10.7: Paul Costa and Robert McCrae and the Five-Factor Model of Personality

Costa and McCrae followed in the footsteps of Eysenck, but they expanded slightly upon the number of second order factors. The result of their efforts became one the most widely respected perspectives on personality structure today: the **Five-Factor Model** of personality. Indeed, the Five-Factor Model has been so well researched, research that has supported and expanded the original conception, that Costa and McCrae believe it now deserves to be referred to as the **Five-Factor Theory** (see McCrae & Costa, 2003).

Paul Costa earned a Ph.D. in human development from the University of Chicago in 1970. He taught for 2 years at Harvard University, and then joined the faculty of the University of Massachusetts at Boston. In 1978 he joined the National Institute on Aging, a branch of the National Institutes of Health. Since 1985, he has been the Chief of the Laboratory of Personality and Cognition, Gerontology Research Center. He also holds appointments at the University of Maryland, Duke University Medical Center, The Johns Hopkins University School of Medicine, and the Georgetown University School of Medicine. Among numerous awards, he has been elected as a Fellow of the Gerontological Society of America, the American Psychological Association, and the Society of Behavioral Medicine. He has published hundreds of research articles, many of them in collaboration with Robert McCrae. McCrae earned his Ph.D. in personality psychology at Boston University in 1976. After teaching and conducting research at Boston University, the Veteran’s Administration Outpatient Clinic in Boston, and the University of Massachusetts at Boston, in 1978 he joined the Gerontology Research Center at the National Institute on Aging, where he continues to conduct research today. He is also a Fellow of the Gerontological Society of America, as well as a Fellow of the American Psychological Society and Division 20 (Adult Development and Aging) of the American Psychological Association (for more information visit the National Institute on Aging website at www.grc.nia.nih.gov).
The Five-Factor Theory of Personality

Costa and McCrae acknowledged the important role that Eysenck played when he identified extraversion and neuroticism as second-order personality factors, and for developing the Maudsley Personality Inventory, the Eysenck Personality Inventory, and the Eysenck Personality Questionnaire (the latter test, developed with his wife Sybil, was the first to include psychoticism; see S. Eysenck, 1997) as tools for measuring these factors. However, they disagreed with Eysenck regarding psychoticism. They initially proposed a different factor called openness. When they discussed this issue with Eysenck, he felt that openness might be the opposite pole of psychoticism, but McCrae and Costa believed the factors were significantly different (see Costa & McCrae, 1986). Since that time, Costa and McCrae have moved beyond the third factor of openness, and added two more second-order factors: agreeableness and conscientiousness (see Costa & McCrae, 1989; Costa & Widiger, 1994; McCrae & Allik, 2002; McCrae & Costa, 2003). Together, Costa and McCrae developed the NEO Personality Inventory (or NEO-PI) to measure neuroticism, extraversion, and openness, and later they developed the Revised NEO-PI, or NEO-PI-R, which also measures agreeableness and conscientiousness (see McCrae & Costa, 2003).

Table 1: The Five-Factor Model of Personality

<table>
<thead>
<tr>
<th>Factor</th>
<th>Low Score Description</th>
<th>High Score Description</th>
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<tbody>
<tr>
<td>Neuroticism</td>
<td>Calm, Even-tempered, Self-satisfied, Comfortable, Unemotional, Hardy</td>
<td>Worrying, Temperamental, Self-pitying, Self-conscious, Emotional, Vulnerable</td>
</tr>
<tr>
<td>Extraversion</td>
<td>Reserved, Loner, Quiet, Passive, Sober, Unfeeling</td>
<td>Affectionate, Joiner, Talkative, Active, Fun-loving, Passionate</td>
</tr>
<tr>
<td>Openness to Experience</td>
<td>Down-to-earth, Uncreative, Conventional, Prefer routine, Uncurious, Conservative</td>
<td>Imaginative, Creative, Original, Prefer variety, Curious, Liberal</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>Ruthless, Suspicious, Stingy, Antagonistic, Critical, Irritable</td>
<td>Softhearted, Trusting, Generous, Acquiescent, Lenient, Good-natured</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>Negligent, Lazy, Disorganized, Late, Aimless, Quitting</td>
<td>Conscientious, Hardworking, Well-organized, Punctual, Ambitious, Persevering</td>
</tr>
</tbody>
</table>

Taken from McCrae and Costa (2003).

The general descriptions of extraversion, neuroticism, openness, agreeableness, and conscientious are listed in Table 13.2. It is important to note that these five factors are distinct, and neither low nor high scores are necessarily better or 'good' or 'bad':

...all traits have passed the evolutionary test of survival, and from society’s point of view all kinds of people are necessary: those who work well with others and those who can finish a task on their own; those who come up with creative new ways of doing things and those who maintain the best solutions of the past. There are probably even advantages to found [sic] in Neuroticism, since a society of extremely easygoing individuals might not compete well with
other societies of suspicious and hostile individuals. Cultures need members fit for war as well as peace, work as well as play… (pp. 51-52; McCrae & Costa, 2003)

As a basis for studying personality, the Five-Factor Model has proven quite comprehensive. The five factors stand up well when measured with a variety of other tests and within other theoretical perspectives, including a thorough comparison with the list of human needs proposed by Henry Murray. Particularly important in psychology today, the Five-Factor Model has also stood up very well when examined across cultures, a topic we will examine in more detail in Connections Across Cultures.

Connections Across Cultures: The Big Five Across Cultures

In order to evaluate the cross-cultural application of the Five-Factor Model, Robert McCrae has suggested that we need to address the issue in three ways. Transcultural analyses look for personality factors that transcend culture. In other words, personality factors that are universal, or common to all people. Intracultural analyses look at the specific expression of traits within a culture. And finally, intercultural analyses compare trait characteristics between cultures (see Allik & McCrae, 2002). In 2002, McCrae and Allik published The Five-Factor Model of Personality Across Cultures, a collection of research in which a variety of investigators examined the applicability of the Five-Factor Model (FFM) in a wide variety of cultures. The various studies contained in this book examine personality structure, as well as the validity and generalizability of using the NEO-PI-R to measure personality, in some forty cultures spread across five continents. McCrae and Allik acknowledge that there is much more to personality than just traits, but the traits identified in the FFM appear to offer a robust cross-cultural foundation for understanding personality worldwide.

The potential validity of translating the NEO-PI-R and studying the FFM in different cultures is based on the idea that the most important factors in human interaction would be encoded in the languages of most, if not all, cultures (see Pervin, 1999). Given concerns regarding this lexical hypothesis and the challenges of translation, Peabody (1999) used trait descriptions with contrasting terms to help clarify matters in a study on the judgment of national character. He had judges from 12 different European countries, plus America, the Philippines, Japan, and China rate one another. Upon examining the data from a FFM perspective, Peabody found strong support for the utility of this model in cross-cultural studies. Other investigators have had significant success using the NEO-PI-R in direct translation. Rolland (2002) collected data from studies in which the NEO-PI-R was administered to people in cultures speaking 16 different languages (including Sino-Tibetan, Indo-European, Uralic, Hamito-Semitic, and Austronesian languages, and one unclassified language [Korean]). Overall, he confirmed the generalizability of the personality structure identified by the FFM in these varied cultures. Similar favorable results pertaining to personality structure have been identified with both adults and adolescents in Czeck, Polish, and Slovak groups (Hrebickova, et al., 2002) and amongst the Shona in Zimbabwe (Piedmont, et al., 2002), as well as for the relationship between personality and emotion amongst Canadian, Spanish, Chinese, Japanese, and Korean subjects (Yik, et al., 2002) and the relationship between personality and cultural goals in Americans and Vietnamese (Leiningeter, 2002). These studies, as well as numerous others that are not mentioned, provide substantial support for the consistency of the FFM across a wide variety of cultures, at least as far as personality structure is concerned. However, it remains unclear whether the scores obtained from two different cultural groups are equivalent (see Poortinga, Van de Vijver, & Van Hemert, 2002). In other words, if Culture A scored higher than Culture B on, say, agreeableness, it may be that the translation used for Culture A is more responsible for the result than an actual difference between Cultures A and B. Further research will be necessary in order to address issues such as this.
Despite the numerous studies that support the cross-cultural application of the FFM, there are psychologists, generally favorable to the FFM, who nonetheless emphasize caution. The fundamental question is whether or not trait descriptions are how people in other cultures describe another person. While it is true that using abstract trait names is common practice in American culture, in other cultures, such as India and China, it is more common to describe people in terms of context dependent actions. To fit such data into a FFM requires some manipulation, which leaves the validity of the work open to some debate (see Pervin, 1999). However, when comparing Chinese and American students, the FFM does provide an adequate measure of each group’s stereotypes regarding one another (Zhang, et al., 1999). What is clear is the need for continued research on cross-cultural perspectives, as well as a need for cross-cultural training programs. In that regard, Brislin (1999) has offered ways in which the FFM can be used as one basis for developing such programs, in part by telling us something about each person in a cross-cultural training program and, therefore, which type of program might work best for them (see also McCauley, Draguns, & Lee, 1999). Whether one favors the FFM or some other model of personality structure, the importance of cross-cultural studies is clear:

Human nature cannot be independent of culture. Neither can human personality. Human beings do share certain social norms or rules within their cultural groups. More than 2000 years ago, Aristotle held that man is by nature a social animal. Similarly, Xun Kuang (298-238 B.C.), a Chinese philosopher, pointed out that humans in social groups cannot function without shared guidance or rules. Therefore, each culture or cultural group establishes its own norms. Constantly, these norms and rules are connected with the behavior and personality of members within a culture and society. (pg. vii; Lee, McCauley, & Draguns, 1999)

In proposing a Five-Factor Theory of personality, McCrae and Costa addressed the nature of personality theories themselves:

A theory of personality is a way of accounting for what people are like and how they act; a good theory explains a wide range of observations and points researchers in the right direction for future research. Freudian theory pointed researchers toward the study of dreams, but decades of research have yielded very little by way of supportive evidence…Trait theory pointed researchers toward general styles of thinking, feeling, and acting, and has resulted in thousands of interesting and useful findings. That is why most personality psychologists today prefer trait theory to psychoanalysis…But…there is more to human personality than traits. (pp 184-185; McCrae & Costa, 2003)

They propose that there are three central components to personality: basic tendencies (which are the five personality factors), characteristic adaptations, and self-concept (a highly adapted and extensively studied form of characteristic adaptation). The basic tendencies interact with three peripheral components that mark the interface with systems outside personality. There are the biological inputs to the basic tendencies, the external environment, and objective biography (all that a person does and experiences). Connecting all of these components are dynamic processes, such as perception, coping, role playing, reasoning, etc. Although this theory is newer, it does account for one of the most important issues challenging trait theories in general: how does one account for the general consistency of traits, yet the potential for, and occasional observation of, change in personality? Simply, the basic tendencies are consistent, whereas the characteristic adaptations are subject to change, both as a result of dramatic environmental influences and due to changes associated with aging (McCrae & Costa, 2003).
Consistency Across the Lifespan

In over 25 years of teaching, it has been my experience that most college students *want* to believe that adult personality can readily change. Likewise, most psychologists, particularly clinical psychologists helping people to change their dysfunctional lives, *want* to believe that personality can change. However, trait theorists have repeatedly shown that traits are highly resistant to change once adulthood has been reached (see, e.g., Costa & McCrae, 1989; McCrae & Costa, 2003). This is particularly true for Neuroticism, Extraversion, and Openness, for both men and women, and for Blacks and Whites. While Costa and McCrae acknowledge that individuals sometimes change dramatically, as a general rule, consistency is clearly more important. They also suggest that this should be an opportunity for optimism. As individuals age, they should not fear becoming a different person, such as someone isolated or depressed. If, however, an individual of younger age is isolated, depressed, or suffers from some other psychological malady, they should also realize that time or aging alone is not likely to change them, but rather, psychotherapy may be a desirable and effective course of action. Once again, Costa & McCrae emphasize the newness of these theories, and suggest the need for systematic prospective studies of the Five-Factor Theory over the entire adult lifespan. Fortunately, the NEO-PI-R provides the tool necessary to evaluate the Five-Factor Theory throughout life and in different cultures. Given the steady increase in life expectancy in Western societies, and the growing percentage of elderly people within our society, this research is likely to become a priority in the field of personality.