
The Big Five Personality Factors and Personal Values

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The authors relate Big Five personality traits to basic values in a sample of 246 students. As hypothesized, Agreeableness correlates most positively with benevolence and tradition values, Openness with self-direction and universalism values, Extraversion with achievement and stimulation values, and Conscientiousness with achievement and conformity values. Correlations of values with facets of the five factors reveal nuances of the facets and clarify ambiguities in the meanings of the factors. Values and personality traits exhibit different patterns of correlation with religiosity and positive affect. Findings support the idea that the influence of values on behavior depends more on cognitive control than does the influence of traits.

The five-factor model (FFM) is the dominant approach for representing the human trait structure today. The model asserts that five basic factors describe most personality traits: Neuroticism, Openness to Experience, Extraversion, Agreeableness, and Conscientiousness. Researchers have used the model to predict individual differences in numerous settings: clinical (reviewed in Costa, 1991), industrial and organizational (e.g., Barrick & Mount, 1991, 1996; Barry & Stewart, 1997; Mount & Barrick, 1995), counseling (McCrae & Costa, 1991), and more.

Some consider any stable individual difference an expression of a personality trait. However, this encompassing view obscures important distinctions between traits and other stable individual differences such as needs, motives, goals, and values. Several studies have contrasted traits with needs, motives, and goals (e.g., Costa & McCrae, 1988; Craig, Loheidi, Rudolph, Leifer, & Rubin, 1998; Winter, John, Stewart, Kohnen, & Duncan, 1998). Here, we examine relations between

traits and personal values. We first note very briefly how values differ from other constructs.

Values are cognitive representations of desirable, abstract goals (e.g., security, justice) (Rokeach, 1973; Schwartz, 1992). Similar to needs, motives, and goals, values motivate actions (Rohan, 2000; Seligman, Olson, & Zanna, 1996). Values differ from specific goals (Emmons, 1989; King, 1995; Roberts & Robins, 2001; Winnel, 1987) because values are transsituational. Unlike needs and motives (Bilsky, 1998; McClelland, 1985), values are inherently desirable and must be represented cognitively in ways that enable people to communicate about them. Explicating the relations of personality traits to values will deepen our understanding of both.

We first discuss conceptual differences between values and traits. We then empirically test hypotheses that specify a systematic pattern of associations between the five personality traits and 10 types of values. We also demonstrate the distinctiveness of the constructs by relating them to religiosity and to positive affect.

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To study values, we adopt the value theory developed by Schwartz (1992). It defines values as desirable, transsituational goals that vary in their importance as guiding principles in people's lives. The crucial content aspect that distinguishes among values is the type of motivational goal they express. Schwartz derived 10 types of values, each of which expresses a distinct motivational goal: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security. He also specified the structure of relations among these values. The theory has been tested in more than 200 samples from more than 60 countries. In the vast majority of samples, both the distinctiveness of the 10 values and the structure of their relations have been verified (Schwartz, 1992; Schwartz & Sagiv, 1995; unpublished data). The set of 10 values has been used to explain a wide variety of attitudes, behaviors, and subjective states across many nations (see Schwartz & Bardi, 2001).

The relative stability of both values and traits across context and time makes them useful psychological constructs. We now highlight their differences. Traits are "dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings and actions" (McCrae & Costa, 1990, p. 23). Hence, traits are enduring dispositions. In contrast, values are enduring goals. Traits describe "what people are like" rather than the intentions behind their behavior. Values refer to "what people consider important," the goals they wish to pursue. Traits vary in the frequency and intensity of their occurrence, whereas values vary in their importance as guiding principles (ranging from at least minimally to supremely important). People believe their values are desirable, at least to a significant reference group, whereas traits may be positive or negative. People may explain behavior by referring to traits or to values, but they refer to their values when they wish to justify choices or actions as legitimate or worthy. Finally, values—but not traits—serve as standards for judging the behavior of self and others.

The same term (e.g., ambition, obedience) may refer either to a trait or a value, but the two references have different meanings. For example, consider "competence": The trait refers to the frequency and intensity of competent actions and ideas that an individual exhibits; the value refers to the importance that an individual attributes to demonstrating competence as a guide to action. Not all individuals who value competence as a guiding principle in their lives have the ability to behave competently. Thus, not all individuals who attribute high importance to the value competence are characterized by the trait of competence. In addition, all people who are highly competent do not view competence as a wor-

thy life goal and pursue it as a guiding principle in their lives.

To further clarify the nature of trait-value relations, we briefly compare the value theory and the FFM in terms of their origins, content, and structure.

Origins. Schwartz postulates that three universal requirements of human existence, singly or in combination, give rise to the set of 10 distinct motivational goals: (a) basic needs of the individual as a biological organism (a source, for example, of stimulation values), (b) requirements of successful interaction among people (e.g., benevolence), and (c) requirements for the survival of groups and societies (e.g., conformity). He argues that for individuals to coordinate their pursuit of these goals they must express them as values. Individual differences in the importance of particular values derive from each person's unique combination of biological endowments, social experiences, and exposure to cultural definitions of the desirable. People's value priorities reflect strategies adopted to cope with these universal requirements (Rohan, 2000; Schwartz, 1992).

The FFM was derived by inference from empirical analyses rather than deduced from theory. Factor analyses of descriptions of self and of others, using trait adjectives from the English lexicon (Goldberg, 1990; John, 1990; Tupes & Christal, 1992), and of the structure of personality questionnaires (Costa & McCrae, 1988; Lanning, 1994) yielded five robust factors. Recently, several theorists have traced the origins of the five factors to evolutionary adaptiveness (e.g., Buss, 1996; MacDonald, 1998; McCrae et al., 2000). They interpret variation in traits as expressing viable evolutionary strategies (see MacDonald, 1998). Thus, both theories postulate adaptive evolutionary origins for their key psychological constructs.

Attributing the emergence of particular human characteristics to universal evolutionary processes implies that these characteristics are present across cultures and social contexts. Congruent with this implication, research in varied cultures has demonstrated the near universal distinctiveness of the 10 types of values (Schwartz, 1992, 1994; Schwartz & Sagiv, 1995) and of the traits of the FFM (reviewed in Church & Lonner, 1998; McCrae & Costa, 1997).

Content. Both theories aim at comprehensive coverage of their basic domains of content. They do not seek to specify every single value or trait. There is evidence that the value theory may represent all broad motivational goals recognized and discriminated across cultures (Schwartz, 1994). The FFM claims to represent comprehensively the basic factors that organize human traits (e.g., Saucier & Goldberg, 1998). Although there is

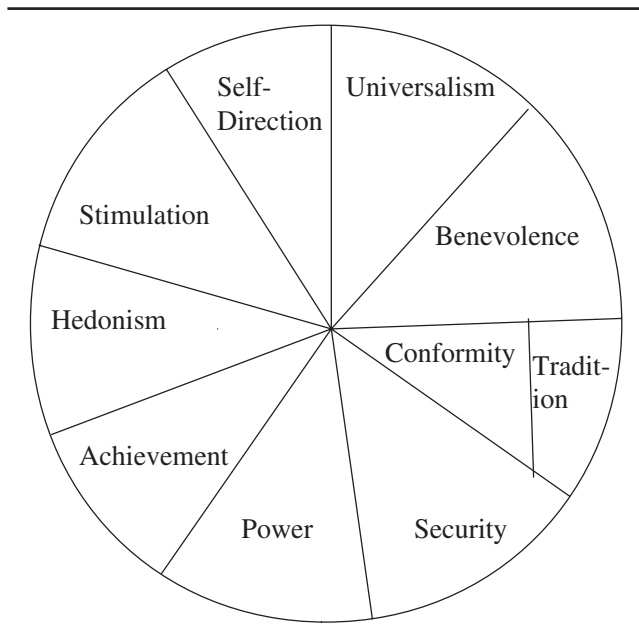


Figure 1 Theoretical model of relations among 10 motivational types of values.

debate about the existence of additional factors (e.g., Tellegen, 1993), only a few have been proposed.

Some disagreement exists regarding the precise meaning of each factor (McCrae & John, 1992). This may arise from the multifaceted nature of the five factors. Different theorists may emphasize different components or nuances of the same broad factor (Hogan & Ones, 1997; McCrae & Costa, 1997; Sackett & Wanek, 1996; Saucier & Ostendorf, 1999).

Structure. The value theory explicates the dynamic structure of relations among values (Schwartz, 1992). Actions in pursuit of any value have psychological, practical, and social consequences that may conflict or be congruent with the pursuit of other values. The total pattern of relations of conflict and compatibility among values yields the structure represented in Figure 1. Values that share compatible motivational goals correlate most positively and emerge in close proximity going around the circle. Values that express conflicting motivational goals correlate less positively, or even negatively, and emanate in opposing directions from the center.

Conceiving values as organized in a circular motivational structure has a critical implication for the relations of values to other variables. It implies that the whole set of 10 values relates to any other variable in an integrated manner. Specifically, if a variable (e.g., a trait factor) correlates most positively with one value and most negatively with another, the expected pattern of associations with all other values follows from the circular value structure: Correlations should decrease monotonically in both directions around the circle from

the most positively to the most negatively associated value. When the whole pattern of associations is predicted, even nonsignificant associations provide meaningful information (Sagiv & Schwartz, 1995; Schwartz, 1996).

Regarding the structure of relations among the five trait factors, there is disagreement. Some studies treat the factors as conceptually independent (e.g., Costa & McCrae, 1985; Goldberg, 1992); others emphasize relations among the factors (e.g., Hendriks, Hofstee, & De Raad, 1999). Various researchers have sought more basic factors that may underlie the five factors. Digman (1997), for example, suggests two higher order factors. Factor α consists of traits that could represent the different degrees of success achieved by the socialization process: Agreeableness (vs. Hostility), Conscientiousness (vs. Heedlessness), and Emotional Stability (vs. Neuroticism). Factor β consists of traits that could represent self-actualization and personal growth: Extroversion and Openness. Becker (1999) adds one factor to the Big Five and suggests two underlying, higher order factors: mental health and behavior control.

Trait-Value Links

Several mechanisms may link traits and values. First, inborn temperaments may give rise to parallel traits and values. For example, people born with a high need for arousal are likely to develop the trait of excitement-seeking as well as to value stimulation and devalue security.

Values and traits may also mutually influence one another. Values may affect traits because, other things equal, people try to behave in ways consistent with their values (Rokeach, 1973; Schwartz, 1996). For example, valuing conformity fosters compliant rather than unconventional behavior. Values serve as ideals or oughts and hence as guides for self-regulation. People may strive to reduce discrepancies they sense between their values and behavior by changing their behavior (Carver & Scheier, 1981; Kluger & DeNisi, 1996).

Traits may affect values because people who consistently exhibit a behavioral trait are likely to increase the degree to which they value the goals that trait serves. This permits them to justify the behavior. In this vein, Schwartz and Bardi (1997) explained the high value that people living under communist regimes attribute to obedience versus autonomy. Such value priorities justify the behavior required to adapt to a totalitarian regime (cf. "value justification," Kristiansen & Zanna, 1994). Self-perception theory (Bem, 1972) might suggest that traits influence values because people infer what is important to them from their consistent (trait-expressive) behavior.

Two past studies have examined relations between values and the FFM (Dollinger, Leong, & Ulicni, 1996; Luk

& Bond, 1993). We discuss their findings in conjunction with those of the present study, which goes beyond them in several ways. First, we derive integrated hypotheses that relate each trait factor to the full set of 10 values. These integrated hypotheses shift the focus from studying relations between single trait factors and single values to studying relations between the structures of values and of traits. Second, we present the first inclusive hypotheses relating values to the facets of each trait factor. This sheds light on the nuances of meaning of both traits and values. Finally, we compare relations of values and of traits with two other variables (religiosity and positive affect). This enables us to assess whether values and traits, although systematically related, are conceptually and empirically distinct constructs.¹

Hypotheses

We present a set of hypotheses that relate each of the five factors to values. We postulate that each factor is compatible with the motivational goals of some values and incompatible with the goals of other values. If the behavioral tendencies that characterize a factor facilitate attainment of the motivational goal of one value, they are likely to interfere with attainment of the goals of values in opposing positions in the circular value structure. For example, compliance traits may facilitate attaining the goals of conformity values, but they probably interfere with attaining the goals of self-direction values. For each personality factor, we first derive hypotheses regarding its strongest positive and negative correlations with values. Then, by drawing on the circular structure of values (Figure 1), we formulate an integrated hypothesis that specifies the expected order of correlations. We also present hypotheses for the facets of each factor. Due to the large number of facets, we present hypotheses only for the most positive correlations of specific facets. Note that each of these positive correlations implies an integrated hypothesis with all 10 values.

Extraversion. Individuals who score high on Extraversion tend to be sociable, talkative, assertive, and active; those who score low tend to be retiring, reserved, and cautious. Extraversion is compatible with pursuing excitement, novelty, and challenge, the goals of stimulation values. Moreover, the active and assertive aspects of Extraversion facilitate the goal of achievement values, success through demonstrating competence according to social standards. Extroverted behavior is also likely to facilitate the pursuit of pleasurable experience, the goal of hedonism values. We therefore hypothesize that Extraversion correlates positively with attributing importance to stimulation, achievement, and hedonism values.

In contrast, we expect a negative correlation between Extraversion and tradition values. These values empha-

size humility and moderation in feelings and actions and submission to life's circumstances. The passivity and self-abnegation inherent in tradition values conflicts with the novelty, excitement, and assertiveness that characterize the Extraversion trait.

Combining these hypotheses with the circular value structure, we formulate an integrated hypothesis that predicts the order of correlations between Extraversion and all 10 values. This order, stated as ranks from the most positive to the most negative correlation, is as follows: stimulation (1), hedonism and achievement (tied as 2); self-direction, power (tied as 4.5); universalism, security (tied as 6.5); conformity, benevolence (tied as 8.5), tradition (10).

Regarding the facets of Extraversion: We expect achievement values to correlate most strongly with the assertiveness and activity facets, stimulation and hedonism values to correlate most strongly with the excitement-seeking facet, benevolence values to correlate with the warmth facet, and power values to correlate with the assertiveness facet.

Agreeableness. Individuals who score high on Agreeableness tend to be good-natured, compliant, modest, gentle, and cooperative. Individuals who score low on this dimension tend to be irritable, ruthless, suspicious, and inflexible. Agreeableness is highly compatible with the motivational goal of benevolence values—concern for the welfare of people with whom one has personal contact. Agreeableness is also quite compatible with the motivational goals of conformity values (not violating norms or upsetting others) and of tradition values (accepting and complying with cultural and religious norms). In contrast, Agreeableness conflicts with pursuing dominance and control over others, the goal of power values. Hence, we predict the following order of correlations with Agreeableness: benevolence (1); tradition, conformity (tied as 2.5); universalism (4); security (5); self-direction (6); stimulation (7); hedonism (8); achievement (9); power (10).

Regarding the facets of Agreeableness: We expect the trust, altruism, straightforwardness, and tender-mindedness facets to correlate most strongly with benevolence values. We expect the compliance and modesty facets to correlate most strongly with conformity and tradition values.

Openness to Experience. Individuals who score high on this dimension tend to be intellectual, imaginative, sensitive, and open-minded. Those who score low tend to be down-to-earth, insensitive, and conventional. Openness to Experience is highly compatible with the motivational goals of self-direction (autonomy of thought and action and openness to new ideas and experiences) and universalism (understanding and tolerance for all people and

ideas and appreciation of beauty and nature). It is also compatible with the motivational goals of stimulation values (novelty and excitement). Openness to Experience conflicts with the motivational goals of conformity, tradition, and security—all of which concern preserving the status quo and avoiding what is new and different. We therefore predict the following order of correlations: self-direction and universalism (tied as 1.5); stimulation (3); benevolence (4); hedonism (5); achievement (6); power (7); tradition, conformity, security (tied as 9).

As for the Openness to Experience subscales, we expect the action facet to correlate most strongly with stimulation values, the aesthetics facet with universalism values, and the fantasy and ideas facets with self-direction values.

Conscientiousness. Individuals high in Conscientiousness tend to be careful, thorough, responsible, organized, and scrupulous. Those low on this dimension tend to be irresponsible, disorganized, and unscrupulous. McCrae and John (1992) identify two distinct aspects of Conscientiousness, a proactive aspect (will to achieve) and an inhibitive aspect (holding impulsive behavior in check). A similar distinction appears in other trait theories. Tellegen (1985), for example, distinguishes “ambition,” an aspect of the positive emotionality dimension, from “control,” an aspect of the constraint dimension (see also Church, 1994, for a comparison between the Big Five and Tellegen’s theory).

The proactive aspect of Conscientiousness is compatible with the motivational goal of achievement values, whereas the inhibitive aspect is compatible with the motivational goal of conformity values. We therefore hypothesize that Conscientiousness correlates positively both with achievement and with conformity values.

Achievement and conformity values are relatively distant in the motivational circle of values. It is therefore surprising to hypothesize that both correlate similarly with the Conscientiousness factor. Correlations with the facets of Conscientiousness can test our assumption that each value is compatible with different elements of Conscientiousness. We hypothesize that achievement values correlate with the competence, achievement-striving, and self-discipline² facets (all proactive) but not with the order, dutifulness, and deliberation facets (all inhibitive). In contrast, conformity values correlate with the latter facets but not with the former. We also hypothesize that the order and deliberation facets correlate positively with security values. We offer no integrated hypothesis relating the overall Conscientiousness trait to all 10 values because this trait combines components compatible with different values.

In developing the value survey, Schwartz (1992) focused on value items thought to reflect the goals of a

single type of value. Items expected to express blends of the basic values, rather than a distinct content domain, such as items likely to express achievement and conformity, were not included. Our interest in the value correlates of the Conscientiousness trait led us to add to the survey five value items intended to reflect a blend of achievement and conformity values: strict, diligent, commitment, hardworking, and cautious. These items should correlate most positively with conformity and achievement values. We hypothesize that this blended set of conscientious values correlates most strongly with the Conscientiousness trait factor and with all of its facets.

Neuroticism. Individuals high on Neuroticism tend to be anxious, depressed, angry, and insecure. Those low on Neuroticism tend to be calm, poised, and emotionally stable. We anticipate no positive associations between value priorities and Neuroticism. Neuroticism is not likely to facilitate the attainment of the motivational goal of any type of value. Moreover, as Bilsky and Schwartz (1994) reasoned, “The depression characteristic of people high on neuroticism might result from failure to attain the desired level of any one of the ten values” (p. 171).

Relations of Values and Traits to Other Variables

Although we hypothesize that values and traits are correlated, we contend that they are distinct constructs, overlapping only partially. Researchers have suggested that traits and motives are two distinct elements of personality (see Winter et al., 1998) and that each may predict different sorts of behavior (e.g., McClelland, 1951). In a similar vein, we suggest that traits and values are conceptually distinct constructs whose correlations with other variables may differ, depending on specific conditions. Values, as cognitive representations of motivations in the form of goals and objectives, are relevant to goal-directed acts. They are therefore likely to be better predictors of attitudes and behaviors over which individuals have cognitive control or choice. Conversely, traits should be better predictors of spontaneous, intuitive, and emotionally driven attitudes and behaviors over which individuals have little cognitive control.

Religiosity. There is little research on relations between the FFM and religiosity. The few studies that relate the trait factors to religiosity (Kosek, 1999; Saucier & Goldberg, 1998; Taylor & MacDonald, 1999) offer no theoretical basis for possible links. Religiosity correlated positively with Agreeableness and negatively with Openness to Experience in all these studies. It correlated negatively with Conscientiousness in two of the studies.

We expect stronger associations of religiosity with values than with traits. This is because religion, similar to

values, is concerned with the evaluation and justification of choices and actions. These are goal-driven behaviors under at least partial cognitive control. Theorists may differ with regard to the specific values they link to religion, but almost all agree that religious involvement influences the value systems of individuals (Brown, 1987; Wulff, 1991). Moreover, people's value priorities affect the degree to which religious involvement promotes their basic goals and hence may appeal to them. Values correlate systematically with religiosity in groups from several religions (Roccas & Schwartz, 1997; Schwartz & Huisman, 1995). We therefore hypothesize that values explain variance in religiosity over and above the variance predicted by personality traits but that traits add little to the prediction of religiosity by values.

Positive affect. Positive affect, similar to subjective well-being in general, is more likely to correlate with personality factors than with values. Many of the personality facets refer explicitly to affective responses, whereas values do not. Several studies report strong and systematic associations between personality traits and self-reported affect. Most research has focused on Extraversion and Neuroticism, with highly convergent results. Neuroticism correlates substantially with negative affect and Extraversion with positive affect (e.g., Costa & McCrae, 1980; Emmons & Diener, 1985; Watson & Clark, 1984, 1992). The correlations with the other factors are usually rather low. Associations of Neuroticism and Extraversion with affect are so strong that many researchers see these traits as representing basic dimensions of affective temperament (see Watson & Clark, 1992, for a review).

Sagiv and Schwartz (2000) examined relations of values to positive affect in six samples from three cultures. Although some systematic correlations were found, all were moderate to low. They argue that causal relations of values with positive affect are likely to depend on whether people's value priorities are congruent with situational opportunities to pursue and attain valued goals. We therefore hypothesize that personality factors explain variance in positive affect over and above the variance predicted by values but that values add little to the prediction of positive affect by personality.

METHOD

Participants and Procedure

Participants were 246 introductory psychology students at an Israeli university, *M* age was 22 years (range 16-35), and 65% were women. The order of completing the values inventory and the personality questionnaire was counterbalanced. The affect scale and background questions followed. All responses were anonymous.

Questionnaire order did not significantly affect correlations between values and the five factors.

Instruments

Values. The importance that respondents attribute to each of 62 single values as guiding principles in their life was measured with the Schwartz (1992) value inventory expanded to include the five Conscientiousness items. Responses ranged from 7 (*of supreme importance*) to 3 (*important*) to 0 (*not important*) to -1 (*opposed to my values*). A multidimensional scaling analysis confirmed the structure in Figure 1 and the appropriateness of the standard indexes of each value. The Conscientiousness items formed a set that emerged close to the center of the map. This reflected their blending of conformity and achievement values with which they were correlated .38 and .16, respectively. To measure the priority given to each of the 10 values, we computed the average score for the items in the standard indexes (Schwartz, 1992, 1994). The internal reliabilities of the value indexes were as follows: universalism .72, benevolence .67, tradition .63, conformity .61, security .61, power .72, achievement .72, hedonism .64, stimulation .70, and self-direction .60. The reliabilities were within the range of variation commonly observed for the values (for evidence regarding reliability and validity of the inventory, see Schmitt, Schwartz, Steyer, & Schmitt, 1993; Schwartz & Sagiv, 1995; Schwartz, Verkasalo, Antonovsky, & Sagiv, 1997).

Personality factors. We measured the five personality factors with a version of the NEO Personality Inventory (NEO-PI) translated to Hebrew and abbreviated by Montag and Levin (1994). This questionnaire consists of 180 items, each answered on a 5-point scale ranging from *strongly disagree* to *strongly agree*. Each factor is measured with six subscales, one for each facet (Costa & McCrae, 1992). A factor analysis confirmed the five-factor structure in the present sample.³ Costa and McCrae (1992) and Costa, Busch, Zonderman, and McCrae (1986) describe the reliability and validity of the instrument. Montag and Levin (1994) describe the validation of the Hebrew version of the NEO-PI used here. Internal reliabilities for the traits across the six facets were as follows: Neuroticism .83 (the reliability of the facets ranged from .81 to .52), Extroversion .76 (.80 to .51), Openness .71 (.81 to .50), Agreeableness .64 (.75 to .58), and Conscientiousness .77 (.75 to .50).

Positive affect. We measured positive affect with the five positive items from the 10-item Bradburn (1969) Positive/Negative Affect Scale (internal reliability .66). Respondents indicated whether they had experienced each of 10 feelings during the past few weeks (e.g., on the top of the world, pleased about having accomplished something).

TABLE 1: Correlations of the 10 Types of Values With Five Factors and 30 Subscales (*N* = 246)

| Factors | Values | | | | | | | | | | |
|--------------------------|-------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|------------|
| | BE | UN | SD | ST | HE | AC | PO | SE | CO | TR | CS |
| Extraversion | .01 | -.07 | .10 | .26 | .18 | .31 | .13 | -.11 | -.13 | -.29 | -.18 |
| E1. Warmth | .20 | -.09 | -.02 | .03 | .09 | .17 | -.05 | -.10 | -.05 | -.03 | -.04 |
| E2. Gregariousness | .04 | -.04 | -.09 | .15 | .06 | .09 | .13 | -.01 | -.05 | -.16 | -.22 |
| E3. Assertiveness | -.11 | -.10 | .14 | .15 | .08 | .38 | .28 | -.07 | -.16 | -.29 | -.06 |
| E4. Activity | .06 | -.09 | .12 | .07 | .02 | .23 | .07 | .03 | -.09 | -.20 | -.04 |
| E5. Excitement seeking | -.10 | .03 | .05 | .39 | .27 | .16 | .12 | -.15 | -.07 | -.24 | -.15 |
| E6. Positive emotions | -.04 | .01 | .14 | .21 | .19 | .22 | -.02 | -.15 | -.08 | -.22 | -.18 |
| Openness | -.06 | .47 | .48 | .33 | .07 | -.06 | -.38 | -.29 | -.34 | -.29 | -.26 |
| O1. Fantasy | -.10 | .25 | .33 | .23 | .06 | -.09 | -.25 | -.18 | -.19 | -.09 | -.22 |
| O2. Aesthetics | .01 | .43 | .25 | .13 | -.09 | -.17 | -.41 | -.19 | -.19 | -.07 | -.22 |
| O3. Feelings | -.04 | .11 | .19 | .14 | .22 | .09 | -.18 | -.15 | -.19 | -.24 | -.12 |
| O4. Actions | -.08 | .33 | .32 | .39 | .01 | .07 | -.17 | -.15 | -.21 | -.27 | -.23 |
| O5. Ideas | .03 | .30 | .32 | .18 | -.04 | -.14 | -.20 | -.20 | -.25 | -.10 | -.15 |
| O6. Values | -.08 | .30 | .39 | .24 | .20 | .13 | -.14 | -.19 | -.26 | -.42 | .01 |
| Agreeableness | .45 | .15 | -.25 | -.26 | -.34 | -.41 | -.45 | .06 | .20 | .36 | -.04 |
| A1. Trust | .22 | .12 | .00 | -.07 | -.17 | -.10 | -.21 | -.05 | .06 | .06 | -.08 |
| A2. Straightforwardness | .29 | .07 | -.17 | -.23 | -.24 | -.30 | -.33 | .09 | .08 | .30 | -.06 |
| A3. Altruism | .33 | .04 | -.18 | -.14 | -.12 | -.16 | -.26 | .13 | .09 | .13 | -.05 |
| A4. Compliance | .36 | .14 | -.24 | -.25 | -.27 | -.35 | -.25 | -.02 | .23 | .36 | -.03 |
| A5. Modesty | .30 | .09 | -.23 | -.14 | -.28 | -.45 | -.35 | .09 | .19 | .35 | .00 |
| A6. Tender mindedness | .16 | .09 | -.10 | -.13 | -.14 | -.09 | -.24 | .01 | .08 | .09 | .01 |
| Conscientiousness | .04 | -.17 | -.01 | -.24 | -.05 | .22 | .05 | .22 | .16 | -.10 | .40 |
| C1. Competence | -.01 | -.11 | .05 | -.17 | -.03 | .12 | .05 | .15 | .02 | -.08 | .22 |
| C2. Order | .09 | -.20 | -.12 | -.27 | -.04 | .11 | .04 | .29 | .21 | -.07 | .33 |
| C3. Dutifulness | .22 | .01 | -.04 | -.23 | -.08 | .04 | -.21 | .16 | .16 | .00 | .25 |
| C4. Achievement striving | -.16 | -.15 | .23 | .09 | .10 | .39 | .15 | -.03 | -.06 | -.34 | .19 |
| C5. Self-discipline | -.03 | -.11 | -.01 | -.12 | -.06 | .24 | .11 | .12 | .09 | -.08 | .31 |
| C6. Deliberation | .05 | -.12 | -.11 | -.27 | -.09 | .02 | .05 | .18 | .18 | .10 | .31 |
| Neuroticism | -.02 | -.02 | -.10 | -.07 | -.01 | -.21 | -.08 | .02 | .02 | .12 | -.04 |
| N1. Anxiety | -.19 | -.10 | -.12 | -.17 | .01 | -.12 | .03 | .08 | .06 | .08 | .08 |
| N2. Angry hostility | -.15 | .04 | -.01 | .18 | .11 | -.06 | -.03 | -.03 | -.13 | -.11 | -.19 |
| N3. Depression | .08 | .02 | .02 | -.07 | -.11 | -.23 | -.12 | -.05 | .03 | .13 | -.01 |
| N4. Self-consciousness | .17 | .03 | -.18 | -.19 | -.14 | -.30 | -.17 | .00 | .05 | .28 | .04 |
| N5. Impulsiveness | -.12 | .01 | .10 | .09 | .15 | .03 | -.02 | .01 | -.08 | -.10 | -.11 |
| N6. Vulnerability | .02 | -.05 | -.25 | -.11 | -.06 | -.20 | -.06 | .05 | .11 | .22 | -.03 |

NOTE: BE = benevolence, UN = universalism, SD = self-direction, ST = stimulation, HE = hedonism, AC = achievement, PO = power, SE = security, CO = conformity, TR = tradition, and CS = conscientiousness. Hypothesized correlations are emphasized in bold. $r > .11, p < .05$; $r > .15, p < .01$, one-tailed.

Religiosity. Respondents reported their subjective religiosity on a 0 (*not religious at all*) to 7 (*very religious*) scale in response to the question, “How religious are you, if at all?” This single item correlated $>.75$ with other items that measured religious belief, observance, and identity in a representative national sample of Israeli Jews (see Schwartz & Huismans, 1995). It is therefore a reasonable indicator for our purposes.

RESULTS AND DISCUSSION

Relations of Values and Traits

Table 1 presents the correlations between the 10 values and each of the five broad personality factors and their facets. We discuss each personality factor in turn.

Extraversion. All the hypothesized correlations of values with the broad Extraversion factor and its facets were confirmed (all $ps < .01$). Extraversion correlated positively with achievement (.31), stimulation (.26), and hedonism values (.18) and negatively with tradition values (–.29). These findings affirm the view that extroverted behavior—assertive, active, and sociable, as against reserved and cautious—comports with cherishing values that define activity, challenge, excitement, and pleasure as desirable general goals in life. Extroverted behavior is antithetical to valuing self-denial or self-abnegation, expressed in tradition values.

The assertiveness and activity facets correlated most strongly with achievement values (.38 and .23, respectively) and the excitement-seeking facet correlated most strongly with stimulation (.39) and hedonism (.27) val-

ues. The assertiveness facet also correlated positively with power values (.28). Unlike any other facet, the warmth facet correlated positively only with benevolence values (.20). Hence, the specific aspects of Extraversion were most compatible with the types of values whose attainment they particularly facilitate. The unique pattern of correlations for warmth suggest that the main motivation underlying this facet of Extraversion differs from the shared motivations underlying the other facets.

We tested the integrated hypotheses that relate each personality factor to the full set of values by correlating the predicted with the observed orders of correlations between traits and values. For Extraversion, a Spearman correlation coefficient of .93 ($p < .01$) confirmed the integrated hypothesis. This strong association reflects the fact that the correlations of Extraversion with values decreased monotonically around the value circle (Figure 1) from achievement values toward tradition values, with only one minor deviation.

Openness to Experience. As hypothesized, Openness to Experience correlated positively with universalism (.47), self-direction (.48), and stimulation values (.33). This broad trait is thus most compatible with the values that emphasize intellectual and emotional autonomy, acceptance and cultivation of diversity, and pursuit of novelty and change. Openness to Experience correlated negatively with conformity (–.34), security (–.29), and tradition (–.29) values and with the added Conscientiousness (–.26) values. Thus, this trait is antithetical to values that emphasize maintaining the status quo, structure, and stability. Most correlations with the Openness to Experience facets were consistent with the hypotheses. The actions facet correlated most strongly with stimulation values (.39), the aesthetics facet with universalism values (.43), and the fantasy and ideas facets with self-direction values (.33 and .32, respectively).

Unexpectedly, the broad Openness to Experience trait correlated most negatively with power (–.38) values. Power values emphasize active control of the social and material environment. This finding implies incompatibility between Openness to Experience and striving for control through dominating people and resources. In the effort to dominate, people who emphasize power may reject unfamiliar ideas and experiences that might threaten their ability to control.

The integrated hypothesis specified that the correlations between Openness to Experience and the whole set of 10 values would follow the motivational circle of values from self-direction and universalism (most positive) in both directions around the circle to tradition, conformity, and security (most negative). A Spearman

correlation of .89 ($p < .01$) between the predicted and observed order of correlations supported the integrated hypotheses. Only the correlation with power deviated from the predicted circular order.

Agreeableness. Agreeableness correlated positively with benevolence (.45), tradition (.36), and to a lesser degree, conformity (.20) values, all as hypothesized. These correlations suggest two different motivational bases for Agreeableness. People may exhibit agreeable behavior because they are concerned with the welfare of close others and want to care for them (benevolence). Agreeable behavior also may be grounded in the goal of fulfilling social obligations, abiding by established norms, and avoiding disruption of relationships (tradition and conformity). The benevolence motivation for Agreeableness is self-transcending and proactive. The tradition/conformity motivation is largely self-restricting and reactive.

Agreeableness correlated most negatively with power (–.45) and negatively with achievement (–.41). We predicted a negative link of Agreeableness with values that entail self-interest even at the expense of others (power and, to a lesser extent, achievement), given the description of individuals low on Agreeableness as ruthless, suspicious, and uncooperative. Power and achievement values can justify or rationalize such behavior. Additional negative correlations with hedonism (–.34), stimulation (–.26), and self-direction (–.25) values suggest that Agreeableness is incompatible with a wider range of motivations. The substantial negative correlations with these values point to another reason for a lack of Agreeableness. These values focus on personal rather than social goals and are relatively indifferent to the effects of one's actions on others (Schwartz, 1992). Apparently, an absence of concern about relationships weakens Agreeableness as well.

The Spearman correlation between the hypothesized and observed order of correlations was 1.00. Correlations decreased monotonically from benevolence to power in both directions around the circle, with no exceptions.

Correlations with the Agreeableness facets confirmed most of the hypotheses. As expected, the trust, straightforwardness, altruism, and tender-mindedness facets correlated mainly with benevolence values (.22, .29, .33, and .16, respectively). Compliance and modesty, but no other facet, correlated with conformity values (.23 and .19, respectively). Tradition values also correlated mainly with the compliance (.36) and modesty (.35) facets. Unexpectedly, benevolence values correlated with these two facets as well (.36 and .30, respectively).

Conscientiousness. In contrast to the preceding personality traits, we hypothesized that Conscientiousness correlates most positively with two value types that are not adjacent in the value circle. Consistent with the hypotheses, Conscientiousness correlated positively both with achievement (.22) and with conformity (.16) values.

Conscientiousness also correlated significantly with security (.22) and with stimulation (–.24) values. Security shares with conformity the goal of maintaining smooth interpersonal relations and avoiding disruption of the social order. Thus, the positive correlation with security emphasizes the importance of this goal as a motivator of Conscientiousness. The negative correlation with stimulation comports with the opposition of stimulation values to both conformity and security values. It points to avoidance of risk as a motivator of Conscientiousness. As expected, Conscientiousness correlated most positively with the set of Conscientiousness value items added in this study (.40). Recall that this set includes single values selected because they reflect a blend of achievement and conformity motivations (e.g., hardworking, diligent). Thus, this finding also supports the composite nature of the Conscientiousness trait.

Correlations of the facets of Conscientiousness further reinforce the dual nature of the motivations underlying this trait. As hypothesized, achievement values correlated with the proactive facets—competence, achievement striving, and self-discipline (.12, .39, and .24, respectively), although the correlation with competence was weak. In contrast, conformity values correlated exclusively with the inhibitive facets—order, dutifulness, and deliberation (.21, .16, and .18, respectively). Finally, as hypothesized, the two strongest correlations of security values were with the order and deliberation facets (.29, .18). We proposed no integrated hypothesis relating Conscientiousness to the whole motivational circle of values because of the dual nature of this trait.

Neuroticism. As expected, the broad Neuroticism trait exhibited little association with values. However, examination of the patterns of correlation of the Neuroticism facets suggests two distinguishable components of Neuroticism. Each correlates weakly but differently with values. One component, including the angry hostility and impulsiveness facets, might be called extrapunitive because the negative emotion is directed outward. It tends to correlate positively with hedonism and stimulation values and negatively with benevolence, tradition, conformity, and Conscientiousness values. The second component, comprised of the anxiety, depression, self-consciousness, and vulnerability facets, might be called intrapunitive because the negative emotion is directed inward. This component tends to correlate positively

TABLE 2: Percentage of Variance in Religiosity and Positive Affect Accounted for in Hierarchical Regression Analyses

| Predictors Entered by Step | Adjusted R ² |
|------------------------------|-------------------------|
| Religiosity | |
| A. Values first | |
| Values | .43 |
| Personality factors | .45 |
| B. Personality factors first | |
| Personality factors | .08 |
| Values | .45 |
| Positive affect | |
| C. Personality factor first | |
| Personality factors | .11 |
| Values | .13 |
| D. Values first | |
| Values | .05 |
| Personality factors | .13 |

NOTE: R^2 change is significant ($p < .05$) in all steps.

with tradition values and negatively with achievement and stimulation values.

Relations to Religiosity and Positive Affect

The results reported thus far demonstrate systematic relations between value priorities and the personality factors. We next consider evidence for the distinctiveness of values and personality traits. If they are distinct constructs, their patterns of correlation with other variables should differ.

Religiosity. We hypothesized that values explain variance in religiosity over and above the variance predicted by personality traits but that traits add little to the prediction by values. We tested this hypothesis with two hierarchical regression analyses. One entered the values first as predictors of religiosity and then the personality factors; the second entered the personality factors first and then the values. We included as value predictors only the eight values that correlated significantly ($p < .01$) with religiosity in this sample and in the same direction as in past research: tradition (.59), hedonism (–.44), stimulation (–.33), self-direction (–.24), universalism (–.22), benevolence (.22), conformity (.18), and achievement (–.15). We included all five personality factors as predictors, even though only Agreeableness (.19) and Openness to Experience (–.18) correlated significantly with religiosity.

Table 2 presents the variance in religiosity accounted for (adjusted R^2) in each step in each analysis. Values accounted for 43% of the variance in religiosity when entered in the first step (Panel A). The personality factors accounted for only 2% of additional variance. The personality factors accounted for 8% of the variance in religiosity when entered first (Panel B) and values

accounted for a substantial 37% of additional variance. These findings are fully consistent with the hypothesis. Values correlated with religiosity more highly than traits and accounted for considerable nonoverlapping variance.

Positive affect. We hypothesized that personality factors explain variance in positive affect over and above the variance predicted by values but that values add little to the prediction of positive affect by personality. We also tested this hypothesis with two hierarchical regression analyses. One entered the personality factors as predictors of positive affect and then entered values; the second reversed the order of entry. We included all five personality factors as predictors. Positive affect correlated reliably with Extraversion (.31), Neuroticism (–.24), Openness to Experience (.19), and Conscientiousness (.14), although not with Agreeableness (–.04). To maximize the potential variance that values could explain, we included all 10 values as predictors, although only the correlations with self-direction (.16), stimulation (.14), universalism (.11), power (–.16), and conformity (–.12) values were reliable. As expected, positive affect correlated more strongly with values than with traits.

Panels C and D of Table 2 present the variance in positive affect accounted for in each step in each analysis. Consistent with the hypothesis, the five personality factors accounted for 11% of the variance in positive affect when entered in the first step (Panel C), and values added only 2% to the explained variance. Values accounted for 5% of the variance in positive affect when entered first (Panel D), and personality factors added a substantial 8% to the explained variance.

The dissimilar patterns of correlation of values and of the personality factors with religiosity and positive affect make clear that the two constructs are not redundant. Values related strongly to religiosity but only weakly to positive affect. The personality traits revealed the complementary pattern of relations: weak associations with religiosity and stronger associations with positive affect. Moreover, in predicting religiosity, values added substantially to the variance explained by traits, whereas traits made a marginal addition to the variance explained by values. In contrast, in predicting positive affect, traits added substantially to the variance explained by values, whereas values made a marginal addition to the variance explained by traits.

In sum, both the moderate level of correlations between values and personality factors, reported earlier, and their dissimilar associations with external variables support the view that values and traits are distinct constructs. Values may influence more strongly attitudes and behaviors that are under cognitive, volitional control, whereas traits may affect more strongly tendencies and behaviors subject to little cognitive control. This

view is compatible with the claim that traits are closely linked to temperaments (McCrae et al., 2000).

GENERAL DISCUSSION

This study sought to examine relations between the five-factor traits and personal values. Both constructs have been the focus of extensive research and both have successfully predicted numerous attitudes and behaviors. We now briefly consider what this study has taught us.

The relations to values of the factors and of their facets help to clarify some issues regarding meanings debated by theorists who emphasize different components of the same factors (e.g., Hogan & Ones, 1997; McCrae & Costa, 1997; McCrae & John, 1992; Sackett & Wanek, 1996; Saucier & Ostendorf, 1999). Consider one example. Some theorists distinguish proactive from inhibitive aspects of Conscientiousness, whereas others do not. The current findings strongly support this distinction. Three facets of Conscientiousness (competence, self-discipline, and achievement striving) correlate substantially with achievement but not with conformity values. They constitute a proactive aspect that is motivated by achievement values—pursuing success according to socially approved standards. Three other facets (order, dutifulness, and deliberation) correlate substantially with conformity but not with achievement values. They constitute an inhibitive aspect that is motivated by conformity values—restraint of actions, inclinations, and impulses that might upset or harm others or violate social norms. The orientation of both aspects to living up to social standards may hold them together as a Conscientiousness trait. Correlations of other facets with values have sharpened our understanding of their meaning in similar ways.

Studying the links between values and Conscientiousness drew attention to value items that blend two values, conformity and achievement, that are ordinarily orthogonal motivationally. The idea that motivations blend into one another is central to the value theory; it specifies that motivational goals form a circular continuum (Schwartz, 1992). However, the theory has assumed that only values adjacent in the circle blend together. The current study uncovered blending between nonadjacent values across the middle of the circle. This raises the possibility that other value items also may blend basic values in ways not yet recognized. Studying how values relate to other personality constructs may suggest additional blends among basic values.

The low correlations of Neuroticism with values may imply that the motivations underlying this trait are incompatible with one another or that the behaviors captured by Neuroticism are under little voluntary control. The current study provides some evidence to sup-

port both these inferences. An extrapunitive set of Neuroticism facets correlates most positively with stimulation and hedonism and most negatively with tradition values. An intrapunitive set of facets correlates most positively with tradition values and most negatively with stimulation and achievement values. Thus, the motivations underlying the different facets of Neuroticism are incompatible. Nonetheless, few of the correlations are substantial. This supports the idea that motivated, voluntary control plays only a minor role in Neuroticism.

Traits and values show meaningful associations. Understanding the causal mechanisms that underlie these associations may contribute to understanding the sources of individual differences in both. We have outlined three mechanisms: (a) Inborn temperaments may give rise to parallel traits and values, (b) individuals may modify their values to fit and justify the traits that characterize them, and (c) value priorities may induce value-consistent behavior that is then perceived as traits.

Our view that values may influence traits contradicts the stance of McCrae et al. (2000, p. 174ff) that personality traits are endogenous basic tendencies, unaffected by any external influence. In their model of the personality system, personality traits influence "characteristic adaptations" such as personal strivings, values, and attitudes. However, personality traits are largely immune to influence by these adaptations or by any environmental variable. As detailed next, what is known about values questions some of the grounds brought to support this claim.

McCrae et al. (2000) propose that the presence of a similar structure of personality traits across cultures indicates that these traits are common to the human species and biologically based. They present evidence that the fundamental structure of the FFM does indeed replicate in a large variety of cultures. But even a near universal structure does not demonstrate a claim of solely biological origins and rule out cultural influences (Katigbak, Church, & Akamine, 1996). The 10 basic values and their circular structure of conflicts and compatibilities, which were derived from requirements of social interaction and group survival as well as biology, appear across cultures in more than 60 countries (Schwartz, 1992, 1994; Schwartz & Sagiv, 1995). Values are clearly influenced by culture: There are stable, strong differences in the value priorities of people from different cultures (Inglehart & Beker, 2000; Schwartz, 1999). Therefore, evidence of cross-cultural stability in the structure of the Big Five is not incompatible with the notion that external influences such as culture affect personality.

The same line of reasoning applies to the relations between age and traits. McCrae et al. (2000) present data cultures showing that traits tend to change with age in similar ways across five cultures. They interpret these findings as indicating that "natural progressions of per-

sonality development that occur without regard to cultural and historical context" (p. 182). Again, value research yields a similar pattern of results—consistent relations of various values to age across cultures. For example, younger people tend to attribute more importance to self-direction and stimulation values and less importance to conformity, tradition, and security values (Schwartz, 2001). However, these findings do not rule out cultural effects on values. In sum, the knowledge obtained so far does not preclude the influence of values on the development of personality traits.

This study has limited generalizability because we studied only Israeli students. It is not implausible that the 10 values and five personality factors relate similarly in other samples, given the stability of the structures of each in cross-cultural studies. However, this must be investigated. The two previous studies of values and the FFM provide some support for the generalizability of our findings. Dollinger et al. (1996) correlated the five factors with the seven types of values that Schwartz and Bilsky (1990) identified in the Rokeach value list. All 11 significant correlations they observed in one sample of American students, and 10 of the 11 significant correlations in a second sample, were significant in the present study too. Luk and Bond (1993) reported 21 significant correlations between the 10 values and five factors in a study of Hong Kong Chinese students. All of these associations were in the same direction here and 15 were significant.

We have seen that associations of values with trait subscales are also informative. Future research should examine such associations closely. They can shed light on the stability of the motivational meanings of the components of each trait across cultures and groups. They also can reveal whether particular values motivate similar behaviors across cultures and groups.

In conclusion, we have argued that values and traits are conceptually and empirically distinct, yet related psychological constructs. Neither can assimilate nor subsume the other. Traits refer to what people are like, values to what people consider important. There is some evidence that traits have stronger influence on behavior over which individuals have little cognitive control, values on behavior under more voluntary control. Associations between traits and value priorities may reflect their influences on one another as well as their shared origins in genetic heritage and in evolutionary and current adaptations.

NOTES

1. Three other studies of values and traits used different measures and constructs to study their relations. Rim (1984) and Furnham (1984) reported correlations between the 36 single values on the Rokeach (1973) list and Eysenck's three trait dimensions. Bilsky and Schwartz (1994) derived indexes for some values in the Schwartz the-

ory from responses to the Rokeach list. They presented associations between these values and both the 10 traits from the Freiburger Personality Inventory (FPI; Fahrenberg, Hampel, & Selg, 1989) that deals mainly with stress and scales of Extraversion and emotionality (Neuroticism) derived from the FPI. They reported no correlations but used multidimensional scaling projections to portray relations between the structures of the values and the FPI. To the extent that they address similar pairs of values and traits, the hypotheses and results of the current study are compatible with the findings in Bilsky and Schwartz (1994).

2. Although conformity values include the single value "self-discipline," this value has a meaning quite different from the trait subscale of self-discipline. The self-discipline subscale measures not being lazy. The value is explained as referring to self-restraint and resistance to temptation.

3. The factor analysis and multidimensional scaling analysis are available from the authors.

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