Personality Correlates of the Organicism-Mechanism Dimension

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Abstract

Personality characteristics that distinguish between persons holding organismic and mechanistic metatheories are presented. Scores on an Organicism-Mechanism Paradigm Inventory were found to be meaningfully related to scores on the California Psychological Inventory, Myers-Briggs Type Indicator, and Holland Vocational Preference Inventory, among other personality measures. Possible causal relationships are discussed.
Personality Correlates of the Organicism-Mechanism Dimension

This paper describes the personality characteristics that distinguish between persons holding organismic and mechanistic metatheories (Bertalanffy, 1968; Pepper, 1942). Metatheories—the sets of fundamental assumptions people hold about their world—have been studied more often by philosophers than psychologists. The only existing studies assessing the relationship between personality and the organismic and mechanistic metatheories were conducted by Maxine Bethel Harris and her associates (Bethel, 1974; Harris, Fontana, and Dowds, 1977) and by Germer, Efran, and Overton (1982).

Harris, et al. describe the development a World Hypothesis Scale (WHS) to measure Pepper's (1942) four world views: formism, mechanism, organicism, and contextualism. Positive results from their work include the following three findings: (1) persons sharing compatible world hypotheses experienced greater satisfaction in dyadic relationships, (2) clients who participated in psychotherapies based on world hypotheses compatible with their own perceived the therapies as more appealing, and (3) subjects endorsing different world views preferred different occupations.

The World Hypothesis Scale shows a number of weaknesses, however. All the statements assessing a particular world hypothesis end in nearly identical wording. For example, all the mechanism statements (which reflect the assumption of causality) end with, "Thus there is a specific reason for . . ." The four scales show substantial intercorrelations; for example, organicism and mechanism
Organicism correlate -.60 and formism and mechanism correlate -.64. This suggests that certain world hypotheses might be better operationalized as ends of a bipolar continuum rather than as independent dimensions. The statements also appear to tap only one area, albeit a central area, in each world hypothesis. The personality scales used to support the construct validity of the World Hypothsis Scale are used more by social psychologists than traditional personality psychologists (e.g., Machiavellian Scale—Christie & Geis, 1970; Social Desirability—Crowne & Marlowe, 1960; Locus of Control—Rotter, 1966; and Dogmatism—Rokeach, 1960).

More recently, Germer, Efran, and Overton (1982) attempted to improve upon Harris, Fontana, and Dowds's (1977) effort to operationalize Pepper's (1942) world hypotheses by constructing an Organicism-Mechanism Paradigm Inventory (CMPI). Half of the 26 forced-choice items on the CMPI cover relatively abstract, philosophical areas, including ontology, epistemology, image of man, analysis and causality, change, dynamics, and methodology. The following is an example of such an item:

a. events are sometimes just the same as before.

b. events are always new and different in some way.

The remaining thirteen items deal with matters of practical concern for ordinary people, including conjugal, parenting, occupational, legal, and other interpersonal relationships. The following is an example of such an item:
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a. Schools should be where a child learns to think for himself.
b. Schools should be where a child learns basic information.

Despite the complexity and diversity of items, the scale showed good internal consistency, with a Guttman split-half coefficient of .86 and a Cronbach alpha coefficient of .76. (A three-week retest showed a stability coefficient of .77.) The 13 philosophical items were found to correlate .63 with the 13 practical items.

Thus, the format and content validity of the CMPI is an improvement over the WHS. Nonetheless, the construct validity of the measure is still uncertain, perhaps because the scale authors selected the same criterion measures used by Harris, Fontana, and Dowds (1977). These scales (Locus of Control, Social Desirability) may be popular with social psychologists, but are theoretically less interesting to personality psychologists. With a few exceptions, correlations with the criteria were either statistically nonsignificant or not particularly meaningful.

The present study was undertaken to examine the construct validity of the CMPI with a battery of theoretically relevant personality measures. Whatever the shortcomings of the CMPI, it does possess good reliability and content validity. A demonstration of meaningful links between the CMPI and theoretically relevant personality scales would support both the construct validity of the CMPI and the notion that metatheoretical thought systems are intimately related to personality.
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Method

Subjects

Subjects were 56 students (30 male, 26 female) enrolled in two sections of an introductory psychology course at the Pennsylvania State University, DuBois Campus. The students voluntarily took the OMPI and a battery of personality scales on different days as part of their course experience. The characteristics of these scales and their expected relationships with the OMPI are presented below.

Organicism-Mechanism Paradigm Inventory

The OMPI is a 26-item, forced-choice inventory designed to measure an individual's preference for two metatheories or paradigms outlined by Overton (1976) and Reese and Overton (1970). The labels for these paradigms, "mechanism" and "organicism", were adopted from Bertalanffy's (1968) General Systems Theory. From the mechanistic viewpoint, people are reactive, determined, ontologically isolated from their environments, and homeostatic; they experience no true growth or development. From the organismic viewpoint, people are active, autonomous, ontologically integrated with the environment, and self-transforming; they experience growth as a reality.

Overton's discussions were intended to describe paradigms from which psychologists operate. Yet everyone is a psychologist in the sense that we are all interested in understanding and predicting each other's behavior (Heider, 1968; Kelly, 1955). Therefore the "lay psychologist" will have a set of suppositions about human behavior, which, if more or less organized and consistent, will resemble the
mechanistic or organismic paradigms. In principle, the scores on the OMNI should enable us to make predictions about diverse patterns of thought and behavior, including interpersonal style, identity, cognitive style, vocational choice, and overall personality.

Interpersonal Style

Riesman, Glazer, & Denny (1950) describe "inner-directed" people as being guided by a "psychological gyroscope" of internalized values implanted early in life, whereas "other-directed" people are guided by the expectations of the people around them. Through a factor analysis of relevant personality items, Collins, et al. (1973) developed scales to measure inner-directedness and other-directedness. The scales showed relative independence ($r = -0.16$) and discriminant validity when correlated with other measures of internal versus external orientation, such as Rotter's (1966) I-E Scale and Shostrom's (1966) Personal Orientation Inventory. Organicism, which holds that persons are active and autonomous, was expected to correlate with Inner-Directedness. Mechanism, which views persons as reactive and determined, should be related to Other-Directedness.

Personal and Social Identity

Jonathan Cheek (Cheek & Briggs, 1982; Cheek & Hogan, 1983) recently developed a scale to measure a person's involvement in personal identity (personal values, emotions, thoughts) and social identity (popularity, interpersonal relationships, group memberships). The nine-item Personal Identity scale and the
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seven-item Social Identity scale both possess a coefficient alpha reliability of .70. The validity of the scales has been demonstrated by meaningful patterns of relationships with Fenigstein, Scheier, and Buss's (1975) Public and Private Self-Consciousness scales, Barron's (1953) Independence of Judgment scale, and Cheek and Hogan's (1983) Susceptibility to Guilt and Shame scales. Because Personal Identity is conceptually similar to Inner-Directedness, while Social Identity is conceptually related to Other-Directedness (Hogan & Cheek, 1983), the pattern of relationships between the Identity scales and the OMPI was expected to be similar to that for the Inner- and Other-Directedness scales. Organicism, with its active, autonomous view of personhood, should correlate with Personal Identity. Mechanism, with its reactive, deterministic viewpoint, should correlate with Social Identity.

Cognitive Style

The Myers-Briggs Type Indicator (MBTI; Myers, 1962) measures differences in the way people perceive and judge their world. Of the four indices on the MBTI, the Sensing-Intuition index seems most relevant to Mechanistic versus Organismic world views. This index reflects a person's preference for one of two ways of perceiving—sensing or intuition. Sensing types enjoy work involving facts, details, routine, and standard procedures. Intuitive types are imaginative, original, and prefer novel, complex problems to routine, simple problems. Sensing types, with their factual, routine, detail-orientation, are likely to endorse a Mechanistic
world view. Intuitive types, who appreciate complex, changing situations, are more likely to hold an Organismic world view.

Vocational Interests

Holland's (1978) Vocational Preference Inventory (VPI) measures an individual's preferences for six types of occupations. Two of Holland's types—Conventional and Artistic—form a bipolar dimension that has implications for a wide range of human affairs (Johnson, 1983; Johnson & Hogan, 1981). Conventional types are orderly, conforming, self-controlled, practical, and prefer occupations like banking and bookkeeping. Artistic types are autonomous, nonconforming, original, impulsive, and prefer occupations like painting and dancing. Conventional types, who are conservative, custodial, and conforming, were expected to hold a mechanistic world view, which assumes stability, elementaristic reductionism, linearity, closed systems, and a view of persons as reactive, determined, and homeostatic. Artistic types, who are progressive and innovative, were expected to hold an organismic world view, which assumes activity, holism, organized complexity, open systems, and a view of persons as active, autonomous, and self-transforming.

Overall Personality

The California Psychological Inventory (CPI; Gough, 1975) has been described as the best available inventory for measuring normal differences in personality (Kleinmuntz, 1967). The CPI contains 18 standard scales and can also be scored for Empathy (Hogan, 1969; Johnson, Cheek, & Smither, 1983). Factor analyses of the CPI have
Organicism revealed four major factors (Megargee, 1972). The themes underlying the four factors are adjustment, interpersonal competence, flexibility, and conventionality. We predicted that the scales marking the flexibility factor—Tolerance, Achievement via Independence, and Flexibility—would show the strongest relationships to Organicism.

Results

Table 1 shows the correlations between the OMPI (scored in the direction of Organicism) and the personality measures. The predictions outlined above were for the most part confirmed. Mechanism was associated with Other-Directedness and, for males, with Cheek's Social Identity Scale. Organicism was associated most strongly with Cheek's Personality Identity scale, Intuition from the MPTI, Artistic interests from the VPI, and the Tolerance, Achievement via Independence, Intellectual Efficiency, and Flexibility scales from the CPI. Organicism also showed significant yet unexpected relationships to the CPI scales assessing interpersonal competence—Dominance, Capacity for Status, Sociability, Social Presence, Self-Acceptance, and Empathy.

Discussion

The coherent and meaningful relationships between scores on the Organicism-Mechanism Paradigm Inventory and a battery of personality
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scales supports the validity of the OMPI and lends credence to the notion that metatheoretical thinking is embedded within personality structure. The term "embedded" is used purposely because the present study does not allow us to infer any causal relationships. Through post hoc reasoning, one could say that personality is caused by, or is the cause of, metatheoretical thinking.

The argument for the causal priority of metatheoretical thinking would be as follows. An organicist views the universe as a living organism and sees people as active, changing, purposive, and autonomous. Because the organicist is one of these active, changing, purposive, autonomous beings, such a person, to be consistent and logical, must describe his or her personality in organismic terms. The argument for the causal priority of personality runs as follows. Metatheoretical thought systems consist of assumptions that are simply supposed rather than rationally or empirically derived. One therefore decides to view the universe as, say, an organism or machine because the viewpoint "feels right"—i.e., it is consistent with the emotions that constitute our personality. The organicist feels active, changing, purposive, and autonomous and therefore views the universe in these terms. The task of determining the causal priority of metatheoretical thinking and personality we leave to future (mechanistically-oriented) researchers.
Author Notes

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References


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Table 1

Personality Correlates of Organismic Metatheoretical Thinking

<table>
<thead>
<tr>
<th>Personality Scales</th>
<th>Males a</th>
<th>Females b</th>
<th>Total</th>
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<tbody>
<tr>
<td>Inner-Directedness</td>
<td>27</td>
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<td>14</td>
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<tr>
<td>Other-Directedness</td>
<td>-34*</td>
<td>-47**</td>
<td>-42**</td>
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<tr>
<td>Personal Identity</td>
<td>29</td>
<td>41*</td>
<td>42**</td>
</tr>
<tr>
<td>Social Identity</td>
<td>-42*</td>
<td>-04</td>
<td>-19</td>
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<td>Myers-Briggs Type Indicator</td>
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<td></td>
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<tr>
<td>Introversion</td>
<td>14</td>
<td>-10</td>
<td>03</td>
</tr>
<tr>
<td>Intuition</td>
<td>51**</td>
<td>48**</td>
<td>56***</td>
</tr>
<tr>
<td>Feeling</td>
<td>00</td>
<td>-07</td>
<td>14</td>
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<tr>
<td>Perceiving</td>
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<td>14</td>
<td>17</td>
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<tr>
<td>Vocational Preference Inventory</td>
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<td></td>
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</tr>
<tr>
<td>Realistic</td>
<td>00</td>
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<td>-13</td>
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<tr>
<td>Investigative</td>
<td>36*</td>
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</tr>
<tr>
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<td>-01</td>
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<table>
<thead>
<tr>
<th>California Psychological Inventory</th>
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<tr>
<td>Dominance</td>
<td>47**</td>
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<tr>
<td>Capacity for Status</td>
<td>36*</td>
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<td>Sociability</td>
<td>34**</td>
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<tr>
<td>Social Presence</td>
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<td>Self-Acceptance</td>
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<td>Empathy</td>
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<td>Well-Being</td>
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<tr>
<td>Responsibility</td>
<td>25*</td>
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<tr>
<td>Socialization</td>
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<td>Self-Control</td>
<td>-09</td>
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<tr>
<td>Tolerance</td>
<td>41*</td>
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<tr>
<td>Good Impression</td>
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<td>Communalilty</td>
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<td>Achievement via Conformance</td>
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<td>Achievement via Independence</td>
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<td>Intellectual Efficiency</td>
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<td>Flexibility</td>
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<tr>
<td>Femininity</td>
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</table>

Note. Decimal points omitted from all correlation coefficients.

\[ a_{n} = 30. \quad b_{n} = 26 \]

\[ *p < .05. \quad **p < .01. \quad ***p < .001. \quad \text{(All one-tailed.)} \]