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AUTHOR	Howard, Pierce J.; Howard, Jane M.
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ABSTRACT

The first section of this monograph shows how, by analyzing the language of personality descriptors, researchers have identified five correlated groups of behaviors. It finds that the most popular formulation of the Five-Factor Model (FFM) is that of Costa and McCrae (1992) and that their nomenclature can be adapted to come up with a version for professional development. These five factors are described: Negative Emotionality, Extraversion, Openness, Agreeableness, and Conscientiousness. Six facets identified for each of these five factors are described. Section 2 presents how the FFM may be used in fostering individual development. It covers guidelines for use of FFM test scores in professional development, including the following: awareness of small interaction effects between all five personality dimensions and aging; the social context of the Big Five; when to use factors and when to use facets; and common themes among the various facets and factors. It also addresses using the FFM in individual coaching and counseling, in a classroom setting, and in personnel selection. Section 3 presents ways in which the Big Five model can be used in working with teams. It looks at how various kinds of relationships--from two-person teams to larger work teams--can benefit from taking time to study the effects of similarities and differences in personality traits among the people in relationships. Contains 21 references. (YLB)

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THE BIG FIVE QUICKSTART:

AN INTRODUCTION TO THE FIVE-FACTOR MODEL OF PERSONALITY FOR HUMAN RESOURCE PROFESSIONALS

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Pierce J. Howard, Ph.D., and Jane M. Howard, M.B.A.
Center for Applied Cognitive Studies (CentACS)
Charlotte, North Carolina

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AN INTRODUCTION TO THE FIVE-FACTOR MODEL OF PERSONALITY FOR HUMAN RESOURCE PROFESSIONALS

Pierce J. Howard, Ph.D., and Jane M. Howard, M.B.A.
Center for Applied Cognitive Studies (CentACS), Charlotte, North Carolina

Section One:
BACKGROUND AND THEORY OF THE FIVE-FACTOR MODEL

Get ready, trainers and consultants! The personality paradigm is shifting. For three decades, the training community has generally followed the assumptions of *the Myers-Briggs Type Indicator (MBTI)* (Myers & McCaulley, 1985). These assumptions included:

- a four-dimension model,
- bimodal distribution of scores on each dimension,
- sixteen independent types,
- the concept of a primary function determined by Judger/Perceiver preference, and
- a grounding in the personality theory of Carl Jung (1971).

The emerging new paradigm is not a radical departure from the *MBTI*, but rather more of an evolution from it. But, the new paradigm is sufficiently different from the old one to require a significant shift in thinking. For example, the new paradigm involves:

- *five* dimensions of personality,
- a *normal distribution* of scores on these dimensions,
- an emphasis on individual personality *traits* (the type concept is gone),
- preferences indicated by *strength of score*, and
- a model *based on experience*, not theory.

THE SEARCH FOR THE BEST METAPHOR

Personality theories, or models, are metaphors for describing something which is intrinsically indescribable--the human personality. For example, Robert Ornstein (1993, pp. 2-3) writes, "Ideas for personality classifications...provide everyone from small children to clinical psychiatrists with a routine for classifying people, one that helps us make sense of ourselves and others. But that's all they do, since one system doesn't map on to the other.... We need an explanation to get through the day, and that is what most personality-typing systems provide."

All language, in fact, is metaphor--it is a process by which we express one thing--the complex fabric of people and their environments--in terms of another--language. We shall never know the entire truth--we can only talk about it. All our language is *about* what we experience, but it is not the experience itself. Why, even our scientific instruments can only approximate a description of the true nature of things. Again, Ornstein says that even positron emission tomagraphy (PET) scans are not a "'window' to the mind, but merely...a metaphor." PET scans and personality models are both metaphors for describing the person.

Certainly, some metaphors are more vague than others. A PET scan is less vague than a paper and pencil questionnaire like the *MBTI*. The history of the study of personality has been one of minimizing vagueness. Just as the theory of Carl Jung reduced the vagueness of the theory of humors (which spoke of phlegmatics, melancholics, sanguines, and cholerics), so Jung's theory will be replaced by a model of personality which is yet less vague. In a sense, the history of intellectual activity is the story of our efforts to find the "source" metaphor from which all other metaphors are derived. Just as Latin was the parent, or source, language of all the romance tongues (such as French and Italian), so all of our personality metaphors (such as Freud's and Jung's) must have a parent, or source, metaphor that encompasses all the truths of the individually derived personality metaphors. There is some truth in Jung's theory, Freud's theory, and others' theories, but the human personality fabric is woven from a far more complex set of fibers than any one theory contains.

LANGUAGE, NOT THEORY, IS THE PARENT METAPHOR

Just as all cloths are woven from fibers, so all theories are composed of language. Language is the one ingredient that all theories have in common. So, it is from language itself, and not theories, that we must extract the source metaphor for describing personality. This was the insight that propelled Tupes and Christal during the 1950's into the research that led to what we know today as the Five-Factor Model (FFM), or the Big Five theory.

Allport and Odbert (1936) were the first researchers to identify the trait-descriptive words in the English language. Their compendium of 4,500 words has been the primary starting point of language-based personality trait research for the last sixty years. Much of the early research, however, was seriously flawed. Raymond Cattell's work was typical of the serious limitations of lexical studies done in the 1940's. Using modern computers, subsequent replications of his original studies done by hand or by early computers revealed calculation errors and, therefore, invalidated many of his findings.

The first evidence that flaws existed in Cattell's work was revealed by Fiske (1949), who suggested that five, not sixteen, factors accounted for the variance in personality trait descriptors. But Fiske stopped there, making no big deal of his finding and not himself quite sure what to make of his results. From 1954-1961, two Air Force personnel researchers, Tupes and Christal (1961), became the first researchers to make use of Allport and Odbert's work. Building on Cattell and Fiske, Tupes and Christal thoroughly established the five factors we know today. Sadly, they published their results in an obscure Air Force publication that was not read either by the psychology or academic communities.

Then, in the late 1950's, Warren Norman at the University of Michigan learned of Tupes and Christal's work. Norman (1963) replicated the Tupes and Christal study and confirmed the five-factor structure for trait taxonomy. For bringing this discovery into the mainstream academic psychology community, it became known, understandably but inappropriately, as "Norman's Big Five." Rightly, it should be Tupes and Christal's Big Five. A flurry of other personality researchers confirmed Norman's findings.

But, even within the academic bastion of truth, politics prevailed. The influence of behaviorists, social psychologists and an especially withering attack by Walter Mischel (1968), led to the suppression of trait theory During the 1960's and 1970's traits were out of favor--only behaviors and situational responses were allowed. However, radical behaviorism began to fall from its pedestal in the early 1980's with the rise of cognitive science. Cognitive scientists proclaimed that there was more to the human mind than stimulus and response (Howard, 1994). Throughout the 1980's and continuing through the present, a plethora of personality researchers have established the Five-Factor Model as the basic paradigm for personality research. Four excellent summaries of this research tradition are Goldberg (1993), Digman (1990), John, Angleitner, & Ostendorf (1988), and McCrae (1992).

THE BIG FIVE DEFINED

Each of the Big Five dimensions is like a bucket that holds a set of traits that tend to occur together. The definitions of the five super factors represent an attempt to describe the common element among the traits, or sub-factors, within each "bucket." The most commonly accepted buckets of traits are those developed by Costa and McCrae (1992). Their nomenclature was developed for an academic and clinical population. For use in the business community, some of the terms need to be modified. Specifically, the term "Neuroticism" needs to be changed to "Negative Emotionality." Imagine an executive being called "High Neuroticism"! In this section, we will present this business version for use in professional development activities.

THE NEGATIVE EMOTIONALITY FACTOR

Negative Emotionality refers to the number and strength of stimuli required to elicit negative emotions in a person. More resilient persons are bothered by fewer stimuli in their environment, and the stimuli must be strong in order to bother them. More reactive persons are bothered by a greater variety of stimuli, and the stimuli do not have to be as strong in order to bother them.

Costa and McCrae have identified six correlated traits which comprise this negative emotionality "bucket." They are listed and defined in Table 1.

Levels of Negative Emotionality

At one extreme of the negative emotionality continuum, we have the *Reactive*, who experiences more negative emotions than most people and who

reports less satisfaction with life than most people. That is not meant to place a value judgment on reactives, however, as the susceptibility to negative emotions and discontent with life provides the basis for shaping extremely important roles in our society, such as social scientists, customer service professionals, and academicians. At higher intellectual and academic levels, extreme reactivity (high negative emotionality) interferes with performance.

Table 1. The Six Facets of Negative Emotionality (adapted from Costa & McCrae, 1992) with Anchors for the Two Extremes of the Continuum

Six Facets of Negative Emotionality:	RESILIENT (R-)	REACTIVE (R+)
Worry	Relaxed; calm	Worrying; uneasy
Anger	Composed; slow to anger	Quick to feel anger
Discouragement	Slowly discouraged	Easily discouraged
Self-Consciousness	Hard to embarrass	More easily embarrassed
Impulsiveness	Resists urges easily	Easily tempted
Vulnerability	Handles stress easily	Difficulty coping

On the other extreme of the negative emotionality continuum, we have the *Resilients*, who tend to experience life on a more rational level than most people and who appear rather impervious sometimes to what's going on around them. We think, for example, of our choir director who didn't miss a beat during a dress rehearsal when the podium on which he was standing collapsed forward. He simply placed his feet at angles like a snow plow and kept his baton moving. Of course, all the singers and instrumentalists broke out laughing at this classic example of non-reactivity. He's unflappable. And that extreme is also the foundation for many valuable social roles--from air traffic controllers and airline pilots to military snipers, finance managers, and engineers.

Of course, along the negative emotionality continuum from reactive to resilient is the vast middle range of what we call *Responsives*, who are a mixture of qualities characteristic of resilients and reactives. Responsives are more able to turn behaviors from both extremes on and off, calling on what seems appropriate to the situation. A responsive, however, is not typically able to maintain the calmness of a resilient for as long a period of time, nor is a responsive typically able to maintain the nervous edge of alertness of a reactive (as, for example, would be typical of a stock trader during a session).

THE EXTRAVERSION FACTOR

Extraversion refers to the number of relationships with which one is comfortable. High extraversion is characterized by a larger number of relationships and a larger proportion of one's time spent in enjoying them. Low extraversion is characterized by a smaller number of relationships and a smaller proportion of one's time spent in pursuing those relationships. Costa and McCrae's six facets of extraversion are described in Table 2.

Table 2. The Six Facets of Extraversion (adapted from Costa & McCrae, 1992) with Anchors for the Two Extremes of the Continuum

Six Facets of Extraversion :	INTROVERT (E-)	EXTRAVERT (E+)
Warmth	Reserved; formal	Affectionate; friendly, intimate
Gregariousness	Seldom seeks company	Gregarious, prefers company
Assertiveness	Stays in background	Assertive; speaks up; leads
Activity	Leisurely pace	Vigorous pace
Excitement-Seeking	Low need for thrills	Craves excitement
Positive Emotions	Less exuberant	Cheerful; optimistic

Levels of Extraversion

On the one hand, the *Extravert* tends to exert more leadership, to be more physically and verbally active, and to be more friendly and outgoing around others than most people tend to be. This extraverted profile is the foundation of many important social roles, from sales, to politics, to the arts and the softer social sciences.

On the other hand, the *Introverts* tend to be more independent, reserved, steady, and more comfortable with being alone than most people are. This introverted profile is the basis of such varied and important social roles as production managers and the harder physical and natural sciences.

In between these two extremes are the *Ambiverts*, who are able to move comfortably from outgoing social situations to the isolation of working alone. The stereotypical ambivert is the Player-Coach, who moves upon demand from the

leadership demands of Coach to the personal production demands of the Player.

THE OPENNESS FACTOR

Openness refers the number of interests to which one is attracted and the depth to which those interests are pursued. High openness refers to a person with relatively more interests and, consequently, relatively less depth within each interest, while low openness refers to a person with relatively few interests and relatively more depth in each of those interests.

Costa and McCrae identify six facets of openness, which are described below in Table 3.

Levels of Openness

On the one hand, the *Explorer* has broader interests, has a fascination with novelty and innovation, would generally be perceived as liberal, and reports more introspection and reflection. Explorers are not unprincipled, but they tend to be open to considering new approaches. The explorer profile forms the basis for such important social roles as entrepreneurs, architects, change agents, artists, and theoretical scientists (social and physical).

Table 3. The Six Facets of Openness (adapted from Costa & McCrae, 1992) with Anchors for the Two Extremes of the Continuum

Six Facets of Openness:	PRESERVER (O-)	EXPLORER (O+)
Fantasy	Focuses on here and now	Imaginative; daydreams
Aesthetics	Uninterested in art	Appreciates art and beauty
Feelings	Ignores and discounts feelings	Values all emotions
Actions	Prefers the familiar	Prefers variety; tries new things
Ideas	Narrower intellectual focus	Broad intellectual curiosity
Values	Dogmatic; conservative	Open to reexamining values

On the other hand, the *Preserver* has narrower interests, is perceived as more conventional, and is more comfortable with the familiar. Preservers are perceived as more conservative, but not necessarily as more authoritarian. The preserver profile is the basis for such important social roles as financial managers, performers, project managers, and applied scientists.

In the middle of the continuum lies the *Moderate*. The moderate can explore the novel with interest when necessary, but too much would be tiresome; on the other hand, the moderate can focus on the familiar for extended periods of time, but eventually would develop a hunger for novelty.

This trait is not really about intelligence, as explorers and preservers both score well on traditional measures of intelligence, but it is about creativity. Openness to new experience is an important ingredient of creativity.

THE AGREEABLENESS FACTOR

Agreeableness refers to the number of sources from which one takes one's norms for right behavior. High agreeableness describes a person who defers to a great many norm sources, such as spouse, religious leader, friend, boss, or pop culture idol. Low agreeableness describes one who, in the extreme, only follows one's inner voice. High agreeableness persons will march to the drumbeat of many different drummers, while low agreeableness persons march only to their own drumbeat.

In defining the components of agreeableness, Costa and McCrae list six facets, which are presented in Table 4.

Table 4. The Six Facets of Agreeableness (adapted from Costa & McCrae, 1992) with Anchors for the Two Extremes of the Continuum

Six Facets of Agreeableness:	CHALLENGER (A-)	ADAPTER (A+)
Trust	Cynical; skeptical	See others as honest & well-intentioned
Straightforwardness	Guarded; stretches truth	Straightforward, frank
Altruism	Reluctant to get involved	Willing to help others
Compliance	Aggressive; competitive	Yields under conflict; defers
Modesty	Feels superior to others	Self-effacing; humble
Tender-Mindedness	Hardheaded; rational	Tender-minded; easily moved

Levels of Agreeableness

At the one end of the continuum, the *Adapter* is prone to subordinate personal needs to those of the group, to accept the group's norms rather than insisting on his or her personal norms. Harmony is more important to the Adapter than, for example, broadcasting one's personal notion of truth. Galileo, in recanting his Copernican views before the Roman

Inquisition, behaved like an adapter. The adapter profile is the core of such important social roles as teaching, social work, and psychology.

At the other end of the continuum, the *Challenger* is more focused on his or her personal norms and needs rather than on those of the group. The challenger is more concerned with acquiring and exercising power. Challengers follow the beat of their own drum, rather than getting in step with the group. The challenger profile is the foundation of such important social roles as advertising, managing, and military leadership.

In the middle of the continuum is the *Negotiator*, who is able to move from leadership to followership as the situation demands. Karen Horney described the two extremes of this trait as "moving toward people" (adapter) and "moving against people" (challenger). The former, known as tender-minded, in the extreme become dependent personalities who have lost their sense of self. The latter, known as tough-minded, in the extreme become narcissistic, antisocial, authoritarian, or paranoid personalities who have lost their sense of fellow-feeling. In one sense, this trait is about the dependence (or altruism) of the adapter, the independence (or egocentrism) of the challenger, and the interdependence (or situationalism) of the negotiator.

THE CONSCIENTIOUSNESS FACTOR

Conscientiousness refers to the number of goals on which one is focused. High conscientiousness refers to a person who focuses on fewer goals and exhibits the self-discipline associated with such focus. Low conscientiousness refers to one who pursues a larger number of goals and exhibits the distractibility and spontaneity associated with diffuse focus.

Table 5 lists the six facets which Costa and McCrae associate to form the conscientiousness factor.

Levels of Conscientiousness

On the one hand, the *Focused* profile exhibits high self-control resulting in consistent focus on personal and occupational goals. In its normal state, the focused person is characterized by academic and career achievement, but when focusedness turns extreme, it results in workaholism. The focused person is difficult to distract. Such a profile is the basis for such important social roles as leaders, executives, and, in general, high achievers.

On the other hand, the *Flexible* person is more easily distracted, is less focused on goals, is more hedonistic, and is generally more lax with respect to goals. The flexible is easily seduced from the task at hand by a passing idea, activity, or person; i.e., they have weak control over their impulses. Flexibles do not necessarily work less than focused people, but less of their total work effort is goal-directed. Flexibility facilitates creativity, inasmuch as it remains open to possibilities longer without feeling driven to closure and moving on. This profile is the core of such important social roles as researchers, detectives, and consultants.

Table 5. The Six Facets of Conscientiousness (adapted from Costa & McCrae, 1992) with Anchors for the Two Extremes of the Continuum

Six Facets of Conscientiousness :	FLEXIBLE (C-)	FOCUSED (C+)
Competence	Often feels unprepared	Feels capable and effective
Order	Unorganized; unmethodical	Well-organized; neat; tidy
Dutifulness	Casual about obligations	Governed by conscience; reliable
Achievement Striving	Low need for achievement	Driven to achieve success
Self-Discipline	Procrastinates; distracted	Focused on completing tasks
Deliberation	Spontaneous; hasty	Thinks carefully before acting

Towards the middle of this continuum is the *Balanced* person, who finds it easier to move from focus to laxity, from production to research. A balanced profile would make an ideal manager for either a group of flexibles or a group of focuseds, providing just enough of the opposite quality to keep flexibles reasonably on target without alienating them, and to help focused people relax periodically to enjoy life a little.

RELATION OF THE BIG FIVE TO THE *MBTI*/JUNG MODEL

Perhaps one of the reasons for the popularity of the *MBTI* has been that it closely resembles the empirically derived Five-Factor Model. Although the *MBTI* derives from theory and not experience, apparently Carl Jung and the *MBTI* test developers were closely attuned to human experience when defining their four dimensional model. The transition, then, from using the *MBTI* to using the FFM is a relatively easy one. McCrae and Costa (1989) in their watershed article--"Reinterpreting the *Myers-Briggs Type Indicator* From the Perspective of the Five-Factor Model of Personality"--clearly

highlight how the *MBTI* is both supported by FFM research and corrected by it. The principal points they make are:

1. The Judgment dimension (Thinking vs. Feeling) is unstable because of its failure to separate negative emotionality from agreeableness. The concept of thinking vs. feeling does not fit isomorphically to the FFM. In order to measure the thinking/feeling supertrait, one would need to piece together several different facet scores from among the thirty facets of the FFM (as defined by Costa and McCrae).

2. Because the distribution of factor scores is normal and not bimodal, the practice of dichotomizing respondents, for example, into extraverts and introverts, is unjustified. McCrae and Costa prefer speaking of degrees of extraversion. For convenience's sake, we speak of three levels, or regions, in which one might score--extraversion, ambiversion, and introversion.

3. The Judger/Perceiver preference does not identify one's primary. In fact, assuming, as sound psychometric practice requires, that one's primary function (from among sensing, intuiting, thinking, and feeling) would be the function with the highest score, then the J/P preference picks the highest function score at a rate no better than chance.

4. The type concept has no validity. Assuming the integrity of the sixteen four-letter types, one would expect to find consistent correlations among the types and other behavioral measures. This is not the case. Rather than reporting a five-letter type, then, the FFM simply reports five trait scores. Certainly, many behaviors are explained by the combinative effect of two or more FFM traits, such as authoritarian behavior being associated with high negative emotionality, low openness, and low agreeableness. We call these behaviors with multi-trait explanations "themes" or interactive effects. The second and third sections in this monograph will discuss such thematic behaviors.

5. Introspection, or reflection, is not associated with introversion, but rather with the trait called intuition (by the *MBTI*) or openness (by the FFM).

6. The judgment/perception scale does not measure one's decisiveness, but rather appears to measure one's need for structure.

7. The definitional problems with the thinker/feeler dimension are many, but they are resolved by adopting the two new dimensions, negative emotionality and agreeableness. A preference for reason and logic belongs to the negative emotionality (low) bucket, while a preference for harmony belongs to the agreeableness (high) bucket.

Because of the empirical origins of the FFM, no single theory is best supported by its structure. On the other hand, because the FFM is essentially an attempt to find the "lowest common denominators" among personality words across all languages, it is uniquely able to serve as a source for measuring the constructs defined by most other personality tests. By being in possession of FFM scores, for example, one could derive an individual's profile using such models as the FIRO, LIFO, AVA, MBTI, DISC, Holland Hexagon, and Social Styles Inventory, as well as such popular concepts as leadership style, conflict management style, and attributional style.

CONSENSUS IN THE PSYCHOLOGICAL COMMUNITY?

In the strictest sense of the word, consensus requires universal agreement, as in a unanimous vote. Consensus within a group implies that all within the group agree with a particular point. While many have claimed that consensus exists within the psychological community on the FFM as the research paradigm for the foreseeable future, certainly not 100% of personality researchers would agree. Hans Eysenck (1991), for one, holds out for a three-factor solution. Hogan (1986) holds out for a six-factor solution. But what is different about the personality research community today versus ten years ago is that there is a clear trend towards embracing a single model--the FFM--as the research paradigm to follow. Up until ten years ago, the personality research community was fragmented, with Freud, Erikson, Horney, Jung, Murray, Eysenck, and others all claiming the best model. All were partially right, but only the FFM has arms big enough to include them all.

But while unanimity among personality researchers is still beyond our grasp, one can sense the excitement among researchers in the recent literature:

> A series of research studies of personality traits has led to a finding consistent enough to approach the status of law.
> --Digman & Inouye (1986)

> The comprehensive analyses in Dutch have provided so far the strongest cross-language evidence for the Big Five.
> - John, Angleitner, & Ostendorf (1988)

> The past decade has witnessed a rapid convergence of views regarding the structure of the concepts of personality. --Digman (1990)

> The major aim of this article has been to provide sufficient evidence to alleviate any qualms about the generality of the Big-Five structure.
>
> --Goldberg (1990)

> We believe that the robustness of the 5-factor model provides a meaningful framework for formulating and testing hypotheses relating individual differences in personality to a wide range of criteria in personnel psychology, especially in the subfields of personnel selection, performance appraisal, and training and development.
>
> --Barrick & Mount (1991)

> I again, anticipate more extensive use by tomorrow's practitioners of new generations of inventories, for example, the NEO Personality Inventory developed by Costa and McCrae (1988) for the assessment in healthy individuals of something akin to today's five basic dimensions of character and personality that have evolved empirically from a line of inquiry first suggested by Galton a century ago.
>
> --Matarazzo (1992)

> The past decade has witnessed an electrifying burst of interest in the most fundamental problem of the field--the search for a scientifically compelling taxonomy of personality traits. More importantly, the beginning of a consensus is emerging about the general framework of such a taxonomic representation.
>
> --Goldberg (1993)

While we do not mean to overwhelm or steamroll you by this surge of interest in the FFM, we do hope that you will catch some of the excitement. It may be helpful for us to explain how we converted four years ago to the FFM. Pierce was researching his book on practical applications of brain research (Howard, 1994). Each chapter of the book attempted to find the most current brain research in a particular field (e.g., aging, sleep, memory, intelligence, gender, motivation, etc.) and present how the findings might be used in everyday life. While researching the chapter on personality, he encountered the groundswell of support for the FFM described earlier. This presented a dilemma for us. We had been using the *MBTI* for team building and professional development activities, as well as the *16-PF* for indiv dual coaching and counseling. According to the research literature, we were using instruments with less than desirable validity and reliability. Not only that, but improved instrumentation was also available in the form of Costa and McCrae's *NEO* tests:

We should note that other instruments for measuring the Big Five are available; see discussion of them in Stephen Briggs' article "Assessing the Five-Factor Model of Personality Description" in McCrae, 1992. We prefer the *NEO* series of tests because 1) both short and long forms are available, and 2) most FFM researchers point to Costa and McCrae's test as the research standard.

Pierce had no choice but to write about the *NEO* and the FFM in his book. So, as professional management consultants, were we to preach one thing and continue to do another, or were we to make our practice consistent with our preaching? We knew that the only responsible choice was to fully embrace the FFM in both the book and in our practice. It was a costly decision--retooling is always costly, and is a major reason why many people do not embrace new and better paradigms. But it would have been more costly in the long run if we had not made the change. For a while, it was a lonely, tough decision. All our colleagues were marching to a different drum. There were no applications materials available. We had to develop all our own exercises, forms, games, etc., to use in feedback and training sessions. Now that the process is complete, we know that it has been worth it. Our clients know that the FFM is a significantly improved approach to discussing individual differences. It is not just a new twist on an old theme, it is a new paradigm. And, we have built on the inconvenience of having to develop all of our own applications materials--we have a book coming out soon and have developed a certification program to train consultants and trainers to use the FFM!

WHERE WE GO FROM HERE

As fellow human resource professionals, we encourage you to study the FFM. The academic psychology community is now ahead of the human resource development community. We must play catch-up. The Big Five will influence most areas of our work. Since 1991 we have been using the NEO tests in many areas of our professional practice:

- team building
- selection
- job analysis
- training design
- customer service
- management and professional development
- coaching and counseling
- career development
- leadership development
- conflict management

In the next two sections of this monograph, we will describe how we use the FFM in both individual and team development. We suggest that, in order to get the most out of this reading, you administer to yourself both the short and long forms of the *NEO*

tests and read some more from the now steadily growing literature. Here is a reasonable plan:

1. Order a *NEO-FFI* and *NEO-PI-R* specimen set (includes self-scoring tests and manual) from the Center for Applied Cognitive Studies (CentACS) in Charlotte, NC. The *NEO* tests are Level B products (requires B.A. in psychology or related field plus coursework in testing to qualify for purchasing). Call 1-800-BIG-5555 to arrange for your specimen set. Be sure to ask to be added to CentACS' mailing list.

2. Order McCrae and Costa's *Personality in Adulthood,* their excellent summary of the development of the FFM published in 1990 by Guilford Press, 72 Spring Street, New York 10012. (Also available from CentACS)

3. Call the Center for Applied Cognitive Studies and order a sample set of applications materials (includes *The Big Five Workbook,* feedback forms, and assorted learning materials) at 1-800-BIG-5555, or fax request to 704-331-9408, or E-mail request to centacs@cybernetics.net.

4. To engage in professional dialog about FFM theory and applications, send E-mail to centacs@cybernetics.net or follow the bulletin board "alt.psychology.personality" on the Internet/Usenet.

5. For training in the use of the FFM in professional development settings, contact the authors at the Center for Applied Cognitive Studies. A public, four-day certification program is offered several times annually.

Some half dozen years ago, an intern with whom we were working looked at his results on the *MBTI.* All his scores were just at zero on each of the scales. He commented forlornly, "Does this mean that I don't have a personality?" I wish he were back with us today, looking at his FFM results. He would never have asked that question. Welcome, in advance, to the new paradigm of the Big Five.

Section Two:

USING THE BIG FIVE WITH INDIVIDUALS

In the first section, we showed how, by analyzing the language of personality descriptors, researchers have identified five correlated groups of behaviors. The most popular formulation of the FFM is that of Costa and McCrae (1992) as measured by their *NEO* tests (short form=*NEO-FFI,* long form=*NEO-PI-R*). For the use of human resource professionals, the authors of this series have adapted Costa and McCrae's nomenclature to come up with the professional development version (as opposed to the clinical or academic version) of the FFM, which is presented in Table 6 (on page 11).

The purpose of this section is to present how the FFM may be used in fostering individual development, whether through individual coaching and counseling, classroom training, or as a part of the personnel selection process.

GUIDELINES FOR USING THE FFM IN PROFESSIONAL DEVELOPMENT

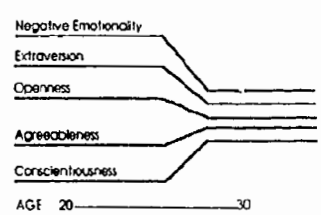
While this monograph is no substitute for a university course in Tests and Measurements or for the *NEO* test manual (Costa & McCrae, 1992), we nonetheless feel professionally bound to provide some guidelines for the use of FFM test scores.

STABILITY OVER TIME

In their extensive research conducted through the Baltimore Longitudinal Study of Aging, McCrae and Costa (1990) have identified small interaction effects between all five personality dimensions and aging. Namely, from late adolescence through young adulthood (i.e., roughly from 20 to 30 years old), agreeableness (A) and conscientiousness (C)

Figure 1. Stability and Change in the Five-Factor Model

From age 20 to age 30, negative emotionality, extraversion, and openness tend to decrease, while agreeableness and conscientiousness tend to increase.



both tend to increase, while negative emotionality (N), extraversion (E), and openness (O) all three tend to decrease. This relationship is portrayed in Figure 1. Norms which reflect this relationship are

available for both college age people and adultsover 30 (Costa & McCrae, 1992). One should be aware of this relationship when presenting test feedback to individuals. When younger persons have high N, E, or O, or low A or C scores, they should be advised of the natural tendency of these scores to moderate somewhat over the next ten years. On the other hand, persons with extremely low N, E, or O or high A or C scores should be concerned with how to live comfortably with such extremes which could, in fact, become more extreme over time. For example, a twenty-year old with extremely high C stands a good chance of becoming a workaholic, while another twenty-year old with low C stands a good chance of becoming somewhat more goal-focused.

THE SOCIAL CONTEXT OF THE BIG FIVE

Two of the five factors are especially relevant to the quality of one's relationships--extraversion and agreeableness. For two individuals in a relationship, extremely divergent scores on these two dimensions tend to intensify the effects of other differences which under different circumstances might not be so noticeable. For example, a couple might include one partner who is A+ (high A) and O+, and the other partner is A- (low A) and O-. In this case, the A- partner may have trouble accepting the other's O+. On the other hand, a couple where both score A+ but diverge on the O dimension should tend to be more accepting of each other's extremes on the O factor. This translates, for example, into whether a liberal and a conservative can live in the same household or work effectively on the same team. If one or both is A-, expect fireworks. If both are A or A+, expect co-existence.

FACTORS VERSUS FACETS: WHEN TO USE WHICH

Paul Valery once wrote that "seeing is forgetting the name of what one sees." Labels can never take the place of the real thing. Just as one cannot get away with just talking about love without actually behaving in a loving manner (gifts, cards, consideration, humor, support, affection, etc.), so one cannot understand and cope with the world's cast of millions by simply labeling them properly with the Big Five domain names. The five factor names are an introduction to a much wider realm of discovery. Just as no two sets of fingerprints are identical, so no two introverts (or adapters or responsives) are just alike. Therefore, whenever time allows, we should prefer to use all thirty facets in our exploration of individual differences, and the five superfactors should only be used as a shorthand to refer generally to the groupings of facets. Even the facets are no substitute for the complexity of the individual human personality and should be treated only as a somewhat more precise descriptor than a factor.

When working with a team of people who have only a couple of hours to devote to personality vocabulary, we tend to use the five factors only. But when more time is available, or if we are working with an individual one-on-one, we prefer (and feel a professional obligation) to use the full-facet approach. As a rough guideline, using the full-facet version with a team of people who have less than three hours to devote to it would not make sense. To try to give adequate attention to each member on all facets in such a short time span could become something akin to an interpersonal hit-and-run accident. On the other hand, one can adequately present full-facet results to an individual in about one hour.

The reliability of the *NEO-FFI* (60 items) averages around .80, while the reliability of the *NEO-PI-R* (240 items) averages around .90. Consequently, where the risks are higher, as in using the FFM for counseling a borderline employee or making selection decisions, there is no question-- use the full-facet long version. The increased reliability and validity available with the long form is especially crucial for interventions with potential legal repercussions. It is really a matter of first aid versus thorough diagnosing and prescribing. The shorter form, however, does possess excellent reliability for use in teaching the FFM as a vocabulary for understanding individual differences in such contexts as team building and training courses.

COMMON THEMES AMONG THE VARIOUS FACETS AND FACTORS

A theme, as we use the term, is a trait which is attributable to the combined effect of two or more separate traits. Because the most recent version of the Costa and McCrae's full facet test (the *NEO-PI-R*) has only been available for a couple of years, the identification of themes using their thirty-facet/five-factor terminology is only just beginning to surface. Five years from now, many more themes will be reported in the research literature. For now, we will be content to identify themes using mainly the five factors and common sense based on general (i.e., non FFM) research results. These themes are presented in Table 7 (on page 12).

Table 6. Professional Development Version of the Five-Factor Model
(Adapted with permission from Costa and McCrae, 1992)

LEVEL:	*LOW*	*MEDIUM*	*HIGH*
FACTOR 1:			
NEGATIVE EMOTIONALITY	**Resilient (N-)**	**Responsive (N)**	**Reactive (N+)**
Facets:			
N1: Worry	more calm (N1-)	worried/calm (N1)	more worried (N1+)
N2: Anger	slow to anger (N2-)	some anger (N2)	quick to anger (N2+)
N3: Discouragement	seldom sad (N3-)	occasionally sad (N3)	often sad (N3+)
N4: Self-Consciousness	seldom embarrassed (N4-)	sometimes embarrassed (N4)	easily embarrassed (N4+)
N5: Impulsiveness	seldom yielding (N5-)	sometimes yielding (N5)	often yielding (N5+)
N6: Vulnerability	stress resistant (N6-)	some stress (N6)	stress prone (N6+)
FACTOR 2:			
EXTRAVERSION	**Introvert (E-)**	**Ambivert (E)**	**Extravert (E-)**
Facets:			
E1: Warmth	aloof (E1-)	attentive (E1)	cordial (E1+)
E2: Gregariousness	prefers alone (E2-)	alone/others (E2)	prefers company (E2+)
E3: Assertiveness	in background (E3-)	in foreground (E3)	a leader (E3+)
E4: Activity	leisurely (E4-)	average pace (E4)	vigorous (E4+)
E5: Excitement-Seeking	low need for thrills (E5-)	occasional need for thrills (E5)	craves thrills (E5+)
E6: Positive Emotions	seldom exuberant (E6-)	moderate exuberance (E6)	usually cheerful (E6+)
FACTOR 3:			
OPENNESS	**Preserver (O-)**	**Moderate (O)**	**Explorer (O+)**
Facets:			
O1: Fantasy	here and now (O1-)	occasionally imaginative (O1)	a dreamer (O1+)
O2: Aesthetics	uninterested in art	moderate interest in art (O2)	major interest in art (O2+)
O3: Feelings	ignores feelings	accepts feelings (O3)	values all emotions (O3+)
O4: Actions	the familiar (O4-)	a mixture (O4)	variety (O4+)
O5: Ideas	narrow focus (O5-)	moderate curiosity (O5)	broad intellectual curiosity (O5+)
O6: Values	conservative (O6-)	moderate (O6)	open to new values (O6+)
FACTOR 4:			
AGREEABLENESS	**Challenger (A-)**	**Negotiator (A)**	**Adapter (A+)**
Facets:			
A1: Trust	skeptical (A1-)	cautious (A1)	trusting (A1+)
A2: Straightforwardness	guarded (A2-)	tactful (A2)	frank (A2+)
A3: Altruism	uninvolved (A3-)	willing to help others (A3)	eager to help (A3+)
A4: Compliance	aggressive (A4-)	approachable (A4)	defers (A4+)
A5: Modesty	superior (A5-)	equal (A5)	humble (A5+)
A6: Tender-Mindedness	hardheaded (A6-)	responsive (A6)	easily moved (A6+)
FACTOR 5:			
CONSCIENTIOUSNESS	**Flexible (C-)**	**Balanced (C)**	**Focused (C+)**
Facets:			
C1: Competence	unprepared (C1-)	prepared (C1)	capable (C1+)
C2: Order	unorganized (C2-)	half-organized (C2)	well-organized (C2+)
C3: Dutifulness	casual about obligations (C3-)	covers priorities (C3)	strong conscience (C3+)
C4: Achievement Striving	casual about success (C4-)	serious about success (C4)	driven to succeed (C4+)
C5: Self-Discipline	distractible (C5-)	mix of work and play (C5)	focused on work (C5+)
C6: Deliberation	spontaneous (C6-)	thoughtful (C6)	careful (C6+)

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Table 7. Themes based on the Five-Factor Model.

A theme is a characteristic personality pattern which reflects the combined effect of two or more factors or facets. A plus (+) indicates a score above 55, a minus (-) indicates a score below 45, and a letter without either plus or minus indicates a score in the 45-55 range. The 45-55 range comprises one standard deviation in the middle of the population

THEME CATEGORY:	THEME:	COMPONENTS:
Leadership Style	Visionary	O+, A-
	Catalyst	O+, A+
	Troubleshooter	O-, C-
	Traditionalist	O-, C+
Holland Hexagon	Realistic	O-, A-
	Investigative	E-, O+, C-
	Artistic	N+, E+, O+, A-, C-
	Social	N-, E+, A+
	Enterprising	E+, A-, C+
	Conventional	E-, O-, A+, C+
Conflict Styles	Negotiator	N, E (+), A, C (-)
	Aggressor	N+, E+, A-, C+
	Submissive	N-, E-, A+, C-
	Avoider	N+, E-, C-
Learning Style	Classroom	N+, E-
	Tutorial	N+, E+
	Correspondence	N-, E-
	Independent	N-, E+
Decision Style	Autocrat	N+, O-, A-, C+
	Bureaucrat	N-, C+
	Diplomat	N-, A, C-
	Consensus	N+, E+, A+, C
Sample Careers	Entrepreneur	E+, O+, A, C+
	Flight Attendant	N+, E+, O+
	Trainer	N(+), E+, O, A+, C
	Sales	N-, E+, O, A, C+

USING THE FFM IN INDIVIDUAL COACHING AND COUNSELING

We find that FFM scores are helpful from the outset when working with an individual client. These individuals have come for coaching or counseling for a variety of reasons:

- borderline performance
- difficulties with other employees
- boredom with work
- frustration with work
- career exploration
- desire for self-improvement
- preparation for promotion opportunity
- job search

One of our favorite cases was Henry, a free-lance television sports producer who was rich and miserable. His Big Five profile was N+, E+, O-, A, C+ He had plenty of work but was worn out. At 11:00 p.m., after wrapping up his evening's work broadcasting an NBA game, he found he couldn't get to sleep until five or six in the morning, and then it was time to get up. The basketball games frazzled his nerves, and it took him a long time to calm down. He was good at his job, and he loved sports. He didn't know what was wrong with him but knew the quality of his life must change.

The key to understanding Henry's job-person mismatch was Henry's N+. His scores on the other four dimensions were a perfect fit for the job, but live, on-the-air sports production, especially the fast pace of basketball, was no place for a reactive personality. The behind-the-scenes producer must be relatively resilient, calmly monitoring all the cameras and coolly giving instructions to guide the show's progress. His high reactivity in a stressful environment with no margin for error was a recipe for misery. He has since moved from producing live sports shows to producing sports documentaries, in which he can edit without the stress of real time. In addition, he has begun work on a Master's Degree in Eastern Studies, as he hopes eventually to specialize in television documentaries of eastern culture, including sports, of course.

USING THE FFM IN A CLASSROOM SETTING

The FFM has proved to be ideal for use in a classroom setting. Having used several other instruments throughout our consulting careers, we knew the good news and bad news associated with providing test results. While many participants accepted their results readily, a substantial number questioned the appropriateness of their results. Some of the more common concerns were:

- "This description doesn't sound like me at all."
- "I'm equally extraverted and introverted--why do you have to call me one or the other?"
- "The last time I took this test, I scored Thinker--this time I scored Feeler. What gives?"
- "The world is not composed of opposites--it is composed of shades of gray."
- "You know that the academic community is not in agreement on a common vocabulary for talking about personality, don't you?"
- "Don't put me in a box."

Well, fret no more. We have found that these types of objections do not accompany Big Five feedback sessions. The degree of acceptance of Big Five test results has been remarkably high. Everyone--*everyone*--to whom we have provided FFM results has been comfortable with being placed

in either the high, medium, or low areas of the five dimensions. Persons previously called introverts--but who were puzzled that their extraverted side was discounted--are now happy to be called Ambiverts. Persons previously called extraverts (the authors, for example)--but who were puzzled that their strong introversion was discounted-- are also now happy to be called ambiverts. Finally, with the FFM, the people who score in the middle of the bell curve are recognized as first class citizens!

We have used the FFM in many different kinds of training classes:

- basic management development
- team skill development
- conflict management
- leadership development
- problem-solving and decision-making
- communications
- effective meetings
- training design
- customer service

In each case, we use the FFM to teach the vocabulary of individual differences. We then assist participants in using this vocabulary to explain their past and to plan for their future. For example, one who scores A+ will tend to be a conflict avoider. So, we help the individual understand how agreeableness behaviors (trust, straightforwardness, altruism, deferring, humility, and empathy) have led to conflict avoidance in the past. Then, we help the individual plan to engage selectively with conflict in the future. We help the individual learn two strategies for managing conflict: development and compensation. We develop the individual by teaching her or him skills, and we help the person learn to compensate by learning how to involve others in assisting with conflict situations.

Meanwhile, all of the instruction keeps the persistent reality of personality traits foremost.

USING THE FFM IN PERSONNEL SELECTION

The *NEO-PI-R* measures six facets for each of the five factors of the FFM. These thirty trait measures form a state-of-the-art palette for painting the highlights of individual differences. In the selection of employees, whether for new employment or for new deployment, the full-facet profile can capture the unique trait composition of a specific job. For some jobs, no unique traits emerge--in other words, the scores of a sample of incumbents in that job average out the same as the general population. But many jobs are characterized by unique trait scores--scores which differ substantially from the normal population. In this latter case, one can compare an individual's scores to the job's scores and therefrom determine the degree of fit between the individual and the job.

Here are some examples of jobs which contain incumbents who differ from the norm:

- Flight Attendant: N+, E+, O+
- Family Practice Physician: N-, O+, A+, C-
- Pharmaceutical Sales: E+, C+
- Organization Development Consultants: O+

In the four jobs described above, note that we have used only the broad-brush *factor* scores. In an actual personnel selection application, we would want to use the *facet* scores for greater precision of measurement. For example, for flight attendants, based on a sample of 84, we would get the facet profile presented in Table 8 (on page 14).

In an unpublished study conducted by the authors with a local university intern, we further determined that flight attendants who were highly satisfied with their jobs could be further differentiated from unsatisfied flight attendants in the following manner: *satisfied* flight attendants scored *lower on the negative emotionality* factor overall than unsatisfied flight attendants (even though both groups scored in the N+ area). This is consistent with the common notions that 1) customer service positions (e.g., flight attendants) are associated with personalities that are more reactive (N+), and 2) extremely reactive (N++) persons would not be as content with airplane life (because of its associated higher risks) as less reactive (i.e., more resilient) persons.

In the third section of this monograph, we will present ways in which the Big Five model can be used in working with teams. We will look at how various kinds of relationships--from marriages to work teams--can benefit from taking time to study the effects of similarities and differences in personality traits among the people in relationships.

Table 8 Profile of Flight Attendants (n = 84)
Unshaded areas represent the average score for flight attendants on each of the facets of the NEO-PI-R

LEVEL:	*LOW*	*MEDIUM*	*HIGH*
FACTOR 1:			
NEGATIVE EMOTIONALITY	**Sedate (N-)**	**Responsive (N)**	**Reactive (N-)**
Facets:			
N1: Worry	more calm (N1-)	worried/calm (N1)	more worried (N1+)
N2: Anger	slow to anger (N2-)	some anger (N)	quick to anger (N2+)
N3: Discouragement	seldom sad (N3-)	occasionally sad (N3)	often sad (N3+)
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E1: Warmth	aloof (E1-)	attentive (E1)	cordial (E1+)
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E4: Activity	leisurely (E4-)	average pace (E4)	vigorous (E4+)
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FACTOR 3:			
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Facets:			
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O4: Actions	the familiar (O4-)	a mixture (O4)	variety (O4+)
O5: Ideas	narrow focus (O5-)	moderate curiosity (O5)	broad intellectual curiosity (O5+)
O6: Values	conservative (O6-)	moderate (O6)	open to new values (O6+)
FACTOR 4:			
AGREEABLENESS	**Challenger (A-)**	**Negotiator (A)**	**Adapter (A+)**
Facets			
A1: Trust	skeptical (A1-)	cautious (A1)	trusting (A1+)
A2: Straightforwardness	guarded (A2-)	tactful (A2)	frank (A2+)
A3: Altruism	uninvolved (A3-)	willing to help others (A3)	eager to help (A3+)
A4: Compliance	aggressive (A4-)	approachable (A4)	defers (A4+)
A5: Modesty	superior (A5-)	equal (A5)	humble (A5+)
A6: Tender-Mindedness	hardheaded (A6-)	responsive (A6)	easily moved (A6+)
FACTOR 5:			
CONSCIENTIOUSNESS	**Flexible (C-)**	**Balanced (C)**	**Focused (C+)**
Facets:			
C1: Competence	unprepared (C1-)	prepared (C1)	capable (C1+)
C2: Order	unorganized (C2-)	half-organized (C2)	well-organized (C2+)
C3: Dutifulness	casual about obligations (C3-)	covers priorities (C3)	strong conscience (C3+)
C4: Achievement Striving	casual about success (C4-)	serious about success (C4)	driven to succeed (C4+)
C5: Self-Discipline	distractible (C5-)	mix of work and play (C5)	focused on work (C5+)
C6: Deliberation	spontaneous (C6-)	thoughtful (C6)	careful (C6+)

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Section Three:
USING THE BIG FIVE WITH TEAMS

Most human resource developers have placed a high value on the use of a common personality vocabulary as a tool in working with teams. By introducing a common vocabulary to members of a team, a facilitator is able to identify and discuss team strengths and weaknesses constructively and non-defensively.

The models of personality on which facilitators have based their vocabularies have varied widely. The terms wafting through the halls of meeting sites mingle like a veritable alphabet soup: drivers and amiables, high expressed controls and low wanted inclusions, quick starts and implementors, sanguine and phlegmatic, cerebral left and limbic right, submissive-hostile and dominant-warm, MBTI, LIFO, DISC, and AVA (see summary with references in Howard (1994), page 132).

As we saw in the first section of this monograph, each of these aforementioned vocabularies is a different metaphor that describes human personality from a particular perspective. Over the last ten years, the psychological community has reached an unprecedented degree of agreement on the best, most universal metaphor--the Five-Factor Model, or the Big Five (Costa & McCrae, 1992). The Big Five serves as a kind of source metaphor. It does not compete with other metaphors; rather, it acts as psychometric infrastructure from which profiles for each of the other models may be derived. In fact, however, if one is using the source metaphor, why bother with the others?

APPLYING THE BIG FIVE TO TEAMS

In the second section, we saw how the Five-Factor Model (FFM) might be applied to the human resource professional's work with individuals--in career development, in executive coaching and counseling, in selection, and in management and professional development. In this section, we focus on the use of the FFM with teams, whether with two-person teams (boss-subordinate, partners, etc.) or with larger ones.

TWO-PERSON TEAMS

As we prepare to look at some real-life teams, we need to recall the vocabulary that we outlined earlier in this monograph. A recap of the five dimensions with names for the three levels (or areas) of each dimension (or continuum) is presented in Table 9.

Table 9. The Big Five Dimensions, with the Three Levels Described.

	LEVEL:		
DIMENSION:	LOW:	MEDIUM:	HIGH:
Negative Emotionality	Resilient (N-)	Responsive (N)	Reactive (N+)
Extraversion	Introvert (E-)	Ambivert (E)	Extravert (E+)
Openness	Preserver (O-)	Moderate (O)	Explorer (O+)
Agreeableness	Challenge r (A-)	Negotiator (A)	Adapter (A+)
Conscientious-ness	Flexible (C-)	Balanced (C)	Focused (C+)

To assist in identifying similarities and differences among team members, we have devised a four-by-five table in which we display the members' scores. For two-person teams, we simply place the two individuals' initials in the box which represents his or her score for each of the five dimensions. The first case study on which we focus is that of two division managers--peers--but who work under the same roof and report to an executive vice-president in another location.

Situation: Sandy and Harvey each manage a major division of an automotive manufacturer. Both divisions happen to be located under one roof. While each division has its own intact manufacturing department, the two divisions share a common set of support departments--human resources, purchasing, and material handling.

Table 10. The General Managers

N-E	Resi	Resp *S-H*	Reac
EXT	Intro	Ambi *S-H*	Extra
OPN	Pres *H*	Modr	Expl *S*
AGR	Chall	Negot *S-H*	Adap
CON	Flexi *S*	Balan	Focu *H*

Therefore, the two general managers must cooperate with one another in managing the support functions. Sandy's division has higher sales but

smaller margins, while Harvey's division has lower sales and larger margins. Harvey accuses Sandy of limiting profits through unnecessary spending, and Sandy retorts that Harvey limits growth by excessively tight controls.

Analysis: The keys to the dynamics of this relationship are Sandy's high O and moderately low C interacting with Harvey's low O and moderately high C. We have a flexible explorer who's willing to try innovative methods, but who neglects the bottom line. On the other hand, we have a focused preserver who's fixated on efficiently milking the status quo but who is blind to opportunities for change and growth. These two managers can learn from one another. Perhaps they could institute a once-a-month "I'll take one of your suggestions, and you take one of mine" session where they agree to listen to each other.

In our second relationship case study, we look at two managers in a reporting relationship.

Table 11. Two Presidents: One Corporate, One Divisional

N-E	Resi *S*	Resp C	Reac
EXT	Intro C	Ambi	Extra *S*
OPN	Pres C	Modr	Expl *S*
AGR	Chall C-*S*	Negot	Adap
CON	Flexi *S*	Balan	Focu C

Situation: Cesar is president of a highly successful construction conglomerate. Shelly is president of a barely profitable management division. Cesar continually picks at Shelly for failing to meet budgets and deadlines, and Shelly, in frustration, responds that the division is performing as well as market conditions permit. Shelly doesn't feel trusted by Cesar, and Cesar is losing confidence in Shelly.

Analysis: Cesar is a highly introverted (low E) preserver (low O) focused on results (high C), while Shelly is an outgoing explorer whose strength is developing business during the good times. During market downturns, Shelly's high O has no outlet, and his low appetite for efficiency (moderately low C, moderately low N) is exposed. Cesar needs to find a way to communicate more frequently with Shelly, both to deal with Shelly's frustration and to find ways to focus on the bottom line.

MULTI-PERSON TEAMS

In displaying the scores of members of multi-person teams, one has two choices: either place everyone's identifier (initials, or, for anonymity, numbers) in the appropriate boxes, or simply show the distribution of scores by showing the number of team members who score in each of the three boxes.

The first team case study (Table 12) is that of an old-school, Theory X management team with the corporate office located in the northern U.S. and the plants located in the South, for the purpose of union avoidance. Interestingly enough, this company is now belly-up.

Table 12. The Crisis Experts

N-E	Resi	Resp 10	Reac
EXT	Intro 1	Ambi 8	Extra 1
OPN	Pres 9	Modr	Expl 1
AGR	Chall 9	Negot 1	Adap
CON	Flexi	Balan 1	Focu 9

Situation: This management team has a proud record of successfully managing in crisis situations. Once a strike shut down a plant (the only union plant), and the management moved all the equipment in the shut-down plant to another site in a different state and had production restored within 72 hours. But turnover is high, morale is low, and business is declining. Management is at a loss concerning what they can do differently.

Analysis: This management team of ten men appears to be composed of clones. With two exceptions, all have the same profile. The only idea person (high O) happens also to be introverted (low E), so his ideas don't tend to get expressed. This team needs to identify a couple of high O, high A, and low C staff members to attend all meetings and make them consider alternatives to their current management practices. Because they have a high margin product, they need to spend some money on consultants and listen carefully to the recommendations. This team's profile is geared for

efficiency but doomed to fail because it lacks the renewing energy of new ideas and openness to change.

The second multi-person team (Table 13) comes from a not-for-profit organization.

Table 13. A Human Service Agency Team

N-E	Resi 3	Resp 5	Reac 8
EXT	Intro 2	Ambi 1	Extra 13
OPN	Pres 3	Modr 4	Expl 9
AGR	Chall 4	Negot 2	Adap 10
CON	Flexi 2	Balan 2	Focu 12

Situation: Team meetings are loud and competitive with little real listening. Side conversations continually crop up among this team of sixteen. They love to brainstorm but lose track of many of their good ideas. Some tend to feel arrogant with respect to the rest of the agency, particularly to what they perceive as a sluggish upper management. Most of them, however, are uncomfortable with conflict and dread the meetings, which frequently erupt into accusation, blaming, and intimidation.

Analysis: The abundance of extraverts calls for strict norms on how to conduct meetings. The abundance of explorers (high O) calls for detailed minutes with follow-up to evaluate suggestions, establish priorities, and assign responsibility for implementation. The high number of adaptive profiles (high A) account for the discomfort with conflict, and they need to agree to turn every complaint into a plan of action. "Fix it or accept it." The large number of high C team members accounts for the perception of others as sluggish. They need to learn to ask for and accept time-lines for decisions from top management.

THE BIG FIVE AND TRAIT CONGRUENCE

When looking at a team's array of FFM scores, one considers two factors in using the Big Five vocabulary to identify the team's developmental needs. First, one considers the unique elements of the team's situation--geography, politics, product maturity, competitive environment, workforce morale. Second, one considers the natural benefits and drawbacks that typically accompany teams with high loadings on one trait, or with split loadings, in which a team shows two or more clusters along a dimension, such as four members who are more extraverted and seven who are more introverted. When all or most of a team load on one area of a dimension, as in all (or most) being more extraverted, we refer to that as trait congruence, or trait homogeneity. When team members cluster along different areas of a dimension, we call that trait diversity, or trait heterogeneity.

Neither trait congruence nor trait diversity is in and of itself a good or bad thing. All team members having congruent extraversion scores, for example, can be both a plus and a minus. Table 14 (see next page) lists the typical key effects for trait congruence and trait diversity for all five Big Five dimensions.

The key effects listed in Table 14 are subject to the influence of other traits. For example, we point out that persons at opposite ends of the Conscientiousness dimension tend to "be at each other constantly." If these people are also high in Agreeableness, then they probably will be "at each other" much less frequently and overtly, while if they are low in Agreeableness, they will have daily knock-down, drag-outs. Keep in mind, then, that these key effects are not absolutely and inexorably associated with their specific traits, but rather are subject to influence by other traits and situations.

ADAPTATION STRATEGIES

How does one cope with the negative effects of a particular trait congruence or diversity? Because the key effects listed in Table 14 tend to be natural consequences of their associated traits, they also tend to be stable and life-long. They won't go away. How does one then cope with the permanent effects of trait interactions within relationships?

Robert Sternberg of Yale University has suggested (1988) that three kinds of problem-solving strategies are available to us:

- I can try to change myself
- I can try to change others
- I can try to change the situation

Sternberg proposes that persons of higher intelligence will employ strategies from all three groups, showing a flexibility in selecting the most appropriate strategy for the situation. Less intelligent people, Sternberg continues, tend to fix rigidly on one type of strategy and persist in trying

Table 14. The Effects of Trait Congruence and Trait Diversity
(+ = Positive Effect; - = *Negative Effect*)

	BOTH HI	BOTH MID	BOTH LO	HI + MID	LO + MID	HI + LO
NEGATIVE EMOTIONALITY	+ Nothing escapes attention - *High stress*	+ Even-tempered - *Take stability for granted*	+ Stress-free - *Can miss important cues*	+ Hi admires Mid's control - *Mid can tire of Hi's reactions*	+ Mid will admire Lo's steadiness - *Lo's needs may not get expressed*	+ Lo provides stability for Hi - *Hi seen as out of control; Lo seen as uncaring*
EXTRAVERSION	+ Many friends - *Little time for reflection*	+ Balance of group and solitude - *Longing for more of both extremes*	+ Close relationship - *Inadequate communication*	+ Hi attracted to M's balance - *Mid wishes Hi more private*	+ Mid will draw Lo out socially - *Mid impatient at reading Lo's mind*	+ Hi handles relationship as Lo works - *Hi seen as shallow; Lo as afraid of people*
OPENNESS	+ Enjoy dreaming together - *Never achieve efficiencies*	+ Lots of common sense - *No competitive edge*	+ Respect for expertise - *Rigid in outlook*	+ Mid keeps Hi's feet on ground - *Resents Hi's risk-proneness*	+ Mid respects Lo's constancy - *Resents Lo's lack of dreaming*	+ Balance of dreams with reality - *Lo seen as boring; Hi as a dreamer*
AGREEABLENESS	+ Strong bonds - *Overly dependent*	+ Good decision makers - *Get caught up in politics*	+ Respect for fighting spirit - *Can fight constantly*	+ Mid will draw out Hi's needs - *Mid impatient w/Hi's martyrdom*	+ Mid helps Lo see others' needs - *Mid impatient w/Lo's rigidity*	+ Fight to balance ind & group needs - *Hi taken to cleaners; Lo rejected*
CONSCIENTIOUSNESS	+ High achievement - *Little pure relationship building*	+ Balance of work and play - *No one goes for the gold*	+ Spontaneity and discovery - *Always out of time and money*	+ Mid helps Hi to relax - *Hi feels held back*	+ Mid helps Lo meet goals - *Mid resents Lo's drain on resources*	+ Lo handles crisis; Hi wins the campaign - *Constantly at each other--make vs. spend*

variations of the same type. For example, persons who persist in trying to change themselves become known as doormats, persons who persist in trying to change others become known as control freaks, and persons who persist in trying to change the situation become known as quitters. Table 15 lists several examples of strategies in each category that might be employed to adapt to the effects of trait congruence/diversity.

Individual differences are here to stay. And, in the words of Ralph Waldo Emerson, "Every individual nature has its own beauty." Having a vocabulary of personality differences enables us to communicate constructively. The Five-Factor Model provides us with a comprehensive source metaphor that celebrates the fullness of human personalities. Join us in this rich dialogue!

Table 15. Examples of Adaptation Strategies.

STERNBERG'S STRATEGY TYPES:	EXAMPLES:
1. *Changing Me*	• Develop procedures to compensate for weaknesses • Delegate • Training • Counseling
2. *Changing Others*	• Give permission for someone to play roles none like but all need • Develop a set of team norms • Tinker with team roles (chair, recorder, timekeeper, etc.) • Assign names and deadlines to all action items • Evaluate team performance periodically (in light of norms) • Training • Negotiate job descriptions, goals, and rewards
3. *Changing the Situation*	• Add more team members • Ask for a volunteer to perform missing functions • Invite non-members to attend permanently or occasionally • Clarify type of decision process intended (boss, vote, consensus) • Transfer or terminate individuals • Reengineer processes and roles

REFERENCES

Allport, G.W., & Odbert, H.S. (1936). Trait names: a psycho-lexical study. *Psychological Monographs*, 47 (211).

Costa, P. T., Jr., & McCrae, R. R. (1992). *NEO PI-R: Professional Manual*. Odessa, FL: Psychological Assessment Resources.

Digman, J.M. (1990). Personality Structure: Emergence of the Five-Factor Model. *Annual Review of Psychology*, 41, 417-440.

Eysenck, H.J. (1991). Dimensions of personality: 16, 5, or 3?--Criteria for a taxonomic paradigm. *Personality and Individual Differences*, 12(8), 773-790.

Fiske, D.W. (1949). Consistency of the factorial structures of personality ratings from different sources. *Journal of Abnormal Social Psychology*, 44, 329-344.

Goldberg, L.R. (1993). The Structure of Phenotypic Personality Traits. *American Psychologist*. January 1993, 48(1), 26-34.

Hogan, R. (1983). *Hogan Personality Inventory Manual*. Minneapolis: National Computer Systems.

Howard, P.J., & Howard, J.M. (1993). *The Big Five Workbook: A Roadmap for Individual and Team Interpretation of Scores on the Five-Factor Model of Personality*. Charlotte, NC: Center for Applied Cognitive Studies.

Howard, P.J. (1994). *The Owner's Manual for the Brain: Everyday Applications from Mind/Brain Research*. Austin, TX: Leornian Press.

Kinlaw, D.C. (1990). *Developing Superior Work Teams*. New York: Free Press.

John, O.P, Angleitner, A., and Ostendorf, F. (1988). The lexical approach to personality: A historical review of trait taxonomic research. *European Journal of Personality*, 2, 171-203.

Jung, C.G. (1971). *Psychological Types*. (H.G. Baynes, Trans., revised by R.F.C. Hull). Princeton, NJ: Princeton University Press. (Original work published 1923)

McCrae, R.R. (Ed.) (1992). *The Five-Factor Model: Issues and Applications*. *Journal of Personality* (Special Issue). June 1992, 60(2).

McCrae, R.R., & Costa, P.T., Jr. (March 1989). Reinterpreting the Myers-Briggs Type Indicator From the Perspective of the Five-Factor Model of Personality. *Journal of Personality*, 57(1), 17-40.

McCrae, R.R., & Costa, P.T. (1990). *Personality in Adulthood*. New York: Guilford.

Mischel, W. (1968). *Personality and Assessment*. New York: Wiley.

Myers, I.B., & McCaulley, M.H. (1985). *Manual: A Guide to the Development and Use of the Myers-Briggs Type Indicator*. Palo Alto: Consulting Psychologists Press.

Norman, W.T. (1963). Toward an adequate taxonomy of personality attributes: Replicated factor structure in peer nomination personality ratings. *Journal of Abnormal and Social Psychology*, 66, 574-583.

Ornstein, R. (1993). *The Roots of the Self: Unraveling the Mystery of Who We Are*. Harper San Francisco.

Sternberg, R.J. (1988). *The Triarchic Mind: A New Theory of Human Intelligence*. New York: Viking.

Tupes, E.C. & Christal, R.E. (1961, May). *Recurrent Personality Factors Based on Trait Ratings* (ASD-TR-61-97). Lackland Air Force Base, TX: Aeronautical Systems Division, Personnel Laboratory.

For further information:

Center for Applied Cognitive Studies (CentACS)
719 Romany Road
Charlotte, NC 28203-4849

Telephone: 704-331-0926, 800-BIG-5555
Fax: 704-331-9408
E-mail: centacs@cybernetics.net