Ego Development and Individual Differences in Personality

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The relation between individual differences in personality and differences in developmental maturity was studied by relating observations of personality by multiple, independent judges to level of ego development. The personality characteristics of longitudinally followed Ss (104 at age 14; 98 at age 23) were evaluated by the California Adult Q-Set (CAQ); ego level was evaluated by the Washington University Sentence Completion Test of Ego Development (SCT). A priori personality dimensions—consisting of CAQ items for which a common developmental pathway was expected—were constructed and related to the SCT: (a) ego-resiliency and interpersonal integrity were associated with increasing ego development, (b) conformity was associated with the Conformist level and, unexpectedly, to the Conscientious level, (c) need regulation was associated with the Conscientious level, and (d) self-ease and expressiveness—playfulness were not associated with ego level.

Developmental characterologists (e.g., Kohlberg, 1969; Loevinger, 1976; Perry, 1970; Sullivan, Grant, & Grant, 1957) have postulated that individual differences within age cohorts are due to different rates of character development. In contrast, personality assessors have focused on individual differences in personality with little regard for the course of development. Although personality and character refer to somewhat different aspects of human functioning, conceptual and quantitative relations between level of character development and individual differences in personality have been established (e.g., Browning, 1983, 1987; Labouvie-Vief, Hakim-Larson, & Hobart, 1987; McCrae & Costa, 1980, 1983). These findings suggest that not only character differences but also personality differences are related to differential character development. This article focuses on the question which individual differences in personality are related to Loevinger's (1976) developmental characterological of "ego development?"

Developmental Characterologies and Ego Development Theory

"Developmental characterologies" (Loevinger, 1976, pp. 105–133) postulate that levels of character development are traversed in a fixed sequence but at widely varying rates. From about age 14 on, a wide range of levels can be discerned in any age cohort (Colby & Kohlberg, 1987; Holt, 1980; Redmore & Loevinger, 1979). The consequence of differential rates of development is that character or maturity differences exist in each age cohort. Other developmental approaches focus primarily on differences between age cohorts and not on differences within age cohorts. For Loevinger, however, "ego development is at once a developmental sequence and a dimension of individual differences in any age cohort" (Loevinger, 1976, p. 13).

The theory of ego development is one of the most comprehensive constructs in the field of developmental psychology, incorporating moral, cognitive, and interpersonal style with conscious preoccupations, and has been applied in a wide variety of research contexts (see Cohn, 1991; Hauser, 1976; Loevinger, 1979). Hence, the construct of ego development provides a rationale for relating character development to a wide variety of personality differences.

Ego Development and Individual Differences in Personality

Which individual differences in personality are expected to be related to ego development? There is no simple answer to this question, because the dimensional approach to personality differences is logically different from the stage approach to ego development (Loevinger, 1987). The difference may be illustrated by contrasting the dimensional with the developmental approach to impulse control. The dimensional approach is concerned with the strength versus weakness of impulse control, with individual differences in the extent to which impulses are controlled. In contrast, the primary objective of ego development theory is to chart the developmental course of qualitatively different reasons for regulating impulses: fear of retaliation at the Impulsive level, fear of being caught at the Self-Protective level, adherence to external rules at the Conformist level, adherence to self-evaluated standards at the Conscientious level, and so forth (Loevinger, 1976, pp. 24–25; see also Block, 1971, pp. 249–251).

Despite this difference in approach, it is plausible that reasons for regulating impulses impact on the extent to which impulses are controlled. Ego development theory predicts that Impulsive-level individuals (Ego Level 2) do not comprehend
rules and have difficulty anticipating the consequences of their actions; hence, their behavior can only be curbed by external and immediate consequences. At the other end of the ego development spectrum, Conscientious-level individuals (Ego Level 6) are expected to be preoccupied with self-control and to have self-evaluated standards; hence, they are capable of monitoring their own behavior. It is therefore likely that impulse control is weakest at the Impulsive level and strongest at the Conscientious level. Research indeed indicates that impulsivity is inversely related to level of ego development (Browning, 1986; Roznafszky, 1981; Starrett, 1983). These findings are not an artifact of age; the findings hold irrespective of the age cohort studied or when age is controlled for statistically.

Confounding Factors

Despite theoretical differences between stage and dimensional approaches, the conceptual and empirical connection between level of ego development and a relatively narrow personality dimension such as impulsivity is fairly unambiguous. The issue becomes more complicated when broader dimensions of personality are involved. McCrae and Costa (1980), for example, have found that the broad concept of neuroticism is unrelated to ego level. Neuroticism, as conceptualized by McCrae and Costa (1980), contains several subdomains, such as depression and anxiety, which are not expected to be related to ego development (Loevinger, 1976; Nettles & Loevinger, 1983). However, other subdomains in this conception of neuroticism, such as impulsivity and hostility, are expected to and found to be inversely related to ego development (Roznafszky, 1981; Starrett, 1983). In other words, the neuroticism dimension is developmentally heterogeneous, because some of its facets are predicted to be related to ego level, but other facets are not expected to be related to ego development. Inconclusive results are obtained if a developmentally heterogeneous personality dimension is related to ego development. Developmentally homogeneous personality dimensions need to be conceptualized to avoid the attenuating effect of combining nondevelopmental with developmental subdomains. All facets of a developmentally homogeneous dimension are either expected to be or not expected to be related to ego level. Moreover, a developmentally homogeneous dimension includes only those facets that are expected to be similarly related to ego development. Some facets of personality may primarily discriminate individuals at the pre-Conformist levels from those at the Conformist level of ego development, other facets may primarily discriminate Conformists from post-Conformists, yet other facets may discriminate Conformists from both pre- and post-Conformists, and yet other facets may be linearly related to ego level.

A second possibly confounding factor regards the available range of ego levels. To adequately test specific developmental hypotheses such as the aforementioned ones, a sample containing the relevant ranges of ego levels is needed. If a personality dimension is particularly relevant to the transition from pre-Conformist to Conformist ego level, both pre-Conformists and Conformists must be present in the research sample. Returning to the neuroticism example, hostility and impulsivity (facets of neuroticism) are expected to and have been shown to discriminate pre-Conformists from Conformists but are less discriminative between the higher levels of ego development (e.g., Roznafszky, 1981). The research showing no relation between ego level and neuroticism (McCrae & Costa, 1980, 1983) was based on a highly educated adult sample of individuals of whom only 4% were at the pre-Conformist levels of ego development and about 50% were at the post-Conformist levels. It is possible that their nonfinding was a consequence of the lack of pre-Conformists, in addition to their usage of a developmentally heterogeneous notion of neuroticism.

A third possibly confounding factor involves the distinction between self-report data and observer ratings. Self-report measures of neuroticism reflect subjective well-being, whereas third-person assessments of an individual's neuroticism are likely to take interpersonal maturity into account. Conceptually, subjective well-being is expected to be unrelated to ego development, whereas interpersonal maturity is a direct function of ego development (Loevinger, 1976). As another example of possibly unwarranted interpretation, it has been reported that open-mindedness (Lorr & Manning, 1978), openness to experience (McCrae & Costa, 1980), empathy (Carlozzi, Gaa, & Liberman, 1983), and other desirable characteristics, as reflected by means of self-report rating scales, are positively related to ego development. However, the question remains as to whether these findings merely reflect self-attributions or do indeed indicate genuine and observable attributes of individuals at high ego levels. Similarly, reliable and valid judgments of psychological mindedness and moral integrity may not be convincingly obtainable through self-report rating scales, even though the latter two attributes are central aspects of ego development.

Research Purpose and Strategies

The present study evaluates theory-driven hypotheses regarding the relation of ego development to individual differences in personality, while avoiding the confounding factors discussed earlier:

1. To avoid the misleading consequences of aggregating developmentally heterogeneous aspects of personality, we sought to generate developmentally homogeneous hypotheses regarding the relation of ego development to specific dimensions of personality.

2. To avoid the possibility that predicted relations could not be adequately evaluated because of a restricted range of ego levels, a sample assessed longitudinally was used to improve the available range of ego levels.

3. To avoid the subjectivity of single self-reports, multiple observations by independent judges were used, after averaging, to obtain reliable and valid personality ratings of observable behavior.

Method

Subjects

Subjects were participants in the Block and Block (1980) longitudinal study of ego and cognitive development. At age 14, the three data sources used for the present analyses were available for 104 subjects; at age 23, the three data sources were available for 98 subjects. Subjects lived primarily in urban settings and were reasonably representative of
Creating Developmentally Homogeneous Personality Scales

To use these CAQ data for the present theoretical purposes, it was necessary to create several developmentally homogeneous scales. Experts in the conceptualization of ego development were asked to specify the developmental sequence expected for each of the 100 CAQ items. The two inclusion–exclusion criteria for creating scales were that (a) items for which a similar developmental pattern was predicted be grouped together, and (b) items grouped together on the basis of the predicted developmental pattern be subsequently partitioned into subgroups on the basis of conceptual distinctions. The scale construction procedure was carried out in three steps.

**Step 1: Encoding expert hypotheses by means of CAQ prototypes.** Following a procedure developed by Block (1957, 1961/1978; Block & Gjerde, 1986), two experts on ego development, Jane Loewinger and Lawrence D. Cohn, each used the CAQ to provide prototypic descriptions of the personality characteristics conceptually associated with each level of ego development. In this way, seven ego-level prototypes for the Impulsive through the Autonomous levels were generated. (As it turned out, the CAQ contained no unique indicators of the highest, Integrated level.) The agreement between the two experts was substantial, the correlations of the two prototypes ranging from .74 for the Conformist level to .91 for the Conscientious level, with an average correlation of .84. For each ego level, the two prototypes were averaged to yield composite CAQ prototypes.

**Step 2: Computation of standardized prototype values for each CAQ item.** Each ego-level prototype yields a prototype value for each of the 100 CAQ items. A high value for an item in a prototype indicates the item is descriptive or salient in characterizing that ego development level; a low value has the converse implication. Inevitably, the seven distributions of the item prototype values were not exactly the same because of small interrater disagreements. To achieve metrical comparability between prototypes, the distribution of item prototype values was standardized for each of the seven ego level prototypes. These standardized item prototype values are available from P. Michiel Westenberg.

**Step 3: Classification of CAQ items according to ego developmental sequence and conceptual coherence.** The distribution of the standardized item prototype values across the seven ego levels reflects the expected developmental pattern for a particular personality attribute. Consider, for example, the distribution of the item prototype values for CAQ Item 60, "Has insight into own needs, knows self well?" E2 = -2.05, E3 = -1.86, E4 = -1.65, E5 = 0.04, E6 = -1.28, E7 = 1.25, and E8 = 1.75. This pattern reflects the theoretical expectation that, developmentally, an S-shaped curve characterizes the relation of self-knowledge to ego development: Low-ego-level people are not expected to know themselves well, but a steady increase in self-knowledge is expected between the Conformist (E-4) and the Conscientious (E-6) levels. Other items were conceptually expected to follow differently shaped patterns, such as bell-shaped, or indiscriminate sequences. Items for which a similar developmental pattern was expected (i.e., the profile of standardized item prototype values) were grouped together to form developmentally homogeneous scales. For these scales, scale prototype values were computed by averaging the standardized item prototype values of the items in each scale. The profile of scale prototype values reflects the expected developmental pattern for the scales. The scale prototype values are given in Table 1.

Although it was our intention to create developmentally homogeneous scales by categorizing items solely on the basis of differentiating developmental patterns, a few items could not unequivocally be assigned to one or another developmental category. Therefore, the definitive classification of some items was based on a priori conceptual recogni-
### Table 1

**Analysis of Linear and Nonlinear Relationships of Ego Level to Personality Dimensions, With Wechsler Vocabulary as Covariate**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Covariate: vocabulary (F&lt;sup&gt;P&lt;/sup&gt;)</th>
<th>Trend analyses (F&lt;sup&gt;P&lt;/sup&gt;)</th>
<th>Levels of ego development&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Linear</td>
<td>Quadratic</td>
</tr>
<tr>
<td>Ego-resiliency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 14</td>
<td>1.28</td>
<td>19.61***</td>
<td>1.63</td>
</tr>
<tr>
<td>Age 23</td>
<td>6.66*</td>
<td>12.54***</td>
<td>0.02</td>
</tr>
<tr>
<td>Psychological mindedness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 14</td>
<td>1.05</td>
<td>21.56***</td>
<td>6.62*</td>
</tr>
<tr>
<td>Age 23</td>
<td>0.10</td>
<td>18.97***</td>
<td>0.15</td>
</tr>
<tr>
<td>Intellectualism</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 14</td>
<td>6.43*</td>
<td>18.68***</td>
<td>0.05</td>
</tr>
<tr>
<td>Age 23</td>
<td>31.15***</td>
<td>8.57**</td>
<td>0.03</td>
</tr>
<tr>
<td>Resiliency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 14</td>
<td>5.63*</td>
<td>8.57**</td>
<td>1.01</td>
</tr>
<tr>
<td>Age 23</td>
<td>1.89</td>
<td>9.88***</td>
<td>0.01</td>
</tr>
<tr>
<td>Interpersonal integrity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 14</td>
<td>1.28</td>
<td>10.20**</td>
<td>2.57</td>
</tr>
<tr>
<td>Age 23</td>
<td>0.00</td>
<td>16.40***</td>
<td>0.61</td>
</tr>
<tr>
<td>Moral soundness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 14</td>
<td>0.21</td>
<td>12.92**</td>
<td>2.82</td>
</tr>
<tr>
<td>Age 23</td>
<td>1.18</td>
<td>16.27**</td>
<td>2.14</td>
</tr>
<tr>
<td>Interpersonal closeness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 14</td>
<td>2.66</td>
<td>7.03**</td>
<td>2.01</td>
</tr>
<tr>
<td>Age 23</td>
<td>0.64</td>
<td>13.88***</td>
<td>0.03</td>
</tr>
<tr>
<td>Conformity</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Age 14</td>
<td>3.24</td>
<td>2.56</td>
<td>5.86*</td>
</tr>
<tr>
<td>Age 23</td>
<td>0.23</td>
<td>2.14</td>
<td>0.19</td>
</tr>
<tr>
<td>Compliance</td>
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<tr>
<td>Age 14</td>
<td>1.11</td>
<td>0.66</td>
<td>7.39**</td>
</tr>
<tr>
<td>Age 23</td>
<td>0.10</td>
<td>0.00</td>
<td>0.21</td>
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<tr>
<td>Friendliness</td>
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<td></td>
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<tr>
<td>Age 14</td>
<td>3.99*</td>
<td>3.52</td>
<td>2.63</td>
</tr>
<tr>
<td>Age 23</td>
<td>1.10</td>
<td>5.45*</td>
<td>0.07</td>
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<td>Need regulation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 14</td>
<td>0.53</td>
<td>14.40***</td>
<td>3.72</td>
</tr>
<tr>
<td>Age 23</td>
<td>6.47*</td>
<td>10.75***</td>
<td>5.55*</td>
</tr>
<tr>
<td>Self-ease</td>
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<td></td>
</tr>
<tr>
<td>Age 14</td>
<td>0.76</td>
<td>2.99</td>
<td>2.47</td>
</tr>
<tr>
<td>Age 23</td>
<td>0.07</td>
<td>1.90</td>
<td>0.13</td>
</tr>
<tr>
<td>Expressive/playful</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 14</td>
<td>0.04</td>
<td>0.76</td>
<td>0.03</td>
</tr>
<tr>
<td>Age 23</td>
<td>0.48</td>
<td>0.36</td>
<td>0.98</td>
</tr>
</tbody>
</table>

* At age 14, d<sub>f</sub> = 99 and 1; at age 23, d<sub>f</sub> = 92 and 1.  
* E-3 = Self-Protective level, E-4 = Conformist level, E-5 = Self-Aware level, E-6 = Conscientious level, and E-7 = Individualistic level.  
* The rows of boldface data contain the expected developmental pattern derived from the ego development CAQ prototypes (i.e., the profile of scale prototype values).  
* These two rows contain the obtained group means for each ego level, for age 14 and age 23, respectively.  
* * p ≤ .001.  
* ** p ≤ .01.  
* * p ≤ .05.

Note: However, the categorization of items on conceptual grounds can be problematic, if only because many of the CAQ items concern complex clinical descriptions with relevance to more than one personality dimension. Even at the level of simple adjectives, "pure" indicators of personality dimensions are hard to come by (e.g., Hofstee, de Raad, & Goldberg, 1992). Most personality descriptors have compound meanings relevant to several conceptual distinct dimensions. When fully independent and unambiguous scales could not be created either on the basis of developmental pattern or conceptual coherence, we looked for a compromise between these two criteria. Nevertheless, developmental coherence was the paramount criterion, because our intention was to create developmentally homogeneous personality dimensions. No item was added to a developmental category because of conceptual commonalities when it also displayed a deviant developmental pattern. In contrast, we conceptually distinguished among items within the same developmental category to further differentiate each broad developmental category and to enable statistical evaluations subsequently of each separate subcategory. This approach resulted in six item categories for which different developmental patterns were expected:

1. Twenty-seven CAQ items were assigned to the ego-resiliency category. This category was expected to manifest a relatively "flat" S-shaped pattern in relation with ego level: The Self-Protective-and-below levels were expected to be significantly different from the Conscientious-and-beyond levels, with the Conformist and the Self-Aware levels placed at subsequent positions in between the two extreme groups (see Table 1, rows of boldface data, for the profile of scale prototype values). Ego-resiliency refers to the generalized capacity for flexible and resourceful adaptation to internal and external stressors (Block, 1965; Block & Block, 1980) and can be differentiated into three
subdomains: psychological mindedness, intellectualism, and resiliency (see Table 1). The psychological mindedness dimension includes introspectiveness, self-knowledge, and a general awareness and examination of motives in self and others. The intellectualism dimension includes intellectual capacity and cultural sophistication. The distinction between psychological mindedness and intellectualism is based on conceptual grounds but is also based on the expectation that psychological mindedness and intellectual sophistication are differentially related to verbal fluency. The expectation is that psychological insight is a function of ego development only; whereas intellectual sophistication is expected to be related to ego development but also to eventuate in enhanced verbal fluency. The third subcategory of ego-resiliency, resiliency proper, refers to the capacity to manage anxiety and to tolerate frustrations, criticism, and other setbacks.

2. Fifteen CAQ items were assigned to the interpersonal integrity category, and this category was expected to manifest a “steep” S-shaped pattern in relation to ego level: The Self-Protective-and-below levels are expected to be significantly different from the Self-Aware-and-beyond levels, with the Conformist level in between. Interpersonal integrity refers to the capacity for authenticity in relations and can be described in terms of two subdomains: moral soundness and interpersonal closeness. Moral soundness, the touchstone of character development, includes interpersonal honesty and a sense of responsibility toward others and for upholding one’s own moral standards. Interpersonal closeness refers to the capacity for and inclination toward forming close interpersonal relations.

3. Sixteen CAQ items were assigned to the conformity category. This category was expected to manifest a bell-shaped or unimodal pattern in relation to ego level: Conformity is expected to peak at the Conformist level. Conformity refers to an external orientation toward socially desirable behavior and can be described in terms of two subdomains: compliance and friendliness. The compliance dimension refers to the adherence to conventions, whereas the friendliness dimension refers to pleasing behaviors.

4. Ten items were assigned to the need regulation category. This category was expected to peak at the Conscientious level. Need regulation is expected to be weakest at the Impulsive level, to be strongest at the Conscientious level, and to diminish somewhat during the post-Conscientious levels. This undifferentiated dimension has two sides: an inhibitive side referring to the inhibition of impulses and a proactive side referring to the ability to delay gratification in the service of a larger but more distant goal.

5. Nine items were assigned to the self-ease category. This category was not expected to manifest a significant relation with ego level: Although a relatively small increase of self-ease was expected at the Conformist level, it was not expected to reach statistical significance. The self-ease dimension refers to subjective well-being, to whether one feels comfortable with oneself.

6. Ten items were assigned to the expressive–playful category. This category was expected to be unrelated with ego level. The small “bump” at the Self-Aware transition appears insignificant and is not replicated in the expected profiles of each constituting item. The expressive–playful dimension includes a lively and extraverted disposition.

The 13 remaining CAQ items could not be assigned to one of the six item clusters, either because of the irregularity or uniqueness of the predicted developmental pattern or because of conceptual difficulties in fitting them into an ego development scale. The Cronbach alphas of the categories ω ranged from .87 to .95, M = 0.91 and subcategories ω ranged from .71 to .94, M = 0.87 were respectable, considering the limited number of items in each scale, and indicate that the scales were empirically homogeneous even though the scale construction process was based only on prior developmental and conceptual considerations.

Analytical Strategy

To conduct statistical analysis of the relation between personality scales and ego development we used multivariate analyses of variance (MANOVAs), with ego development and gender as independent variables, the personality dimensions as dependent variables, and vocabulary as a covariate. Hypotheses about the nature of the relation between ego development and personality dimensions (linear, quadratic, etc.) were based on the expected developmental patterns derived from the ego development CAQ prototypes (i.e., the profile of scale prototype values).

Results

Distribution of Ego Levels

Table 2 presents the distribution of ego levels at ages 14 and 23. These two distributions of ego levels are similar to those observed in previous research with adolescents and young adults (e.g., Holt, 1980; Loening et al., 1985). However, with respect to sex differences, the present findings diverge from previous findings. A meta-analysis of sex-differences in ego development has reported that adolescent girls are ahead of adolescent boys but that, in their early 20s, men catch up (Cohn, 1991). In contrast, in this study no sex difference was observed among the 14-year-olds, t(102) = 0.57, p = .57, whereas among the 23-year-olds, women were ahead of men, t(96) = 3.44, p = .001, in ego level.

To achieve the minimum number recommended for a multivariate analysis of variance, a few subjects were reassigned or discounted to abolish ego categories with fewer than 6 subjects. The one male subject who scored at the Individualistic level at age 14 was regarded an outlier, and his data were excluded from the 14-year analyses. The two 14-year-old subjects at the Conscientious level were judged to be borderline with the previous, Self-Aware, level and were added to the latter category. Thus, at age 14, 103 subjects occupied three ego levels: Self-Protective (n = 35), Conformist (n = 41), and Self-Aware (n = 27). One 23-year-old scored at the Autonomous level and was reassigned to the immediately lower, Individualistic level. Thus, at age 23, 98 subjects occupied five adjacent ego levels, with a minimum of 6 subjects per ego category: Self-Protective (n = 6), Conformist (n = 12), Self-Aware (n = 40), Conscientious (n = 31), and Individualistic (n = 9).

Table 2 Distribution of Ego Levels for Each Age Group, Distinguished by Sex of Subject

<table>
<thead>
<tr>
<th>Ego level</th>
<th>Age 14</th>
<th></th>
<th>Age 23</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>All</td>
<td>Boys</td>
<td>Girls</td>
<td>All</td>
</tr>
<tr>
<td>E-2: Impulsive</td>
<td>35</td>
<td>22</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>E-3: Self-Protective</td>
<td>41</td>
<td>14</td>
<td>27</td>
<td>12</td>
</tr>
<tr>
<td>E-4: Conformist</td>
<td>25</td>
<td>13</td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td>E-5: Self-Aware</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>31</td>
</tr>
<tr>
<td>E-6: Conscientious</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>E-7: Individualistic</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>E-8: Autonomous</td>
<td>104</td>
<td>51</td>
<td>53</td>
<td>98</td>
</tr>
<tr>
<td>n</td>
<td>104</td>
<td>51</td>
<td>53</td>
<td>98</td>
</tr>
</tbody>
</table>
Ego Level and Vocabulary

As expected, the correlations of ego level with vocabulary were statistically significant but moderate (at age 14, r = .26, p = .005, n = 103; at age 23, r = .28, p = .006, n = 98). Although vocabulary and ego-level scores were not obtained during the assessments at ages 14 and 23, but were obtained during previous assessments at ages 11 and 18, respectively, the magnitude of the correlations between ego level and vocabulary is consistent with previous findings regarding the relation of ego level with verbal intelligence (e.g., Browning & Quinlan, 1985; Loevinger & Wessler, 1970 McCrae & Costa, 1980). This consistency may be due to the general stability of the vocabulary score; vocabulary at age 11 correlated at .69 (p = .000, n = 108) with vocabulary at age 18. The consistency of the findings and the stability of the vocabulary score suggest that the vocabulary scores obtained during previous assessments are fairly accurate representations of the subjects’ vocabulary at ages 14 and 23.

The statistical insignificance of the interaction of ego level with gender suggests that the pattern of correlations between ego level and IQ does not depend on gender.

Ego Level and Personality

Table 1 presents the results of the statistical analysis of the relation of the developmentally homogeneous personality dimensions with ego level. Columns 6–10 of Table 1 contain the expected and the obtained patterns of personality scale scores with respect to the levels of ego development. The expected patterns derived from the ego development CAQ prototypes (see the Creating Developmentally Homogeneous Personality Scales section). The statistical analyses (MANOVAs) of the obtained patterns, controlled for vocabulary, are reported in Columns 2–5 of Table 1. Because the interaction effect for gender did not reach significance for any of the scales, the results are reported for the combined sample.

In accord with expectations, ego development was associated with increasing ego-resiliency. All three components of ego-resiliency—psychological mindedness, intellectualism, and resiliency—were independently associated with ego development, regardless of age and verbal intelligence. At age 14, these results were mainly due to the contrast between the Self-Protective and the Conformist levels. If the Self-Protective group is removed from analysis, the remaining contrast between the Conformist and Self-Aware level is not significant. It thus appears that, at age 14, subjects at the Conformist level and subjects at the Self-Aware level were not fully discriminable, at least not in terms of psychological mindedness, intellectualism, and resiliency. This finding contradicts the expectation that Conformist and Self-Aware subjects should be discriminable on these three dimensions. At age 23, however, ego-resiliency and two of its three components—psychological mindedness and intellectualism —discriminated between Conformists-and-below and Self-Aware-and-above, as was expected. Resiliency, however, was monotonically related to ego development. No specific stage transition provided significant contrasts, but the ordinal relation between ego level and resiliency was highly significant. As expected and at both ages, intellectualism but not psychological mindedness was significantly related to vocabulary. Regardless of the relation between vocabulary and intellectualism, however, ego development was associated with intellectualism.

In accord with expectations, ego development was associated with increasing interpersonal integrity. As expected and at both ages, moral soundness was mainly associated with the transition from the Self-Protective to the Conformist level, although a linear effect remains if the Self-Protective subjects are eliminated from the statistical analyses. Interpersonal closeness, however, was linearly associated with ego development and depended less on one specific stage transition.

Also in accord with expectations, the Conformist level was associated with a peak in conformity behaviors, both in terms of compliance and friendliness. As expected and at both ages, friendliness and compliance were lowest at the Self-Protective level, peaked at the Conformist level, and diminished at the Self-Aware level. Unexpectedly, however, at age 23, both friendliness and compliance regained salience at the Conscientious level. The significant quartic trend for conformity and its two components indicates that conformity peaked at the Conformist level, which was expected, but also peaked at the Conscientious level, which was unexpected. (No cubic trends were significant at the .05 level and were therefore not reported in Table 1.)

Need regulation was linearly related to ego development at age 14, a connection primarily due to the contrast between the Self-Protective and the Conformist levels. At age 23, need regulation was weakest at the Self-Protective level and strongest at the Conscientious level. The significant quadratic term at age 23 indicates that, beyond the Conscientious level, need regulation diminishes. These patterns conform to theoretical expectations. Also as expected, self-ease was weakly associated with the Conformist level, and this association did not reach statistical significance. The absence of relations with the expressive-playful scale were also expected.

Discussion

The present research evaluated theory-driven hypotheses relating personality differences to ego development. A sample with a wide range of ego levels was used, and possible confounds, such as age and verbal fluency, were controlled. Furthermore, the study related data from the self-administered SCT to data based on observer Q-sort ratings, thus bridging very different data domains. Given these methodological and statistical features, the results appear to provide strong support for the general hypothesis that certain individual differences in personality are coherently connected with the concept of developmental maturity.

The strategy of creating developmentally homogeneous scales proved crucial. It produced some differentiating patterns that would have gone unrecognized had we relied on preexisting aggregations of developmentally heterogeneous personality attributes. Thus, although resiliency and self-ease are sometimes combined into one general dimension (see John, 1990), these dimensions were distinguished on the basis of their different developmental pattern. The distinction between resiliency and self-ease is anticipated by Tellegen's (1982) distinction between stress reaction and well-being. In accord with Loewinger's (1968, 1976) reasoning that none of the levels of ego
development can safeguard against feelings of inadequacy or other negatively toned ruminations, self-ease as observed by clinical judges proved to be unrelated to ego development. These results, though based on observer ratings, correspond with the McCrae and Costa's (1983) finding that ego development is unrelated to subjective well-being measured with self-reports.

These several findings are discrepant with clinical research suggesting that maladaptation and low self-esteem are associated with lower (e.g., pre-Conformist) levels of ego development (Jacobson, Hauser, Powers, & Noam, 1984; Noam et al., 1984). However, this clinical finding may exist because, among maladjusted subjects, individuals at lower ego levels appear to be more disturbed (e.g., Noam & Houlihan, 1990). This greater psychopathology may be a consequence of age-inappropriate behavior due to “delayed” ego development, or it may be because pre-Conformists are more brittle, amoral, and rebellious. Furthermore, although more severe pathology seems to be associated with pre-Conformity, severe disturbances are also found among Conformist adolescents. Borst, Noam, and Bartok (1991) have shown that approximately two-thirds of their clinically disturbed Conformist adolescents were suicidal, whereas only one-third of their clinically disturbed pre-Conformist adolescents were suicidal. Another relevant datum is that voluntary requests for psychological treatment are more frequently made by post-Conformists (e.g., Dill & Noam, 1990; Vaillant & McCullough, 1987; Weiss, Zilberg, & Genevro, 1989), an indication that high-ego-level people nevertheless may be characterized by lack of a sense of well-being. Highly disturbed people can be found at all levels of ego development (see also, Browning, 1986). The mere presence of psychological distress thus appears to be unrelated to ego development, but the manifestation and meaning of a problem is fundamentally colored by the individual's level of ego development (Borst & Noam, 1993; Nelson & Wink, 1987; Labouvie-Vief et al., 1987).

Although the mere presence of psychological distress appears to be unrelated to ego development, ego-resiliency, that is, the capacity for flexible and resourceful adaptation to internal and external stresses, is strongly and positively related to ego development. All three components of ego-resiliency—psychological mindedness, intellectualism, and resiliency—were expected to be and proved to be related to ego development in both age cohorts. The positive association between ego development and psychological mindedness corresponds with previous findings of an inverse relation between the use of immature defense mechanisms and ego development (Jacobson et al., 1986; Labouvie-Vief et al., 1987). Use of immature mechanisms, such as projection, repression, and “acting out” are negatively related to ego level, whereas more mature defense mechanisms, such as rationalization and reversal, are positively related to ego development. The growing awareness of inner life and the emerging understanding of psychological causation is also demonstrated in the preference of post-Conformist patients for psychodynamic therapies (Dill & Noam, 1990).

The positive association between the second component of ego-resiliency, intellectualism, and ego development depends partly, not entirely, on verbal fluency. The growing interest during the course of ego development in intellectual and philosophical problems of a widening variety is a reflection of the cognitive differentiation and openness to ideas and values associated with high ego levels. Cognitive complexity at high ego levels has been found with regard to the differentiation of future plans (McAdams, Ruetzel, & Foley, 1986) and with regard to the complexity of reasoning employed vis-à-vis social dilemmas (Blanchard-Fields, 1986). The third component of ego-resiliency, resiliency proper, that is, the capacity to manage anxiety and to rebound from frustrating experiences, is also positively related to ego development. This connection has not previously been reported although it is predicted by ego development theory.

Similar to the distinction between the expected and found developmental patterns for resiliency and self-ease, another distinction was made in the interpersonal realm, between friendliness and interpersonal closeness. These two aspects are sometimes combined into one global dimension called agreeableness (see, John, 1990). However, the theory-based expectations and the findings reported here indicate that friendliness is related to ego development in a nonlinear fashion, whereas interpersonal closeness is monotonically related to ego development. These differential patterns might have been obscured had we combined these two dimensions.

The touchstone of character development and the second component of interpersonal integrity, moral integrity, is strongly related to ego development. This is a finding not readily obtainable through self-report questionnaires. Observations of alcoholics and medical patients revealed a similar pattern (Rozznafsky, 1981), but these results were not controlled for the possibly confounding effect of age or verbal fluency. The present study indicates that ego development influences moral integrity in any age cohort, regardless of verbal fluency. The results also suggest that moral integrity cannot be equated with conformity to external demands or rules. Subjects high on conformity are moderate to high on moral integrity, but subjects low on conformity may either be low, moderate, or high on moral integrity.

The resurgence of conformity at the Conscientious level was not anticipated. Conformity is not a simple and unequivocal concept. All we can say is that an external orientation toward socially desirable behavior, expressed in terms of compliance to conventions and pleasing behavior, is related to the Conformist level but also to the Conscientious level. Hoppe and Loewinger (1977), in studying conformity behaviors within a sample of elementary school children (Grades, 8, 9, and 11) representative of the pre-Conformist-through-Self-Aware levels of ego development, found that conformity (self-reported) and compliance to school rules (school records) peak at the Conformist level. Although their sample provided the range of ego levels needed to test the hypothesis that conformity behaviors peak at the Conformist level, the absence of a sufficient number of Conscientious-and-above subjects did not allow conformity behaviors to resurface at higher levels of development. Future studies will have to determine whether the reemergence of conformity at the Conscientious level is a replicable finding.

As predicted, need regulation was weakest at the Self-Protective level, strongest at the Conscientious level, and less strong thereafter. A precedent for some aspects of the need regulation finding may be found in Browning (1986), who found that problematic psychiatric ward behavior is inversely related to ego level.
Observed expressiveness—playfulness was not expected to be related to, and indeed was not related to, ego development. This finding was anticipated by McCrae and Costa (1980), who found self-reported extraversion to be unrelated to ego level. A strength of the present research—that differential developmental predictions were furnished by an independent party of experts—is also a weakness. The experts on ego development provided the CAQ prototypes from which were derived developmentally and conceptually homogeneous scales. However, the developmental hypotheses embodied by the scales are not explained. For example, why would ego development theory dictate that friendliness is associated with ego level in a strikingly nonlinear fashion? It would require an extensive, articulating conceptual study to explain the expected relations between personality differences and ego level. Such a conceptual study may also distinguish between theoretically explainable expectations as compared with computed but theoretically unexplainable expectations. Theoretically unexplainable expectations may be a particular result of the Q-sorting technique used to capture the experts’ expectations. It is possible, for example, that the lower prototype values for intellectualism at the highest ego levels are an artifact of the greater saliency expected of other aspects, such as resiliency and interpersonal integrity, rather than of an expected decrease in intellectualism at the highest levels. The results indicate that intellectualism is a linear function of ego level and does not subside beyond the Conscientious stage.

Taken together, the present findings and previous research support the centrality of the construct of ego development as a multifaceted dimension of individual differences in any age cohort. However, longitudinal analyses are needed to determine how the individual differences related to level of ego development wax or wane as ego development proceeds. It is only by the longitudinal approach that we may determine which individual differences are a consequence of ego development and hence change with it or whether certain individual differences are associated with level of ego development because they foster ego development.

References


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