guilty.
(120) 4. I never feel depressed.
(156) 5. I am always in perfect health.
(192) 6. I never get upset.
(228) 7. I can do anything I set my mind to.
(264) 8. I never have trouble making decisions.
(300) 9. I have never been dissatisfied with my life.
(336) 10. I have no psychological problems whatsoever.

Prudence

(18) 1. I was extremely well-behaved as a child.
(54) 2. I never do anything on impulse.
(90) 3. I do not break even minor laws.
(126) 4. I have never been in any kind of trouble.
(162) 5. I have never done anything unsafe.
(198) 6. I always fulfill my obligations.
(234) 7. I have always done what was expected from me.
(270) 8. I have always kept my word.
(306) 9. I never even think about doing things that are wrong.
(342) 10. I always do what is right, even if I suffer for it.
Item Response Veridicality

Ambition

(24) 1. No one manages people better than I do.
(60) 2. I am an extremely talented and gifted leader.
(96) 3. My accomplishments may well be recorded in history books.
(132) 4. My work will bring me an international reputation.
(168) 5. I have never given up.
(204) 6. People will talk about my achievements for generations.
(240) 7. I will make an extraordinary contribution to mankind.
(276) 8. People have been extremely impressed with my leadership.
(312) 9. I can win any game I choose to play.
(348) 10. I think I am special, better than most people.

Sociability

(30) 1. I could talk to people all day long.
(66) 2. At parties everyone wants to talk to me.
(102) 3. I can't stand to be alone.
(138) 4. For me, just being with people is the meaning of life.
(174) 5. Everyone I meet seems to be attracted to me.
(210) 6. Nothing is more important to me than socializing with people.
(246) 7. I am the most sociable person I know.
(282) 8. Being able to work with people is more important than salary.
(318) 9. I have more friends than most people.
(354) 10. I am with other people all the time.

Likeability

(36) 1. Everyone liked me in high school.
(72) 2. I care more about others than I do about myself.
(108) 3. I am extremely easy to live with.
(144) 4. I love all people.
(180) 5. No one has ever really disliked me.
(216) 6. I am one of the nicest persons you will ever meet.
(252) 7. I feel sympathetic rather than angry toward people who wrong me.
(288) 8. When injured I turn the other cheek.
(324) 9. There is no such thing as being too trusting.
(360) 10. I never argue with people.