Values and personality

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Abstract

Personality and differential psychology have paid little attention to values research. Consequently, the constructs used in these subdisciplines have developed independently, and evidence regarding the relations of personality to values is minimal. This study seeks to advance our understanding of these relations and to arrive at a theoretical integration of constructs. Starting from recent developments in values theory (Schwartz, 1992; Schwartz and Bilsky, 1987, 1990) and drawing on Maslow's (1955) distinction between 'deficiency' and 'growth' needs, we elaborate theoretical links between personality and values with special emphasis on structural relations. A set of hypotheses regarding these relations is generated and tested next, using data from a study with 331 German students. These students completed both the Rokeach Value Survey (RVS) and the Freiburg Personality Inventory (FPI), measuring ten primary and two secondary personality variables, namely extraversion and emotionality. Joint Similarity Structure Analyses (SSAs) of values and personality variables were conducted. The findings reveal both meaningful and systematic associations of value priorities with personality variables, confirming the hypothesized structural relationships. The compatibility of our hypotheses with the complex findings of George (1954) using totally different indexes of both values (Allport-Vernon Study of Values) and personality (drawn from Eysenck and Guilford) further supports the theoretical connections proposed in this study.

INTRODUCTION

Theoretical discussions and empirical research on the role of values in human interaction and social systems abound in social psychological and sociological literature.
Values are commonly characterized as relatively stable individual preferences that reflect socialization. As such, they might appear useful for describing and explaining individual behaviour (Mischel, 1990). It is therefore surprising that values have received scant attention from personality and differential psychologists. Only within motivational psychology have researchers systematically analysed the different roles of values and motives in predicting behaviour (see e.g. Biernat, 1989; Langan-Fox, 1991; Raven, 1988). Their analyses were primarily stimulated by the work of McClelland (1985). Aside from these approaches, values are mentioned rarely, if at all, in personality introductory textbooks (e.g. Amelang and Bartussek, 1990; Carver and Scheier, 1992; Liebert and Spiegler, 1982), review articles (e.g. Carson, 1989; Digman, 1990; Wiggins and Pincus, 1992), or even in comprehensive handbooks (e.g. Pervin, 1990b). Only a few researchers have tried to relate values to well-founded personality constructs such as extraversion or neuroticism (see e.g. Furnham, 1984; Rim, 1984; Simmons, 1976); and even these attempts give little consideration to theoretical bases for value–personality links.

The current study seeks to advance our understanding of relations between values and personality. We first define these concepts in a manner that points to their possible relations. We then suggest a theoretical framework for relating them and derive testable hypotheses regarding value–personality relations. Finally, we present an empirical test of these hypotheses, using data from a German sample.

DEFINITIONS OF VALUES AND PERSONALITY

Values

An examination of the many definitions of values in the literature reveals five common features (Schwartz and Bilsky, 1987). Values (a) are concepts or beliefs, (b) are about desirable end states or behaviours, (c) transcend specific situations, (d) guide selection or evaluation of behaviour and events, and (e) are ordered by relative importance (Allport, 1961; Levy and Guttman, 1974; Maslow, 1959; Morris, 1956; Pepper, 1958; Rokeach, 1973; Scott, 1965).

The above are formal features defining all values but they do not identify the crucial feature of content that distinguishes one value (e.g. wisdom) from another (e.g. success). This distinguishing feature is the motivational content of the value. Values are cognitive representations of the important human goals or motivations about which people must communicate in order to coordinate their behaviour. The content that distinguishes one value most significantly from another is the type of motivation or goal that it represents.¹

In earlier work, we have generated a comprehensive typology of the different types of value content, based on a theoretical analysis of the universal requirements of the human condition (Schwartz, 1992; Schwartz and Bilsky, 1987, 1990). Empirical studies support the existence of ten distinct types of values: power, achievement,

¹ According to McClelland (1985), motives and goals are separate personality constructs with a differential impact on predicting operant trends in action as opposed to choices, attributions, and other cognitively guided behaviour. He would therefore probably view 'type of goal' as the feature that distinguishes among value contents.
hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security (Schwartz, 1992). The relative importance attributed to each of these value types constitutes the individual’s system of value priorities.

**Personality**

There are many different conceptual approaches to personality (Carver and Scheier, 1992; Pervin, 1990a). Among these, the trait approach seems most promising for our integrative purposes: it differs from the motivational approach mentioned above, thus offering another, complementary access towards integration of theoretical reasoning. It is well researched empirically and provides operational indicators useful for relating to value priorities. Despite years of criticism, the trait approach has recently regained importance with the increasing interest in the five-factor model of personality (Digman, 1990; John, 1990). Thus, interrelating the trait and the values perspective should contribute to a more complex and comprehensive understanding of personality.

In the absence of clear-cut criteria for choosing among definitions, we adopted Guilford’s (1959) definition of personality because of its breadth and applicability for interpreting the key past study relating values to personality traits (George, 1954). According to Guilford (1959), personality refers to the individual’s ‘unique pattern of traits’ (p. 5), and a trait is ‘any distinguishable, relatively enduring way in which one individual differs from others’ (p. 6). Guilford distinguished several broad classes of traits that represent different aspects of personality: somatic traits (morphological and physiological), motivational traits (needs, interests, and attitudes), aptitudes, and temperaments.

**Distinguishing values from personality traits**

The above definition of traits is so broad as to include individual values as a subset. Nonetheless, values differ from the individual differences usually viewed as personality traits in three ways that support their separate conceptual treatment (Graumann and Willig, 1983; Rokeach, 1973), as follows. (1) Personality traits are typically seen as descriptions of observed patterns of behaviour, whereas values are criteria individuals use to judge the desirability of behaviour, people, and events. (2) Personality traits vary in terms of how much of a characteristic individuals exhibit, whereas values vary in terms of the importance that individuals attribute to particular goals. (3) Personality traits describe actions presumed to flow from ‘what persons are like’ regardless of their intentions, whereas values refer to the individual’s intentional goals that are available to consciousness.

**THEORETICAL LINKS BETWEEN VALUES AND PERSONALITY**

**Deficiency and growth**

According to Rokeach (1973), a person’s character, ‘which is seen from a personality psychologist’s standpoint as a cluster of fixed traits, can be reformulated from an
internal phenomenological standpoint as a system of values’ (p. 21). Given our definitions of personality and values, this reformulation seems most likely to be accomplished by concentrating on the motivational aspect of both concepts, i.e. by seeing people’s needs, interests, and attitudes (‘motivational traits’ in terms of Guilford’s approach; Guilford, 1959) as directly leading to and/or influenced by the broad goals by which they guide their behaviour (values). That is, the motivational trait and the parallel goal vary together.

Maslow’s (1954, 1955) analysis of ‘deficiency’ versus ‘growth’ needs suggests a more complex motivational link between personality and values. Maslow identified deficiency needs (e.g. health, safety) as those whose satisfaction is consistently sought by deprived persons in preference to other needs. Deficiency needs appear to be inactive or functionally absent once the gap between the desired standard of satisfaction and the person’s perceived current state is eliminated. In contrast, growth needs (e.g. self-actualization, curiosity) are those whose satisfaction is pursued even after high levels of satisfaction have been attained. For growth needs, there is no stable external standard that can be reached which then renders the need inactive.

The relationships between values and personality traits are different depending on whether the traits in question are inferred from patterns of behaviour aimed at satisfying growth needs or deficiency needs. Values and traits are covariant if the latter are inferred from behaviour patterns aimed at satisfying growth needs (e.g. curiosity, generosity). Thus, the person characterized by the trait of curiosity is likely to attribute high importance to the value of curiosity and to disvalue boredom strongly. In contrast, values and personality traits are compensatory for traits inferred from behaviour patterns aimed at satisfying deficiency needs (e.g. anxiety, cowardliness). Thus, the person characterized as anxious is likely to attribute high importance to the value of security and to disvalue unexpected challenges strongly.

**Structure of value systems**

In order to utilize this theoretical framework to relate particular value types to specific personality traits, it is necessary to present a more detailed analysis of the motivational structure of value systems. Table 1 presents capsule definitions of each of the ten value types we have identified in terms of its central motivational concern, and provides examples of specific values that express that concern.

Actions taken in the pursuit of each type of value have psychological and social consequences that may be compatible with or conflict with the pursuit of other value types. For example, actions that express conformity values (e.g. politeness) are likely to be compatible with actions that express security values (e.g. social order). This is because both sets of actions contribute to compatible states of interpersonal harmony and obedience to social norms. In contrast, the pursuit of achievement values may conflict with the pursuit of benevolence values: seeking personal success for oneself is likely to obstruct actions aimed at enhancing the welfare of others who need one’s help.

Based on an analysis of the probable compatibilities and conflicts likely to arise in the pursuit of the ten types of value, Schwartz (1992) derived a set of hypotheses about the overall structure of relations among them. This structure, confirmed by research in 41 countries (Schwartz, 1992; Schwartz and Sagiv, submitted), is presented
Table 1. Definitions of the motivational types of values and examples of values that express each type

<table>
<thead>
<tr>
<th>Type</th>
<th>Definition</th>
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<tbody>
<tr>
<td>POWER</td>
<td>social status and prestige, control or dominance over people and resources (social power, wealth, authority, preserving public image)</td>
</tr>
<tr>
<td>ACHIEVEMENT</td>
<td>personal success through demonstrating competence according to social standards (successful, capable, ambitious)</td>
</tr>
<tr>
<td>HEDONISM</td>
<td>pleasure or sensuous gratification for oneself (pleasure, enjoying life)</td>
</tr>
<tr>
<td>STIMULATION</td>
<td>excitement, novelty, and challenge in life (daring, a varied life, an exciting life)</td>
</tr>
<tr>
<td>SELF-DIRECTION</td>
<td>independent thought and action—choosing, creating, exploring (creativity, freedom, curious, independent, choosing own goals)</td>
</tr>
<tr>
<td>UNIVERSALISM</td>
<td>understanding, appreciation, tolerance, and protection for the welfare of all people and for nature (social justice, broadminded, world at peace, wisdom, a world of beauty, unity with nature, protecting the environment, equality)</td>
</tr>
<tr>
<td>BENEVOLENCE</td>
<td>preservation and enhancement of the welfare of people with whom one is in frequent personal contact (helpful, forgiving, honest, loyal)</td>
</tr>
<tr>
<td>TRADITION</td>
<td>respect, commitment, and acceptance of the customs and ideas that traditional culture or religion impose on the self (accepting my portion in life, devout, respect for tradition, humble, moderate)</td>
</tr>
<tr>
<td>CONFORMITY</td>
<td>restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms (obedient, self-discipline, politeness, honouring parents and elders)</td>
</tr>
<tr>
<td>SECURITY</td>
<td>safety, harmony, and stability of society, of relationships, and of self (family security, national security, social order, clean, reciprocation of favours, sense of belonging)</td>
</tr>
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</table>

graphically in the circular diagram in Figure 1. Competing motivational types of values emanate in opposing directions from the centre; complementary types are in close proximity around the circle.

Findings also strongly supported the existence of two underlying dimensions that organize value systems (Schwartz, 1992; Schwartz and Sagiv, submitted). As shown in Figure 1, these dimensions are composed of higher-order value types that combine the standard types: Openness to Change (including Self-Direction and Stimulation) versus Conservation (Security, Conformity, and Tradition); Self-Enhancement (Power and Achievement) versus Self-Transcendence (Universalism and Benevolence). Hedonism is related both to Openness to Change and to Self-Enhancement. The first dimension opposes values emphasizing own independent thought and action and favouring change to those emphasizing submissive self-restriction, preservation of traditional practices, and protection of stability. The second dimension opposes values emphasizing acceptance of others as equals and concern for their welfare to those emphasizing the pursuit of one's own relative success and dominance over others.

We briefly note the conceptual similarities of our value types with another set that was included in a study of personality we will discuss. Drawing on Spranger (1921), Allport and Vernon (1931) distinguished six types of value: political values (e.g. power, competition, struggle) parallel our power type; social values (e.g. love, kindness, sympathy) match our benevolence type and partly overlap with universalism; economic values (e.g. an interest in business, production, consumption, accumulation of wealth) come closest to our achievement type, but also express power and, to a lesser degree, hedonism goals; theoretical values (e.g. discovery of truth through observing, reasoning, and a critical and rational attitude) resemble our self-direction; religious values are close to our tradition type; and finally, aesthetic values
Figure 1. The theoretical structure of relations among motivational types of value

(e.g. esteem for form and harmony, grace, and symmetry) express the aspect of our universalism type pertaining to appreciation of beauty and nature.

**Personality assessment**

The revised form of the Freiburg Personality Inventory (FPI; Fahrenberg, Hampel, and Selg, 1989) was used to measure personality traits in the current research. The FPI is probably the most widely employed personality inventory in the German language not confined to special diagnostic purposes and applications. It consists of the two secondary and ten primary scales that are described in Table 2.

The two secondary scales, labelled Extraversion and Emotionality (neuroticism), are intended to measure Eysenck's (1953, 1981, 1982) Extraversion/Introversion and Neuroticism constructs. These are central constructs in the comprehensive Big-Five Model of personality and in the German research tradition. The ten primary scales are intended to assess several more specific constructs labelled Life satisfaction, Social orientation, Achievement orientation, Inhibitedness, Impulsiveness, Aggressiveness, Strain, Somatic complaints, Health concern, and Frankness. Each scale consists of a kernel concept supplemented by several partly overlapping subconcepts. The primary scales, in turn, partly overlap with the secondary scales. Six of the items that measure extraversion and five that measure emotionality are also used in the primary scales.
Table 2. Description of the scales of the Freiburg Personality Inventory (FPI-R)

<table>
<thead>
<tr>
<th>Primary scales</th>
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<tbody>
<tr>
<td>LIFE SATISFACTION: contented with life, optimistic,</td>
</tr>
<tr>
<td>hopeful versus discontented, depressed, negative</td>
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<tr>
<td>attitude towards life</td>
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<tr>
<td>SOCIAL ORIENTATION: socially responsible, helpful,</td>
</tr>
<tr>
<td>considerate versus self-concerned, showing little</td>
</tr>
<tr>
<td>solidarity, uncooperative</td>
</tr>
<tr>
<td>ACHIEVEMENT ORIENTATION: achievement oriented, active,</td>
</tr>
<tr>
<td>acting quickly, ambitious, competitive versus</td>
</tr>
<tr>
<td>low achievement orientation, low energy, lacking</td>
</tr>
<tr>
<td>ambition, non-competitive</td>
</tr>
<tr>
<td>INHIBITEDNESS: inhibited, unsure of self, shy versus</td>
</tr>
<tr>
<td>easy-going, self-confident, outgoing</td>
</tr>
<tr>
<td>IMPULSIVENESS: easily aroused, hypersensitive,</td>
</tr>
<tr>
<td>uncontrolled versus calm, composed, under control</td>
</tr>
<tr>
<td>AGGRESSIVENESS: spontaneously and reactively</td>
</tr>
<tr>
<td>aggressive, pushy, assertive versus non-aggressive,</td>
</tr>
<tr>
<td>controlled, restrained</td>
</tr>
<tr>
<td>STRAIN: tense, overwrought, stressed versus untrained,</td>
</tr>
<tr>
<td>unpressured, able to handle stress</td>
</tr>
<tr>
<td>SOMATIC COMPLAINTS: many complaints,</td>
</tr>
<tr>
<td>psychosomatically disturbed versus few complaints,</td>
</tr>
<tr>
<td>not psychosomatically disturbed</td>
</tr>
<tr>
<td>HEALTH CONCERN: afraid of illness, conscious about</td>
</tr>
<tr>
<td>health, treating oneself with care versus not</td>
</tr>
<tr>
<td>worried about health, unconcerned about health, robust</td>
</tr>
<tr>
<td>FRANKNESS: frankly admitting minor weaknesses and</td>
</tr>
<tr>
<td>common violations of norms, unembarrassed, versus</td>
</tr>
<tr>
<td>oriented to norms of conduct, concerned with making</td>
</tr>
<tr>
<td>a good impression, unable to be self-critical, closed</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Secondary scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXTRAVERSION: extraverted, sociable, impulsive,</td>
</tr>
<tr>
<td>enterprising versus introverted, reserved,</td>
</tr>
<tr>
<td>reflective, serious</td>
</tr>
<tr>
<td>EMOTIONALITY: emotionally labile (unstable),</td>
</tr>
<tr>
<td>hypersensitive, anxious, many problems and</td>
</tr>
<tr>
<td>physical complaints versus emotionally stable,</td>
</tr>
<tr>
<td>composed, self-confident, content with one's life</td>
</tr>
</tbody>
</table>

**HYPOTHESES**

The value types are structured into an integrated system of priorities by the dynamic relations among them. Hence, a full understanding of the values-personality relationship requires us to relate personality traits to the priorities given to the full set of value types. This can be accomplished most effectively if the values and trait variables can be analysed within the same framework without distorting the structure of relations among the value types. We postulate that this is possible because the principle that organizes the value structure—variations in motivation—also underlies personality differences (Aronoff and Wilson, 1983). We therefore hypothesize that a joint analysis of the values and the trait variables will yield a structure similar to that found when analyzing values alone, i.e. a structure similar to Figure 1. This is our meta-hypothesis, basic to all the others.

Assuming the confirmation of the meta-hypothesis, it is possible to represent the hypothesized relations of each personality variable with the total value structure by specifying the value type(s) with which it is expected to share its pattern of association. Operationally, the circular value structure emerges cleanly when each value type is most positively correlated with the types adjacent to it and progressively less correlated with the other value types as one goes around the circle in both directions.\(^2\) The location of a particular personality variable near a given value

\(^2\) The full theoretical rationale for this general hypothesis is elaborated by Schwartz (1992).
type in the joint structure would indicate that it shares the same pattern of associations with the whole system of values.

Covariant relationships

Four personality variables measured by the FPI primary scales describe patterns of behaviour, attitudes or interests (belonging to the motivational modality in terms of Guilford) that serve needs best classified as growth needs: social orientation, achievement orientation, aggressiveness, and frankness (Fahrenberg et al., 1989; Guilford, 1959, Chapters 16–17). According to our analysis, such traits should be covariant with the parallel value types, suggesting the following hypotheses.

1. Social orientation is located in the higher-order self-transcendence region, opposite the self-enhancement region.
2. Achievement orientation is located toward the centre of the multidimensional space, between the higher-order openness to change region and the achievement values region. This location is due to its correspondence with elements of two sets of values (self-direction/stimulation and achievement) that are themselves separated by hedonism. Because hedonism is usually toward the periphery of the values circle, and achievement orientation conflicts with hedonism, a location near the centre would represent its hypothesized associations optimally.
3. Aggressiveness is located in the higher-order self-enhancement region, opposite the self-transcendence region.
4. Frankness is located in the higher-order self-enhancement region. This hypothesis is based on the understanding of frankness as an index of the motivation to present the self in a positive light, even if falsely. This interpretation is reinforced by the fact that frankness typically correlates most highly with aggressiveness ($r = 0.47$; Fahrenberg et al., 1989, p. 33).

Compensatory relationships

Three personality variables assessed by the primary scales of the FPI, inhibitedness, impulsiveness, and strain, can probably best be assigned to Guilford’s modality of temperaments. Two others, somatic complaints and health concern, are conceptually similar to Guilford’s category of somatic traits (Guilford, 1959, Chapters 14, 16). Persons high on these five variables presumably compare their current state to desirable standards of well-being and view their state as deficient (Fahrenberg et al., 1989). Hence these traits are responses to deficiency needs. As such, according to our analysis, the value priorities associated with these personality variables should be those that signify goals that compensate for the deficiencies. More specifically, we hypothesize the following.

5. Inhibitedness is located in the higher-order conservation region opposite to the openness to change region. This assumes that people are inhibited out of insecu-

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5 This personality variable is a blend of assertiveness and willingness to exploit others. Although it often has a negative connotation, it is understood by the authors of the FPI as a motivational trait in Guilford’s sense (Fahrenberg et al., 1989). This trait continues to motivate behaviour even after high levels of aggressiveness are attained.
ity and fear that their behaviour may be socially disruptive. Hence, they value highly the compensatory goals of security and conformity.

6. Impulsiveness is located in the higher-order conservation region opposite openness to change. This assumes that people who describe themselves as impulsive feel a deficiency of self-control and fear overreacting in inappropriate and harmful ways.

7. Strain is located in the higher-order conservation region. This assumes that people who describe themselves as high in strain feel exposed to an overload of demands and/or unpredictable challenges. Hence, they attribute importance to values that represent stability and predictability and disvalue those that represent choice and stimulation.

8. Somatic complaints are also located in the higher-order conservation region. People who feel plagued by ill health long for (i.e. value highly) the security of better health.

9. Health concern is located in the higher-order conservation region opposite to openness to change. The preoccupation with avoiding threats of injury or infection is expressed in valuing security and conformity and disvaluing risk and challenge.

The remaining personality variable assessed by the primary scales of the FPI, life satisfaction, is not easily classified into Guilford’s trait taxonomy. However, we expect life satisfaction (like the value happiness) to be positively associated with all of the value types, because the attainment of any value can contribute to life satisfaction. On this basis we hypothesize the following.

10. Life satisfaction is located near the centre of the spatial configuration of all the variables.

The secondary scales

By definition (see Table 2), extraversion, like the primary scales with which it overlaps and the Eysenck dimension which it represents, describes a pattern of behaviour and attitudes that serves growth needs for excitement and social pleasure. Its opposite pole, introversion, in turn, is primarily a response to a sense of deficiency in energy and social skills. In this vein, Eysenck (1954) interpreted the Guilford ‘Carefreeness’ Scale as an index of extraversion. On these bases we hypothesize the following.

11. Extraversion is located near the border between the regions of the hedonism and stimulation value types with which it is most congruent. It is opposite the regions of the higher-order conservation and self-transcendence value types, which have a compensatory relation to introversion.

Emotionality, the FPI equivalent of Eysenck’s neuroticism, is a temperament variable with no clear theoretical links to particular values. The depression characteristic of people high on neuroticism (Eysenck, 1954) might result from failure to attain the desired level of any one of the ten value priorities. Hence, it is not likely to be associated differently with different value types. In this, emotionality resembles the primary scale variable of life satisfaction, with which some of its items (reversed) overlap. The absence of systematically differentiated associations of emotionality
with the set of value types is represented operationally by the following hypothesis.  

12. Emotionality is located close to the centre of the value structure.

**INTERPRETING PAST EMPIRICAL FINDINGS**

Before testing the hypotheses with new data, we apply our approach to clarify findings of the few past empirical studies that have examined values–personality relations from a trait perspective. Most important, though only indirectly interpretable, is a study by George, reported by Eysenck (1954, pp. 177–179). George administered scales for measuring the Allport–Vernon values, some of Guilford’s temperament (introspectiveness, depression, instability, carefreeness) traits and motivational (sociability) traits, and Eysenck’s radicalism–conservatism and tough-mindedness versus tender-mindedness ideologies to a sample of 500. George extracted two orthogonal factors from an analysis of the intercorrelations among these personality and value variables and plotted the locations of these variables on the two-dimensional space formed by the factors (cf. Figure 2). The two factors were most clearly defined by Eysenck’s scales, radicalism–conservatism on the horizontal axis and tough–tender-mindedness on the vertical.

There are clear parallels between the two factors and our two basic value dimensions. Radicalism–conservatism is a socio-political attitude dimension of personality that opposes openness to change in established, restrictive practices to preservation and enforcement of these practices, and acceptance of those who are different to rejection of them (Eysenck, 1954, p. 127). This dimension parallels the openness to change versus conservation dimension of values. Tough–tender-mindedness is a personality dimension that opposes realistic, worldly, and egoistic values to ethical, moralistic, super-ego, and altruistic values (Eysenck, 1954, p. 132). This dimension parallels the self-enhancement versus self-transcendence dimension of values. On this basis, we have mapped the ten standard and four higher-order value types onto the personality space generated by George.

The parallel between these personality and value dimensions implies that the location of other variables relative to these personality dimensions is indicative of their relations to the value dimensions. This is informative with regard to neuroticism and extraversion, because Eysenck interpreted them as represented by the five Guilford trait scales, which are also mapped in Figure 2. Neuroticism was represented by the scales of depression, instability, and introspectiveness. These scales were all located close to the centre of the map, showing no clear association either with the radicalism–conservatism or the tough–tender-mindedness dimensions. This finding suggests that neuroticism is also not associated with the basic value dimensions; it provides indirect support for Hypothesis 12 above.

According to Eysenck, extraversion was represented by the Guilford carefreeness and (in reverse on the vertical axis) social shyness scales. These indicators of extraversion are located near the border between the superimposed regions for the hedonism and stimulation value types and distant from the higher-order conservation and self-transcendence value types. This provides indirect support for Hypothesis 11.

Figure 2 also shows the locations of the six Allport–Vernon values on the dimensions derived by George. We examine whether these six values were located where we would expect them to be, relative to the value types and dimensions we superimposed by drawing conceptual parallels with the Eysenck dimensions. As expected,
Figure 2. Two-dimensional representation of relations among Allport-Vernon values, Guilford temperaments, and Eysenck dimensions (based on the work of George, 1954), and hypothesized relations with value types (capital letters)

the economic and political values were in the self-enhancement region, the religious value in the tradition region, the social value in the self-transcendence region, the aesthetic value in the universalism region, and the theoretical value in the openness to change region. Thus, the full set of findings in the George study corresponds well with our framework for linking values and personality traits.

Three studies that related single values to similar personality variables deserve mention. Furnham (1984) administered the Eysenck Personality Questionnaire and the 18 terminal values from the Rokeach Value Survey to 70 English students. He
split the sample at the mean on extraversion and at the mean on neuroticism, and formed four groups of subjects based on the cross-classification of the two personality variables. He then compared the median rankings of the 18 values across the four groups. Rim (1984) administered the Eysenck and the complete (36-value) Rokeach instruments to 100 Israeli students. He compared the value ranks of those above the median on extraversion with those below the median and of those above the median on neuroticism with those below.

Furnham and Rim each found significant differences between the personality groups on about one quarter of the single values. There was, however, practically no overlap between the two studies in the values that discriminated significantly. Hence they can shed little light on the applicability of our framework. This inconsistency may be due to the relatively small samples used. It may also reflect the unreliability of single values as indicators of value priorities. The findings reinforce our view that reliable results are best obtained by using sets of values shown to measure the same motivational concern as indexes of value types rather than by using single values.

Simmons (1976) explored the relations of 100 personal value statements with Eysenck’s extraversion and neuroticism. Twenty-two items correlated significantly with extraversion, but only three with neuroticism. This is compatible with our hypothesis of an association between values and extraversion but not neuroticism. The specific findings are not informative, however, because the correlations reported are for post hoc groupings of heterogeneous values, groupings that defy clear interpretation.

**METHOD**

**Sample and procedure**

The sample included 331 German students from six colleges in three different states of the Federal Republic. The median age was 22 years (range 18-33), about two thirds were female, and they majored either in administration ($N = 176$) or in education ($N = 155$). Data were collected from small groups during class sessions.

**Instruments**

Subjects first completed the gummed label version of the Rokeach Value Survey (RVS). After ranking values from most to least important as guiding principles in their own lives, subjects compared each adjacent pair of values on a seven-point scale to indicate how much more important each value was than the value ranked immediately below it. For each person, we computed value importance ratings by scoring the value ranked least important as unity and assigning to each higher-ranked value a score consisting of the sum of all the value comparison scores for the values ranked below it plus unity. The resulting ratings have a potential range from unity to 120 and reduce ipsativity. Because the structure of motivational relations among all the values can be represented in a single map, we can simultaneously examine the relations of personality variables with all the values. The 36 values in the Rokeach

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4 See the article by Schwartz and Bilsky (1987) for a more detailed explanation of the scaling.
(1967) lists measure five of the ten motivational types of values quite well. They also permit measurement of a combined achievement/power values type and a combined stimulation/self-direction type. Only tradition values are totally missing. We test hypotheses about the mutual relations between these value types and personality variables by mapping them both in the same smallest space projection. Second, subjects completed the Freiburg Personality Inventory.

Analysis

To operationalize the hypotheses regarding the structural relationships between personality variables and values, we employed Similarity Structure Analysis (SSA, earlier called Smallest Space Analysis; Borg and Lingoes, 1987; Guttman, 1968). SSA represents variables as points in multidimensional space such that the distances between the points reflect the pattern of empirical relations among the variables, as measured by their intercorrelations. The location of each variable in the space simultaneously reflects its relations with the entire set of other variables. Variables are located in close proximity not only because of their positive intercorrelation but because of the similarity of their correlations with all other variables (positive, near zero, and negative). Because the SSA locates each variable in relation to all others, it is appropriate for examining the overall pattern of associations between personality variables and the whole dynamic structure of value priorities, the objective we set above. Hypotheses about relations between value priorities and personality are supported if the value types and personality variables hypothesized to belong to the same theoretical domain of content emerge empirically in the same region in the multidimensional space.

To test our structural hypotheses, two SSAs were computed. In the first SSA, the 36 Rokeach values and the ten primary scales of the FPI were included simultaneously. In the second SSA, the Rokeach values were jointly analysed with the two secondary FPI scales, extraversion and emotionality (neuroticism). Separate analyses were necessary because of the partial overlap of primary and secondary scales mentioned before. Four-dimensional solutions were chosen for interpreting the results in order to facilitate comparison with our earlier studies (Schwartz and Bilsky, 1987, 1990).

RESULTS

In both analyses, the hypothesized value structure emerged (Figures 3 and 4), with the exception of a single deviation from the theoretical structure in Figure 1: values from the security and conformity value types were intermixed, making these types indistinguishable. However, this was a minor deviation, because these two value types are theorized to be adjacent and to form the single broad domain of conservatism. Thus, the deviation did not interfere with hypothesis testing. More crucial was the finding, in both analyses, that the value types were structured to form the two basic bipolar dimensions of the universal structure of values: openness to change versus conservation and self-transcendence versus self-enhancement. This bipolar structure was central to our theoretical reasoning and to the testing of hypotheses.
Figure 3. Similarity structure analysis of 36 values and ten primary scales of the FPI (values that are markers of each value type are represented by a common letter).

The primary personality scales and value priorities

The joint analysis of the 36 Rokeach values and the ten primary personality scales yielded a coefficient of alienation of 0.14, indicating a reasonable fit for the four-dimensional solution. The projection of values on Dimensions 1 versus 3 revealed the expected array of value types (see Figure 3). The locations of the personality variables within the value regions confirmed Hypotheses 1–9. The location of life satisfaction was close to the centre of the plot, as predicted in Hypothesis 10, but slightly displaced toward the security/conformity region.

Extraversion, emotionality, and value priorities

The joint SSA of the 36 Rokeach values and the two secondary personality scales (extraversion and emotionality) yielded a coefficient of alienation of 0.13. This coeffi-

5 Whether or not the other two-dimensional projections of the SSA contain further information about the relationship of values and personality traits is irrelevant with respect to hypothesis testing and can therefore be neglected. (See the book by Borg and Lingoes (1987) for the rationale of the SSA approach to data analysis.)
Figure 4. Similarity structure analysis of 36 values and two secondary scales of the FPI (values that are markers of each value type are represented by a common letter)

icient indicates a good fit of the four-dimensional solution, comparable to the fit with the 36 values alone. Partitioning of values was accomplished on Dimensions 1 versus 2 (see Figure 4). With the exception mentioned above, the resulting arrangement conformed to our expectations both with regard to the separation and ordering of value types and with regard to the location of the two personality variables (cf. Figure 2). In confirmation of Hypothesis 11, extraversion emerged near the border between the regions of the hedonism and stimulation value types and opposite the self-transcendence and conservation regions. In support of Hypothesis 12, emotionality emerged in the centre of the map, showing no strong association with any of the value types.

DISCUSSION

The addition of personality variables to the SSAs of the values had little effect on the structure of value relations. This suggests that similar motivational dynamics
underlie both types of concepts. Were this not so, the joint SSAs would have produced solutions that greatly distorted the structure of relations among values or that were degenerate (Kruskal, Young and Seery, 1978). The findings reveal both meaningful and systematic associations of value priorities with personality variables. Put differently, the goals people use as guiding principles in their life, as expressed in their value priorities, are related in theoretically predictable ways to the consistent patterns of motivated behaviour tapped by the FPI scale scores.

The fact that personality variables can be integrated into the basic structure of human values once again raises the question of whether it is worthwhile to differentiate conceptually between values and personality. Values may, indeed, be conceived as a type of personality disposition. Like other dispositions, values are defined as relatively stable across time and situation, and value priorities are also used to characterize and compare individuals. Yet values are a distinctive type of disposition. As guiding principles in the individual’s life, values are conscious goals evaluated in terms of importance. They are experienced as demands one places upon oneself, as part of one’s self-identity. As such, values are distinct from most other types of personality dispositions, because the latter are external attributions of features that distinguish among individuals but do not entail intentional commitment by the person (Graumann and Willig, 1983).

The grounding of hypotheses in the distinction between deficiency and growth needs, proposed by Maslow (1955), proved helpful in clarifying when values and personality traits are compensatory as against covariant. In both instances, it is reasonable to postulate reciprocal causation between values and personality. When values and personality are covariant, the reciprocal effects increase both value importance and the personality tendency: Values (e.g. achievement) promote congruent behaviour patterns (assertive personality traits) which, when successful, reinforce values (achievement) which in turn, further promote congruent behaviour patterns (assertiveness), and so on. When values are compensatory to personality, the reciprocal effects work in opposite directions: values (e.g. security) promote congruent behaviour patterns (caring for one’s health) which, when successful (attaining good health), reduce the importance of the relevant values (security), and so on.

The pattern of values-personality relations in Figure 3 reveals that the primary FPI scales, with the exception of social orientation, are associated with conservation and self-enhancement values. This suggests that the FPI does not cover the full range of motivations that might enter into personality. This limitation reflects the intentional focus of the FPI on psychophysiology, psychotherapy, rehabilitation, stress, aggression, and prosocial behaviour (Fahrenberg et al., 1989). Traits potentially indicative of Maslow’s (1959) self-actualized person, that should relate more to the openness to change and self-transcendence higher-order value types, are few. A personality inventory intended to tap characteristics of the fully functioning person would probably yield associations with the latter value types as well.

Past research on the relation between values and personality as described in terms of traits has yielded equivocal results (Furnham, 1984; Rim, 1984; Simmons, 1976). This research adopted a single-variable correlational approach and examined large numbers of coefficients, producing many, inconsistent, statistically significant findings. The SSA method adopted here, in conjunction with a theory of the content and structure of values, permitted a more comprehensive, holistic analysis of values-personality relations. The values theory with which we worked is not tied to a particu-
lar instrument for measuring values. Rather, it can be used to organize the values measured in any instrument into a set of motivational value types (Schwartz, 1992). Future studies, with different value and personality instruments, can therefore employ the values theory to combine single values into motivational types, to generate hypotheses and to organize findings.

CONCLUSION

Personality and differential psychology relating to a trait concept have paid almost no attention to values research. Consequently, the constructs used in these subdisciplines developed independently, and evidence regarding the relations of personality traits to values is minimal. The current study used recent developments in values theory to go beyond empirical correlations toward a theoretical integration. These theoretical developments enabled us to generate a set of hypotheses regarding value–trait relations. We also used the theory to interpret earlier findings (George, 1954) that had empirically linked the Allport–Vernon values with personality variables drawn from Eysenck and Guilford. The compatibility of our hypotheses with George’s findings, and their confirmation using totally different indexes of both values and personality, strongly support the theoretical connections proposed here.

Of course, these steps toward integrating personality and values research are both limited and tentative. Broader conceptualizations of how these variables fit together are necessary. They may be aided by recent structural analyses of personality traits (Hofstee, De Raad and Goldberg, 1992; Wiggins and Pincus, 1992) that can be compared with the structure of values. In addition, introducing the structural considerations specified in our values theory into the investigation of value–motive relationships as researched by motivational psychologists (McClelland, 1985) might be another useful move towards theoretical integration. Perhaps the success of these first steps will stimulate research in this largely uncharted area.

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