Personality Trait Structure as a Human Universal

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Patterns of covariation among personality traits in English-speaking populations can be summarized by the five-factor model (FFM). To assess the cross-cultural generalizability of the FFM, data from studies using 6 translations of the Revised NEO Personality Inventory (P. T. Costa & R. R. McCrae, 1992) were compared with the American factor structure. German, Portuguese, Hebrew, Chinese, Korean, and Japanese samples (N = 7,134) showed similar structures after varimax rotation of 5 factors. When targeted rotations were used, the American factor structure was closely reproduced, even at the level of secondary loadings. Because the samples studied represented highly diverse cultures with languages from 5 distinct language families, these data strongly suggest that personality trait structure is universal.

Traditionally, anthropologists and cross-cultural psychologists have emphasized the tremendous diversity of human cultural institutions and their profound impact on individual psychology (Markus & Kitayama, 1991). More recently, however, progress in evolutionary psychology (Konner, 1991) and behavior genetics (Loehlin, 1992) has provided a rationale for examining universals of human nature that transcend cultural differences. This article reviews recent evidence that suggests that the structure of individual differences in personality is uniform across several cultures and may in fact be universal. Common dimensions of personality may thus provide a framework for understanding cultural differences.

All human languages (Dixon, 1977) contain terms to characterize personality traits—relatively enduring styles of thinking, feeling, and acting. By *personality structure* trait, psychologists mean the pattern of covariation among these traits, usually summarized in terms of a relatively small number of factors that represent the basic dimensions of personality. For example, in English-speaking cultures, people who are sociable are generally also energetic and cheerful, and these traits together define a dimension usually called *extraversion* (H. J. Eysenck & Eysenck, 1967).

If personality traits are arbitrarily shaped by culture—for example, by child rearing practices, religious and moral values, and the apperceptual system encoded in each different language—then very different personality traits and trait structures might be found in different cultures. If, however, personality traits represent variations

in basic human ways of acting and experiencing, the structure might be universal. Universality might be attributed to specieswide biological bases of traits, or it might represent a purely psychological consequence of the shared human experiences of living in groups, using abstract thought, or being conscious of our own mortality.

Cross-cultural studies of personality using translations of English-language questionnaires have been conducted for many years (e.g., Bond, Nakazato, & Shiraishi, 1975) and have often shown evidence of replicable factors (S. B. G. Eysenck, 1983). Yet these studies were in one sense premature, because until recently there was no consensus among personality psychologists on what the basic structure of personality was in English-speaking populations. Were there three factors (S. B. G. Eysenck, 1983), eight (Comrey, 1970), or sixteen (Cattell, Eber, & Tatsuoka, 1970)?

Many psychologists are now convinced that the best representation of trait structure is provided by the five-factor model (FFM; Digman, 1990; but see Block, 1995, for a dissenting view). According to the FFM, most personality traits can be described in terms of five basic dimensions, called Neuroticism versus Emotional Stability (N); Extraversion or Surgency (E); Openness to Experience or Intellect, Imagination, or Culture (O); Agreeableness versus Antagonism (A); and Conscientiousness or Will to Achieve (C). These dimensions can be found in trait adjectives as well as in questionnaires created to operationalize a variety of personality theories (McCrae & John, 1992).

Each of these factors represents the common variance among a large set of more specific traits or facets. The Revised NEO Personality Inventory (NEO-PI-R;

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Costa & McCrae, 1992) was developed to operationalize the FFM by assessing 30 specific facets, 6 for each factor. The factor structure of these 30 scales has been widely replicated in English (e.g., Piedmont, 1994), with similar factors found in men and women, older and younger adults, and White and non-White subsamples (Costa, McCrae, & Dye, 1991). Because the instrument has been translated into a number of different languages, it can be used to investigate the cross-language generalizability of the FFM.

Language and Personality

Personality and its assessment are intimately bound with natural language. All human cultures include words for describing individual differences in personality, and a large part of the process of socialization consists of learning these terms and how they are applied to oneself and others. Unlike physical characteristics, personality traits are abstractions that cannot be directly measured and must instead be inferred from complex patterns of overt and covert behavior. Human judges are needed to make these inferences, and in psychological studies, they typically do so by responding to checklists or questionnaire statements that use natural language. Even technical judgments, such as psychiatric diagnoses, ultimately rely on natural language: To diagnose a narcissistic personality disorder, one must understand the meaning of such terms as *grandiose, exploitative, envious,* and *arrogant* (American Psychiatric Association, 1994).

The lexical approach to personality structure (Goldberg, 1981) adopts the hypothesis that because personality traits are so central to human interactions, all important traits will have been encoded in natural language. Thus, an analysis of trait language should yield the structure of personality itself. The FFM was originally identified in analyses that began with lists of trait terms derived from the English-language dictionaries, and one way to look for universal trait dimensions has been to conduct psycholexical studies in a variety of languages.

Results of such studies to date have been mixed. The FFM is clearly recovered in studies of German traits (Ostendorf, 1990), but only four of the five factors were found in an analysis of Hungarian adjectives (De Raad & Szirmák, 1994). Yang and Bond (1990) found five factors in Chinese trait terms, but they did not show a one-to-one correspondence with the dimensions of the FFM. Church and Katigbak (1989) reported similar findings in Tagalog, a Philippine language.
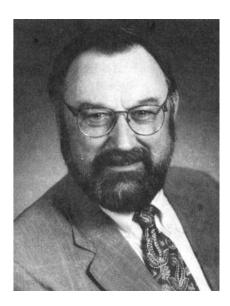
These studies might be interpreted as evidence that personality structure varies appreciably across cultures; alternatively, they might mean that the lexical approach has certain limitations as a strategy for the study of personality structure. It is simply not the case that all personality traits are encoded as adjectives. The English language, for example, contains no single trait adjective for such well-known traits as need for variety and tolerance of ambiguity. Cultures select a limited range from among the spectrum of personality traits to encode in their lexicon, and they may select differently. Languages differ not only in the precise trait terms they include (as every translator knows) but more broadly in the aspects of personality their vocabularies emphasize (Angleitner, Ostendorf, & John, 1990). Lexical studies thus confound differences in personality structure with differences in personality language.

To examine cross-cultural differences in structure per se, it is necessary to hold the assessment of personality constant by measuring the same traits in each culture. That, of course, is easier said than done; finding the exact equivalent for a single word in another language is often impossible. But meaning can usually be conveyed at the level of phrases or sentences, and questionnaires, which use conditional and contextualized statements to assess personality, may be more cross-culturally transportable than are lists of adjectives. When translated, personality scales may provide a roughly equivalent set of variables and make it possible to ask whether the relations among these variables are invariant across cultures.

A Stratified Sample of Languages

Because some 4,000 human languages are spoken, it is impossible to establish directly the universality of personality structure. There are hologeistic methods designed to allow worldwide generalizations (Naroll, Michik, & Naroll, 1980), provided that a relatively large sample of cultures is studied. However, given the small and nonrandom selection of languages into which most personality questionnaires have been translated, those methods are not directly applicable.

As it happens, however, the NEO–PI–R has been translated into languages from several different language families. *Language families* are groups of languages with a common historical origin that have cognate terms and share certain features of grammar and syntax. They constitute, therefore, a meaningful basis for stratification in sampling the world's languages. In this article, we exam-

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ine the factor structure of the NEO–PI–R translated into German (a language, like English, from the Germanic branch of the Indo-European family), Portuguese (from the Italic branch of Indo-European), Hebrew (a Hamito-Semitic language), Chinese (from the Sino-Tibetan family), Korean, and Japanese. These latter two languages are generally not classified in any family, although Korean shares some features of the Altaic languages (like Turkish and Mongolian), and some scholars have noted resemblances between Japanese and Austronesian (e.g., Samoan) and Austro-Asiatic (e.g., Khmer) languages ("Languages of the World," 1993).[1]

If, as Sapir (1921) argued, reality is structured by the language one speaks, and if personality traits in particular are social constructions (Hampson, 1988), then radically different languages might be expected to lead to very different construals of personality. By sampling across language families, we test the limits of generalizability of the FFM.

Other Cultural Differences

The seven societies compared in the present study differ, of course, in many respects other than simply language. Historically, Hebrew, Portuguese, and German cultures were shaped by Judeo-Christian traditions and Japanese, Chinese, and Korean cultures by Buddhist and Confucian traditions. Germany and Japan are relatively wealthy societies; Portugal and South Korea are not. The United States and Japan currently have political systems that emphasize individual civil rights, whereas South Korea and Israel—both under threat of regional conflict—do not (see Diener, Diener, & Diener, 1995).

Perhaps more relevant to personality structure are cultural differences in social norms, attitudes, and values. Smith, Dugan, and Trompenaars (1996), for example, surveyed values of managers and organization employees in 43 countries. Multidimensional scaling showed that

Japan, Hong Kong, and especially South Korea scored low on a dimension of egalitarian commitment versus conservatism, whereas Portugal, Germany, and the United States scored high. Similarly, Schwartz (1994) used teacher ratings of values to rank 38 cultural groups on culture-level value dimensions and found that Hong Kong scored relatively high on conservatism, whereas West Germany scored high on autonomy.

The most widely researched cultural variable is individualism–collectivism: "Overwhelming evidence indicates differences in basic psychological processes between collectivistic and individualistic contexts" (Kagitçibaşi & Berry, 1989, p. 516). Diener et al. (1995) reported ratings by H. C. Triandis of the individualism–collectivism of 55 countries on a scale from 1 to 10. The samples examined in the present article are distributed across most of that range: South Korea (3), Japan (4), Portugal (5), Israel (6), West Germany (8), and the United States (10). If distinctly different personality factors are found in these different samples, cultural differences in conservatism or collectivism might suggest possible explanations (cf. Betancourt & López, 1993). However, the finding of similar factors in all these samples despite the profound differences of language and culture would provide strong evidence of the universality of personality trait structure.

Method

Samples

Data from seven factor structures were compared. The basis for comparisons was the normative data for the NEO–PI–R, a sample of 500 men and 500 women aged 21 and over, selected to match U.S. Census (U.S. Department of Commerce, Bureau of the Census, 1984) projections with respect to age and race. They were, however, somewhat better educated than the American population in general (Costa & McCrae, 1992).

The German sample included 642 men and 646 women (plus 36 respondents with gender not reported) aged 15 to 83 who were friends and relatives recruited by psychology students. About 60% of the participants were students (Ostendorf & Angleitner, 1994). Portuguese data were from 861 men and 1,133 women (and 6 with unreported gender) aged 17 to 84, from the Leiria region of Portugal. The full range of socioeconomic and educational levels were represented; the questionnaire was administered orally to participants who were unable to read it themselves (M. P. Lima & A. Simões, personal communication, January 1, 1995).

Two job applicant samples (396 men, mean age = 28.4; 539 women, aged 17 or 18) completed the Hebrew

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[1] Some Westerners may suppose that Chinese and Japanese are similar, but "the two languages are entirely different. Chinese is a monosyllabic language with musical tones to distinguish the many identical syllables. In its classical form at least, Chinese is a language of great compactness. Japanese, on the other hand, is polysyllabic, has no tones like the Chinese, and . . . is a language of interminable sentences" (Keene, 1955, p. 2).

translation of the NEO–PI–R (Montag & Levin, 1994). The Chinese version was administered to undergraduate psychology students (161 men and 191 women) who received research credit for their participation (McCrae, Costa, & Yik, 1996; McCrae, Zonderman, Costa, Bond, & Paunonen, 1996).

The Korean NEO–PI–R was completed by 1,234 men and 1,087 women (plus 2 with unreported gender) who were all college freshmen (Lee, 1995). The Japanese sample consisted of 200 college students (54 men and 146 women). A principal-axis factor analysis was reported by Gondo, Shimonaka, Nakazato, Ishihara, and Imuta (1993); for the present purposes, principal components were examined (Y. Shimonaka, personal communication, June 1, 1995). Note that factor structures for the Chinese and Japanese samples are also discussed elsewhere (McCrae, Zonderman, et al., 1996).

Materials

The NEO–PI–R is a 240-item questionnaire designed through rational and factor analytic methods to operationalize the FFM. Each of the five factors is represented by six specific traits, or facets (see Table 1 for a list of facets and their classification). Responses are made on a 5-point scale from *strongly disagree* to *strongly agree;* data on the reliability, stability, and validity of the facets and factors are summarized in the manual (Costa & McCrae, 1992).

All translations were made by native speakers with training in psychology. After completing a translation, a back-translation into English was prepared by a second translator (blind to the original English) and reviewed by the test authors. Items (typically less than 10% of the 240) that appeared to have strayed from their intended meaning were reviewed and revised by the translator.[2] The revised items were again back-translated and revised as needed. Translators were encouraged to preserve the meaning of the item even if that involved minor changes in the literal content. In some cases, a few items (e.g., 15 items in the Chinese version) were revised after pilot testing.

Analyses

Although a number of statistical techniques have been used to assess the psychometric equivalence of translations (Butcher & Han, 1996), the most common is a comparison of factor structures. Factor analysis identifies clusters of variables that are mutually related and relatively independent of other variables; thus, factor loadings speak to the convergent and discriminant validity of variables. If a translated instrument shows the same factor structure as the original, it is likely that construct validity of the constituent scales has been maintained.

There are several different methods for factoring and for evaluating replicability. Recent work with confirmatory factor analysis (Church & Burke, 1994) suggests that it may not be the optimal method for studying personality structure. McCrae, Zonderman, et al. (1996) argued that congruence coefficients between varimax-rotated princi-

pal components from two samples provide a direct and familiar way to assess factor similarity. In addition, however, they proposed that targeted rotation of the translated scales may be useful by showing how closely the structure can be aligned with the original factors. They also offered Monte Carlo-based statistics for evaluating the significance of congruence coefficients for both factors and variables after targeted rotation.

When factored, the facet scales of the NEO–PI–R do not exhibit simple structure. Although each facet ought to load primarily on the factor to which it is assigned, secondary loadings are also expected for many facets. For example, N2: Angry Hostility generally has a negative secondary loading on Factor A: People who are often angry find it difficult to get along with others. Again, Assertiveness is considered a facet of E, but in American samples it consistently shows secondary loadings on three other factors. Assertive people are not only extraverted, they also tend to be self-confident (low N), domineering (low A), and ambitious (high C).

These nuances of meaning are particularly useful for assessing the cross-cultural replicability of personality structure. The six facets of E are not interchangeable markers of a single factor; they are distinctive traits, recognizable from their secondary loadings on other factors. E1: Warmth should show a positive loading on the A factor, whereas E5: Excitement Seeking should show a negative loading. Preservation of such secondary loadings would suggest universality not only of the five broad factors but also of the specific traits that define them.

Results

For each of the six samples, five varimax-rotated principal components were first examined. Table 1 presents the results for the two largest samples (factor matrices for all six samples are available from the authors). It is clear that all five factors can be readily recognized in both samples, although the Korean data are somewhat closer to the original than are the Portuguese. Both primary and secondary loadings (e.g., the negative loadings of N2: Angry Hostility on A) closely resembled the American structure.[3] Similar results were seen with the other four samples. Across the six samples, facets had loadings greater than .40 on their intended factor in 163 of the 180 cases (91%).

Congruence coefficients (Barrett, 1986; Wrigley & Neuhaus, 1955) were then calculated between each set of factor loadings and the loadings in the American normative sample. Values higher than .90 are usually considered evidence that a factor has been replicated; as Table

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[2] The relative ease with which accurate translations could be made is an indication that the description of personality transcends language.

[3] Separate analyses within gender were also examined for the Portuguese and Korean samples. Structures were essentially identical for men and women, with all cross-gender factor congruence coefficients exceeding .95.

Table 1
Factor Structure of the Revised NEO Personality Inventory (NEO–PI–R) in Korean and Portuguese

| | Varimax-rotated principal component | | | | | | | | | |
| | N | | E | | O | | A | | C | |
NEO–PI–R facet	K	P	K	P	K	P	K	P	K	P
N1: Anxiety	**83**	**77**	−14	04	−01	03	−08	16	02	15
N2: Angry Hostility	**58**	**65**	13	−28	08	−06	**−52**	−27	−27	−03
N3: Depression	**77**	**79**	−21	−09	05	−12	−07	10	−23	−18
N4: Self-Consciousness	**77**	**71**	−20	−08	−13	−03	−02	09	−07	−20
N5: Impulsiveness	**46**	38	30	22	08	36	−21	−26	**−52**	−31
N6: Vulnerability	**69**	**66**	−22	−09	−14	−08	−05	01	**−40**	**−43**
E1: Warmth	−25	−07	**65**	**70**	09	17	**45**	21	09	26
E2: Gregariousness	−22	−12	**66**	**66**	−08	13	29	−12	−06	−04
E3: Assertiveness	−36	−32	**62**	17	13	20	−11	**−55**	26	19
E4: Activity	01	05	**69**	18	−01	25	−19	−30	21	36
E5: Excitement Seeking	−11	−01	**57**	**46**	23	36	−17	−38	−21	03
E6: Positive Emotions	−12	−11	**65**	**56**	28	**44**	19	−18	03	10
O1: Fantasy	09	13	02	20	**68**	**67**	−07	−12	−15	−11
O2: Aesthetics	08	06	19	12	**67**	**67**	14	13	19	19
O3: Feelings	09	14	**52**	31	**60**	**61**	06	−19	17	22
O4: Actions	−29	−21	30	05	**43**	**54**	02	04	−06	−05
O5: Ideas	−10	−11	01	05	**68**	**71**	−01	−18	32	11
O6: Values	−17	−14	00	−02	**42**	**70**	14	11	−12	−06
A1: Trust	−22	−19	24	**50**	07	−06	**67**	**41**	08	03
A2: Straightforwardness	−03	−04	−24	−05	03	−03	**57**	**74**	22	07
A3: Altruism	−13	−02	25	**53**	10	10	**71**	**46**	21	33
A4: Compliance	−10	−09	−19	21	−07	−24	**73**	**67**	−13	09
A5: Modesty	25	10	**−42**	−11	−22	06	39	**72**	−19	05
A6: Tender-Mindedness	19	14	14	22	26	21	**57**	**51**	05	15
C1: Competence	−32	−26	30	23	23	05	00	−02	**70**	**65**
C2: Order	−01	06	−01	−03	00	01	−04	−01	**74**	**69**
C3: Dutifulness	01	−04	03	09	−05	−01	21	37	**76**	**73**
C4: Achievement Striving	−04	−06	29	15	07	13	−03	−11	**77**	**76**
C5: Self-Discipline	**−40**	−32	18	01	03	05	05	10	**68**	**73**
C6: Deliberation	−17	−21	−19	−05	03	−33	18	27	**74**	**55**

Note. Decimal points are omitted; loadings over .40 in absolute magnitude are given in boldface. N = Neuroticism; E = Extraversion; O = Openness to Experience; A = Agreeableness; C = Conscientiousness; K = Korean factor loadings; P = Portuguese factor loadings.

2 shows, all but four of the factor congruence coefficients reached this level.[4]

Finally, congruence coefficients were computed comparing the 15 pairs of the six translations. This provided a particularly stringent test of replicability, because minor deviations in either translation would have been compounded in comparing two translations. Congruence coefficients between the Korean and Portuguese structures shown in Table 1 were .98, .79, .89, .82, and .94, respectively, for N, E, O, A, and C factors—values that show considerable similarity but not identity. When examined by factor across all comparisons, all 15 congruence coefficients exceeded .90 for N and C factors, and all exceeded .88 for the O factor. Systematically lower values—as low as .50 between Japanese and Chinese

samples—were found for E and A factors; only one third of these congruence coefficients met the .90 criterion.

That result is not surprising, because E and A are known to be axes of the interpersonal circumplex (McCrae & Costa, 1989), in which traits are distributed in a circular order. The orientation of the axes that define this plane is thus somewhat arbitrary; in the case of the Japanese varimax structure, the factors labeled E and A might be better described as the alternative axes of

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[4] An alternative index of factor similarity—the coefficient of factor comparability (Everett, 1983)—was also calculated in the American sample, with very similar results. Only coefficients for E (.75) and A (.78) factors in the Japanese sample and the E factor (.89) in the Portuguese sample were less than .90, which is the usual criterion for factor replication.

Table 2
Coefficients of Factor Congruence With the American Normative Structure

Sample	Varimax-rotated principal component				
	N	E	O	A	C
German	.97	.96	.96	.97	.98
Portuguese	.98	.89	.89	.93	.96
Hebrew	.98	.92	.96	.94	.95
Chinese	.97	.93	.92	.93	.97
Korean	.97	.94	.94	.95	.96
Japanese	.94	.78	.92	.68	.92

Note. N = Neuroticism; E = Extraversion; O = Openness to Experience; A = Agreeableness; C = Conscientiousness.

Affiliation and Submission (McCrae, Zonderman, et al., 1996). The Portuguese E factor shown in Table 1 is also tilted slightly in the direction of Affiliation.

If differences are due entirely to an arbitrary rotation, it should be possible to match factors across languages by rotating them all to a common target. Orthogonal Procrustes rotation, using the American normative factor structure as the target, was therefore performed for all six samples, and they were compared with the American target and with each other.

Results showed that when rotation was guided by a hypothesized target, virtually identical structures were found in all seven samples. The median cross-language factor congruence coefficients were .96, .95, .94, .96, and .96 for N, E, O, A, and C, respectively, and only 2 of 105 coefficients failed to reach .90 (and those 2 were both .89). These values are far higher than one would expect to see by chance after Procrustes rotation (McCrae, Zonderman, et al., 1996).

Congruence coefficients can be calculated for variables as well as factors and evaluated for statistical significance. These coefficients take into account loadings on all five factors and, so, could be useful in identifying individual facets that show anomalous patterns of secondary loadings. But virtually no anomalous patterns were found: After Procrustes rotation, 177 of the 180 comparisons with the American structure were significant. The similarity of secondary loadings is illustrated in Table 3, which shows loadings for E3: Assertiveness. Although the functions of leaders may vary across cultures, it appears that in all seven cultures studied, individuals who assert themselves and readily speak out tend to be high in E and C and low in N and A.

Discussion

The cross-cultural and cross-language similarities in the structure of the NEO–PI–R seen in these samples are in many ways remarkable. More-or-less literal translations of items selected in American samples worked quite well in different cultures, without the need for extensive

revision or adaptation (although item analyses might still be desirable to refine the translated scales). The structure found in adult American volunteers was replicated in Japanese undergraduates and Israeli job applicants. A model of personality rooted in English-language trait adjectives could be meaningfully applied not only in a closely related language like German but also in such utterly distinct languages as Chinese and Korean.

Pulver, Allik, Pulkkinen, and Hämäläinen (1995) translated an early version of the NEO–PI–R into Finnish and Estonian and found evidence for the FFM in these two languages from another family: Uralic. (Paunonen, Jackson, Trzebinski, & Forsterling, 1992, also found evidence of the FFM in Finnish.) Thus, a very similar structure of personality can be found in at least six distinct language families that together include the native tongues of most of the earth's inhabitants. This is hardly an exhaustive sampling of language families (languages indigenous to the Americas and sub-Saharan Africa are notable omissions), but it clearly shows that the five-factor structure of personality in some sense transcends language and may indeed be universal.

Several qualifications to the claim that personality structure is a human universal must be noted. First, all the cultures sampled here are modern industrial countries with long traditions of literacy. Indeed, Hebrew and Chinese literatures predate the English language itself by many centuries. No studies of the FFM have been undertaken in preliterate societies; it is possible that traits may be differently configured in those cultures. Second, the fact that the five factors can be found in different cultures does not mean that they play the same role everywhere (Bond & Forgas, 1984). Individual differences in Agreeableness versus Antagonism may be of little consequence in societies in which interpersonal relationships are rigidly dictated by social roles, and variations in Conscientiousness may be unimportant in cultures that devalue personal ambition. Third, because no indigenous or emic measures of personality were included in these studies,

Table 3
Factor Loadings for Assertiveness in Seven Cultures

Sample	Procrustes-rotated principal component				
	N	E	O	A	C
American	-32	44	23	-32	32
German	-34	45	09	-43	31
Portuguese	-32	34	17	-47	17
Hebrew	-43	43	08	-32	31
Chinese	-20	57	11	-30	23
Korean	-34	54	17	-25	33
Japanese	-24	57	18	-38	21

Note. Decimal points are omitted. N = Neuroticism; E = Extraversion; O = Openness to Experience; A = Agreeableness; C = Conscientiousness.

the possibility remains that there are culturally unique factors of personality beyond N, E, O, A, and C.

It is also essential to recall that equivalence of factor structure does not in itself mean that different translations of an instrument are parallel forms. Raw scores may have very different interpretations in different cultures even if the translations accurately reflect the same trait constructs (Geisinger, 1994). Determining whether individuals in one culture are really more introverted, trusting, or diligent than those in another is an arduous task that requires the investigator to rule out a host of alternative explanations (e.g., item difficulty levels, self-presentational styles) for apparent differences.

Nevertheless, evidence that there is a common human structure of personality is good news for cross-cultural psychology. As Triandis (1980) noted, "Since establishing cultural differences is extremely difficult, it may well be good strategy for the present generation of cross-cultural psychologists to give top priority to the establishment of the generality of psychological laws" (p. 9). The general laws of personality structure suggest the range of traits that should be investigated—traits in the FFM—and encourage the use of imported or etic questionnaires as one component in cross-cultural research.

For many years anthropologists have studied how cultures provide distinctive solutions to universal problems of nutrition, procreation, and the division of labor. It now makes sense to ask them also to examine the unique cultural manifestations of common dimensions of personality. How is fearfulness expressed? What opportunities are there for social interaction and for solitude? How is intellectual curiosity channeled? How is aggression controlled? How is dutifulness defined and rewarded? Such questions could form the basis for renewed interest in one of the most venerable branches of anthropology, culture and personality (McCrae, Costa, & Yik, 1996).

The suggestion that personality structure is universal also raises questions for a number of other disciplines. Is universality due to a common genetic basis for personality (Loehlin, 1992)? What, if any, is the evolutionary significance of individual differences in traits (Tooby & Cosmides, 1990)? Do personality factors influence psychopathology, educational attainment, vocational interests, and political attitudes in similar ways in different cultures?—are applied psychologies also in some degree universal?

It took personality psychologists many decades to resolve questions about the number and nature of basic trait dimensions in English-speaking populations. Fortunately, it appears that that long struggle need not be repeated in every other culture. The FFM at least provides a solid beginning for understanding personality everywhere.

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