Abstract: Recent developments in personality research point to an alchemy of character composed of five elements: extroversion, agreeableness, conscientiousness, neuroticism, and openness to experience. This paper surveys this research for its implications to the study of the virtues in organizational ethics. After subjecting each of these five character traits to several tests as to what constitutes a virtue, the empirical evidence supports an organizational virtue of agreeableness and an organizational virtue of conscientiousness. Although the empirical evidence falls short, an argument is mobilized on behalf of an additional organizational virtue of openness to experience.

During recent decades, a consensus in social psychology has emerged on behalf of a general taxonomy of five personality traits (for general reviews, see Digman 1990; Goldberg 1993; McCrae and John, 1992). Known formally as the Five Factor Model (FFM) or colloquially as “The Big Five,” this conceptual scheme has spawned an enormous amount of published research in recent years. Its enthusiasts consider it the Rosetta Stone of character, the solution to a scientific problem whose roots date back to antiquity. Of course, there are a whole host of critics of the FFM largely on technical grounds (e.g., Block 1995, Eysenck 1993, McAdams 1992). The concern has also been voiced that the popularity of the FFM is due to a socio-political shift to the right (Comer 1993) since it posits character and not environment as the most important behavioral determinant. In any event, the impact of the FFM on the social sciences is undeniable (Digman 1989; McCrae, Costa, and Busch 1986). The central question for this paper is whether there is anything in this research stream that enlightens the subject of the virtues in business ethics.

In the first section, I establish a foundation for this paper by reviewing the tradition in virtue ethics of identifying particular traits of character as virtues. Against this all-important backdrop, I attempt in the second section to describe the FFM in terms and details useful to a student of business ethics. The third section deals with whether the evidence supports any conclusions about whether the traits in the FFM constitute virtues in the ethical sense. Finally, there will be a section that offers some speculation about what these conclusions mean to the theory and practice of business ethics.
In classical Greek philosophy, the only ethics was virtue ethics. Virtue constituted an excellence, and ethics concerned excellences of character. Plato and Aristotle in addressing the inquiries of Socrates developed the necessary psychological and metaphysical features of an adequate theory of the virtues. Plato identified temperateness as the virtue of the appetitive part of the psyche, courage as the virtue of the spirited part, wisdom as the virtue of the intellectual part, and justice as the virtue that links the psyche with others. Later, these became known as the cardinal virtues. Aristotle distinguished between intellectual and moral virtues with practical wisdom (phronesis) serving an executive function among them. His psychology centers on practical wisdom, for to have it is to possess all of the moral virtues and to lack it makes one ultimately morally deficient regardless of whatever other excellences one might claim (Robinson 1989).

Sixteen hundred years later, Aquinas sought a psychology that would accommodate the classical theory with theistic doctrines of virtue. To the Aristotelian account of reason, he added passions and appetites and also incorporated the notion of will from Augustine. He revised Plato’s cardinal virtues. Temperateness became the virtue of the concupiscible part of the soul, courage the irascible part of the soul, and justice of the will. In place of phronesis, Aquinas used the term prudence (cf. Pieper 1966) but accorded it a similar primacy. Moreover, like Augustine, he supplemented the cardinal virtues with the Christian virtues of hopefulness, reverence, and charitableness (Gilson 1956).

The work of David Hume is the only modern account of the virtues comparable in scope and development to those of Aristotle and Aquinas (MacIntyre 1984). His formulation included a number of virtues not in classical models, namely, benevolence, integrity, greatness of mind, patience, eloquence, good humor, and cleanliness. He contrasted these with justice in that the other virtues may bring honor to the recipient while being just may bring no such benefits. Underlying Hume’s account of the virtues is a psychology that accords sympathy as a natural human tendency that is reinforced by the pleasure humans take in mutual associations and affections (Penelhum 1993).

Taken together, the work of these three great virtue ethicists provide the necessary foundation for any derivation of organizational virtues. Without evidence to the contrary, we would expect to include courage, temperance, wisdom (or prudence), and perhaps reverence, hopefulness, charitableness, benevolence, integrity, greatness of mind, patience, eloquence, good humor, and cleanliness. Yet, given all of the developments since the time of David Hume, it is worth asking whether the psychology of these great philosophers still stands up.

While the early study of modern social psychology dealt directly with dispositions and traits of character, few if any models dealt with the virtues, cardinal or otherwise. There seemed a greater tendency to study flaws and vices than virtues, particularly the cardinal ones. Accordingly, there is scant evidence in this field that one might mobilize to test whether, indeed, each of the virtues
proposed by the masters has been found to have the features of a virtue. For
eexample, psychologists have not apparently studied whether courageous per-
sons are fulfilled persons (cf. Rachman 1990), nor was I able to find any studies
regarding the virtue-like properties of temperance.

As time went on, the preoccupation with traits in social psychology passed
into a period in which the environment was thought to be the principal determi-
nant of social behavior. Recently, traits have come back into the mainstream, but
this time in a vastly different form. Early trait theories in psychology were based
on dispositions that had functional, physiological, etiological, or psycho-his-
torical origins. They were the product of theoretical development by professional
psychologists armed with highly differentiated conceptual categories. Modern
trait theories, and specifically the FFM, are more democratic. They are based on
distinctions of character attributes made by ordinary people. So, rather than fo-
cusing on theory-based traits like “agoraphobic” or “internal locus of control,”
the FFM concerns itself with the trait categories most people use in describing
and evaluating themselves and others (e.g., stubborn, carefree, bashful, and reck-
less). Equally important is that modern trait theories restrict their trait categories
to those that are parsimonious. If most people use the trait descriptors “gruff,”
“curt,” “caustic,” and “surly” interchangeably, then only one descriptor is used.
Parsimony also requires that the categories used are independent and statisti-
cally orthogonal; if real people use only three categories to describe hair color
and shade, then only three should be used. The result is admittedly reductionis-
tic but perhaps more accessible to common people who are just as puzzled by
differences without distinctions in psychology as natives of the tropics are by
the eight words Eskimos have for snow. In a parallel sense, one might question
whether the distinction between practical wisdom and prudence so important to
Aquinas resonates with most people. More broadly, is there a meaningful differ-
ence between the Thomistic virtue of charitableness and the Humean virtue of
benevolence?

In short, then, it seems useful to reexamine the psychology of Aristotle, Aquinas,
and Hume not just to update them but to be certain that they capture meaningful
character distinctions. I will attempt that after an introduction to the FFM.

The Five Factor Model

In this section, I attempt to describe the FFM. I will first briefly review the
historical developments that led to the contemporary model. Second, I will de-
scribe the five factors in the model. And finally, I will summarize the major
criticisms raised about the FFM together with responses by its advocates.

History of the FFM

Sir Francis Galton (1884) may have been the first scientist to recognize the
“lexical hypothesis” that actual individual differences are encoded in single terms
in language. Accordingly, he turned to the dictionary as a means of describing personality facets (e.g., gregarious, stolid, dependable) and relating these facets to each other (e.g., talkative-extroverted-loquacious; intelligent-analytical-smart). Galton’s estimate of the number of personality-descriptive terms in English was later sharpened empirically by Allport and Odbert (1936) to 4,504 non-judgmental words from the dictionary. Building on this and similar beginning points, Cattell (1943), Norman (1963), and Goldberg (1981) developed shorter, more psychologically relevant, and commonly used personality attributes. These lists were subsequently used as a vehicle for descriptions ordinary people give of their associates on questionnaires and rating forms. For example, in one study considered seminal by FFMers, Tupes and Christal (1958) asked Air Force officers and officer candidates to rate thirty or so colleagues and subordinates on thirty-five traits.

All of this would be of little importance if it weren’t for the common methodological practice of factor analysis in social psychology. To all of the uninitiated and many of its actual users, factor analysis is a rather arcane statistical technique that helps in the discovery of information in complex arrays of inter-correlated data. Visualize a matrix of correlation coefficients with 35 columns and 35 rows much like that Tupes and Christal worked with in their study. In the cell defined by column 3 and row 22, one would observe a measure of association between the ratings of trait 3 and trait 22. A correlation of +.99 would indicate that Air Force raters described others almost identically on these two traits (every time they gave someone high marks on one trait, they gave them high marks on the other). A correlation of -.99 would imply that raters would give people exactly opposite ratings on these two trait scales. Finally, a correlation of exactly 0 would indicate that there was no association between ratings on trait 3 and ratings on trait 22. With the use of factor analysis, researchers attempt to discover clusters of traits that have a great deal of shared or redundant variance. Known as factors, these clusters are thought to have the same essential meaning. There exist statistical criteria for deciding whether the correct factor structure includes one, two, or thirty factors from a particular array of inter-correlated variables. However, most psychologists will allow that the use of factor analysis involves judgment as well as pure science.

What makes the Tupes and Christal study seminal is that their data revealed five factors of personality. And allowing for slight differences, subsequent studies have found these same five factors among different subjects (regardless of age, gender, etc.), contexts (self-reports and ratings), and in different languages (John 1990). All five factors have been shown to be valid (systematically related to behavior) and to endure across decades in adults (McCrae and Costa 1990). Especially striking is that when FFM researchers factor analyzed existing personality questionnaires developed independent of FFM (e.g., California Psychological Inventory), the same five-factor structure usually emerged (Hogan 1983, McCrae and Costa 1985). Thus, advocates of the FFM believe they have
discovered the basic dimensions of personality or character, although they acknowledge that it may not be complete or sufficient.

The Factors

FFM studies have all resulted in five factors, but each factor has not always been given the same label. For example, the first factor in the FFM is termed alternatively “extroversion” and “surgency,” and the fourth factor is known by the alternative terms “emotional stability,” “neuroticism,” or “nervousness.” On the surface, this may seem puzzling. However, with factor analysis the titles given factors by researchers reflect historical accidents, conceptual positions, and the prior research stream of the scientist naming them. Thus, what the factors are called is less important than what they mean.

In Table 1 the five factors as named by Costa and McCrae (1992) are described, and I will let this table speak for itself. By way of explanation, when subjects complete questionnaires based on the FFM, we would expect their responses on the scales within each factor to be strongly correlated and their responses on the scales between each factor to be weakly correlated if at all. The reason for this expectation is that in the aggregate, that is how people respond. Some readers may be able to conjure up examples of people who are very warm but not in the least gregarious, but the FFM would suggest that such an individual is both a statistically mild anomaly and someone who is probably not terribly high in overall extroversion.

In a later section, I will take up the issue of whether any of these factors helps us with our understanding of virtue. At this point, what we have is a list of traits, one of which seems socially neutral (extroversion/introversion), three of which appear to be laudable (conscientiousness, agreeableness, openness to experience), and one (neuroticism) which appears, if anything, more vice- than virtue-like. At this point in the paper, we are not at all close to any conclusions about the FFM and organizational virtue.

Criticisms of the FFM

As mentioned previously, the FFM has been the subject of many criticisms, mainly on highly technical grounds, but some that are quite relevant to the subject of this paper.

Too Few Factors. Some critics contend that the five-factor solution is much too simple to summarize everything that is known about individual differences in personality (e.g., Cattell 1993). Some prefer models of more than five factors (Mershon and Gorsuch 1988), while others advocate an item or scale-level analysis that eschews factor analysis altogether (Block 1971, 1995). Obviously, the parsimony of the five-factor solution sacrifices some information. For example, an average score in extroversion could be attained by a person energetic but aloof, or a person lethargic but friendly. For some purposes, these distinctions are essential.
Table 1

*Descriptions of People High and Low on the Five Factor Scales*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Scale</th>
<th>People High on Scale</th>
<th>People Low on Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Extroversion</strong></td>
<td><strong>Warmth</strong></td>
<td>friendly; affectionate</td>
<td>formal; reserved</td>
</tr>
<tr>
<td></td>
<td><strong>Gregariousness</strong></td>
<td>prefer company of others</td>
<td>prefer to be alone</td>
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<tr>
<td></td>
<td><strong>Assertiveness</strong></td>
<td>forceful; tends to lead</td>
<td>lets others lead</td>
</tr>
<tr>
<td></td>
<td><strong>Activity</strong></td>
<td>energetic</td>
<td>laid back</td>
</tr>
<tr>
<td></td>
<td><strong>Excitement Seeking</strong></td>
<td>crave stimulation</td>
<td>little need for thrills</td>
</tr>
<tr>
<td></td>
<td><strong>Positive Emotions</strong></td>
<td>cheerful; optimistic</td>
<td>less exuberant</td>
</tr>
<tr>
<td><strong>Agreeableness</strong></td>
<td><strong>Trust</strong></td>
<td>disposed to trust others</td>
<td>skeptical of others</td>
</tr>
<tr>
<td></td>
<td><strong>Straightforwardness</strong></td>
<td>frank; ingenuous</td>
<td>not candid; guarded</td>
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<tr>
<td></td>
<td><strong>Altruism</strong></td>
<td>generous, considerate</td>
<td>self-centered</td>
</tr>
<tr>
<td></td>
<td><strong>Compliance</strong></td>
<td>deferential in conflicts</td>
<td>prefers competing</td>
</tr>
<tr>
<td></td>
<td><strong>Modesty</strong></td>
<td>humble; self-effacing</td>
<td>conceited; arrogant</td>
</tr>
<tr>
<td></td>
<td><strong>Tendermindedness</strong></td>
<td>sympathetic</td>
<td>hardheaded</td>
</tr>
<tr>
<td><strong>Conscientiousness</strong></td>
<td><strong>Competence</strong></td>
<td>feels capable, effective</td>
<td>feels inept</td>
</tr>
<tr>
<td></td>
<td><strong>Order</strong></td>
<td>neat</td>
<td>unorganized</td>
</tr>
<tr>
<td></td>
<td><strong>Dutifulness</strong></td>
<td>principled; scrupulous</td>
<td>casual about duties</td>
</tr>
<tr>
<td></td>
<td><strong>Achievement</strong></td>
<td>diligent; purposeful</td>
<td>lackadaisical</td>
</tr>
<tr>
<td></td>
<td><strong>Self-Discipline</strong></td>
<td>ability to motivate self</td>
<td>procrastinates; quits</td>
</tr>
<tr>
<td></td>
<td><strong>Deliberation</strong></td>
<td>cautious</td>
<td>hasty</td>
</tr>
<tr>
<td><strong>Neuroticism</strong></td>
<td><strong>Anxiety</strong></td>
<td>tense; apprehensive</td>
<td>calm; relaxed</td>
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<tr>
<td></td>
<td><strong>Angry Hostility</strong></td>
<td>frustrated; angry</td>
<td>easygoing</td>
</tr>
<tr>
<td></td>
<td><strong>Depression</strong></td>
<td>hopeless</td>
<td>not easily dejected</td>
</tr>
<tr>
<td></td>
<td><strong>Self-Consciousness</strong></td>
<td>sensitive to ridicule</td>
<td>rarely feels inferior</td>
</tr>
<tr>
<td></td>
<td><strong>Impulsiveness</strong></td>
<td>low self-control</td>
<td>resists temptations</td>
</tr>
<tr>
<td></td>
<td><strong>Vulnerability</strong></td>
<td>poor coping with stress</td>
<td>feels immune to stress</td>
</tr>
<tr>
<td><strong>Openness</strong></td>
<td><strong>Fantasy</strong></td>
<td>vivid imagination</td>
<td>prosaic</td>
</tr>
<tr>
<td></td>
<td><strong>Open to Aesthetics</strong></td>
<td>likes art and beauty</td>
<td>dislikes art and beauty</td>
</tr>
<tr>
<td></td>
<td><strong>Open to Feelings</strong></td>
<td>many emotional states</td>
<td>blunt affect</td>
</tr>
<tr>
<td></td>
<td><strong>Open to Actions</strong></td>
<td>willing to try new things</td>
<td>change is difficult</td>
</tr>
<tr>
<td></td>
<td><strong>Open to Ideas</strong></td>
<td>intellectually curious</td>
<td>narrow range of ideas</td>
</tr>
<tr>
<td></td>
<td><strong>Open to Values</strong></td>
<td>open-minded</td>
<td>dogmatic</td>
</tr>
</tbody>
</table>

Source: Costa and Widiger, 1994
More serious is the concern that there may be more factors buried in the residual of the factor solutions. Some studies have hinted at the existence of such a sixth factor. For example, Digman and Takemoto-Chock (1981) identified a factor the authors termed “culture.” And a number of studies have shown that cognitive ability (intelligence) is a distinct sixth factor (e.g., Krug and John 1986). In general, these studies lack what the FFM has always attained, a model that can be replicated across contexts, subjects, and modes of measurement.

Too Many Factors. Some critics do not feel that all five factors are necessary. Indeed, the FFM was preceded by a widely accepted three-factor solution (Eysenck 1967). Research derived from this model (Zuckerman et al. 1988) and independent of it have advanced three-factor theories (Cloninger 1988). Yet, none of these alternative models have shown the robustness of the FFM (cf. Goldberg 1990). Five factors seem just about right.

FFM is Atheoretical. Perhaps the most far-reaching of all the criticisms of the FFM is that it incorporates almost no personality theory (Block 1995). Rather, it is based on words used by non-professionals in judging themselves (through questionnaires) and others (through ratings). This raises the possibility that the FFM is nothing more than a reflection of ordinary peoples’ cognitive biases (Digman 1990, Kroger and Wood 1993). The reliance on factor analysis exacerbates this problem even more since so much is left to interpretation as data speaks for itself regardless of conceptual developments.

FFMers counter that their model is similar to existing models of personality derived in other ways, even though it has never purported to explain the origins or development of personality (Goldberg and Saucier 1995). Moreover, they point to impressive evidence about the model’s validity and its explanatory power when other languages are used (Costa and McCrae 1995).

In summary, it is safe to say that the FFM is embroiled in a healthy controversy reserved only for models that profoundly move a social scientific discipline in an entirely new direction.

Where are the Cardinal Virtues in the FFM?

If people used the cardinal virtues as the foundation for their descriptions and assessments of people, there would be a four- rather than five-factor solution, one each for temperateness, courage, justice, and wisdom (or prudence). Since no such solution exists, where are the cardinal virtues? Mathematically, they are each in a five-dimensional space defined by the FFM. According to Goldberg’s (1990) FFM data, all four virtues would register low on neuroticism. Additionally, temperateness would most likely register as neither high nor low on extroversion, courage would be high on extroversion, justice would be high on agreeableness and conscientiousness, and wisdom would be high on openness to experience. Among these associations, the relationship between courage and extroversion is probably the strongest since courage actually is one of Goldberg’s extroversion scales.
Perhaps a metaphor is useful to describe how the cardinal virtues are treated in the FFM. Conceive of the FFM factors (extroversion, conscientiousness, etc.) as chemical elements. Each cardinal virtue would then be a compound comprised of all five factors in varying amounts. Some virtue compounds (e.g., courage) are composed largely of two elements (−neuroticism, +extroversion) with only traces of the others (+conscientiousness, +agreeableness, +openness to experience). Others virtue compounds (e.g., justice) have more complicated formulae.

The FFM does not imply that the cardinal virtues are conceptually imprecise or unimportant. It only implies that, for most people, the cardinal virtues do not represent entirely independent sources of meaning. Rather, they are contaminated or "dirty" categories of meaning. Wise persons are generally also described as just, and temperate people are generally also described as wise.4 Using most people's cognitive mapping, comparing cardinal virtues to one another reveals more differences than distinctions.

What remains to be seen is whether the traits defined by the FFM constitute virtues. If they do, they may be preferable to the cardinal virtues as conceptual categories. While not based on a psychology as theoretically meticulous as Aristotle's, Aquinas's, or Hume's, there is a psychology there, and it is the rather pedestrian psychology of the common person engaging in day-to-day character analysis.

**Do Any of the Traits Embedded in the FFM Qualify as Virtues?**

The FFM provides five scales that represent central human character traits. The question is whether there are any points on these scales that represent sufficient excellence that one would term them virtues. The following requirements come from Aristotle (cf. Robinson 1989, Sherman 1989, Moberg 1997). In order for a trait to constitute a virtue it must first be a trait that is characteristically human. Second, since Aristotle assumed that the virtues could be developed, it must not be a trait that is immutable. Third, it must constitute a mean between excess and deficiency. Fourth, it must grace the possessor and his/her community with unqualified flourishing.

**Are the Traits Described by the FFM Characteristically Human?**

One way to establish whether a given trait is characteristically human is to show that it requires the mental activity that humans possess and other species lack.5 It is difficult to establish to everyone's satisfaction that dogs cannot be extroverted, that porpoises cannot be agreeable, and that hamsters cannot be neurotic. Consequently, the strategy adopted in this paper is to attempt to demonstrate not that animals do not possess these traits but that all humans apparently do. To do this requires a demonstration that the FFM is found in a wide array of cultures rather than just a few.

Such evidence exists. The FFM has been demonstrated among German (Angleitner, Ostendorf, and John 1990); Hungarian (deRaad and Szirmak 1994),
Japanese (Isaka 1990), Philippine (Church and Katigbak 1989), Israeli (Birenbaum and Montag 1986), Chinese (Yang and Bond 1990), and Dutch (John, Goldberg, and Angleitner 1984) samples in their original languages. This is certainly not indicative that the FFM exists on every inch of the globe, but it does support a conclusion that the traits in the FFM exist in an array of different cultures. It should also be noted that by and large, there are no important differences in mean scores on the FFM between young (aged 30) and old adults, Caucasian and African-American subjects (Robins, John, and Caspi 1994), or males and females (McCrae and John 1992).

**Are the Traits in the FFM Open to Development?**

Somewhat surprisingly, Aristotle did acknowledge a predisposition to virtue at birth. Consider the following quote from *Nicomachean Ethics* 1144b4: “For each of us seems to possess his type of character to some extent by nature, since we are just, brave, prone to temperance, or have another feature, immediately from birth.” Aristotle goes on to say that natural endowments are insufficient and that habit and understanding are necessary to enlarge and perfect virtue (Wilson 1993). However, it comes as a surprise to some that Aristotle even acknowledges the possibility of a meaningful family heritage at birth.

I mention this acknowledgment mainly because the FFM literature includes a number of interesting twin studies that purport to ferret out the relative importance of heredity and environment on the FFM, and heredity plays a nontrivial role. Jang, Livesley, and Vernon (1996) based their estimates on 123 pairs of identical twins and 127 pairs of fraternal twins. Genetic influence was estimated as 41 percent for neuroticism, 53 percent for extroversion, 61 percent for openness, 41 percent for agreeableness, and 44 percent for conscientiousness. In line with these rather startlingly high heredity estimates is published speculation about the role each trait played in evolution and natural selection (e.g., Buss 1991, MacDonald 1995). In the twin studies, most of the environmental influence came from experiences not shared with the twin (e.g., differential parental treatment). These estimates were very similar to Loehlin’s (1992), which used different measures of the FFM. However, these estimates were larger than Bergeman et. al. (1993), who found a non-shared *environmental* influence of 54 percent for openness, 67 percent for agreeableness, and 60 percent for conscientiousness. This comparatively greater environmental influence is likely due to subject age (59 for the Bergeman subjects compared to 31 in the Jang study) since hereditary effects are thought to decline throughout life. In short, there appears significant evidence that the traits embedded in the FFM are open to environmental shaping and other developmental experiences.

At the same time, there appears to be a limited period of time within which most humans develop their personalities. In a summary of research on the FFM and age, Costa and McCrae (1994) report that by the age of thirty, adults have pretty much established their personalities. There is little evidence of shifts after
that age. College students are still in the process of personality development. Compared to older adults, students demonstrate higher scores on neuroticism, extroversion, and openness scales and lower scores on agreeableness and conscientiousness.

This raises the question of how these character traits develop during the critical period of birth to age 30. Here, the evidence is not nearly as complete nor conclusive as one would like, but there are some interesting results. For example, McCrae and Costa (1988) studied 619 persons aged 21 to 96 who could be scaled on the FFM based on self and other ratings of personality. This study reveals that individuals who report that their parents were loving scored lower in neuroticism and higher in extroversion, openness to experience, agreeableness, and conscientiousness than adult subjects who recalled unloving parental care. Individuals (especially men) who describe their parents as casual rather than demanding were lower in extroversion and conscientiousness but higher in openness to experience. Parental attention (i.e., spoiling) was associated with high extroversion and low agreeableness. All of the associations were modest and alternative explanations suggest that the correlations may be exaggerated, but this gives some proof of the role parents play in the development of the FFM traits.

Other notions of the environmental influences on the development of character are quite speculative. For example, Graziano (1994) asserts that the early relationship between an infant and a caregiver provides a critical context for personality development. After Main, Kaplan, and Cassidy (1985), Graziano suggests that sensitive, responsive caregiving leads to a positive model of relationships whereas inconsistent, inept caregiving leads to a negative model. It would not be difficult to bend this argument into guesses about the development of extroversion, openness, conscientiousness and neuroticism, but the enormous complexity of the issue of early human development throws such an entire enterprise into question. In short, the field is fairly mute on the issue of the development of “The Big Five” except that it has both genetic and environmental ontogenies.

Are FFM Traits the Midpoints Between Excess and Deficiency?

Aristotle conceived of virtues resting somewhere between the vices of excess and deficiency. Table 2 is taken from Eudemian Ethics, and it further elaborates on this notion of the “golden mean.”

A careful examination of the scales of the FFM might lead to some concerns about whether these scales have excess (or vices) at their extremes. On the basis of the discussion to this point, the scales of conscientiousness, agreeableness, and openness to experience might be thought to have ideal qualities at the high normal \(^6\) end of the scale. Extroversion seems to be a scale in which neither pole is exemplary of either good or bad character. And, neuroticism is a scale that has an obvious “good” pole at the low end and “bad” pole at the high end.
Table 2

Aristotle’s Table of Virtues

<table>
<thead>
<tr>
<th>Vice (Deficiency)</th>
<th>Virtue</th>
<th>Vice (Excess)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of Feeling</td>
<td>Gentleness</td>
<td>Irascibility</td>
</tr>
<tr>
<td>Cowardice</td>
<td>Bravery</td>
<td>Foolhardiness</td>
</tr>
<tr>
<td>Shyness</td>
<td>Modesty</td>
<td>Shamelessness</td>
</tr>
<tr>
<td>Insensibility</td>
<td>Temperance</td>
<td>Intemperance</td>
</tr>
<tr>
<td>Unnamed</td>
<td>Righteous Indignation</td>
<td>Envy</td>
</tr>
<tr>
<td>Gain</td>
<td>The Just</td>
<td>Loss</td>
</tr>
<tr>
<td>Meanness</td>
<td>Liberality</td>
<td>Lavishness</td>
</tr>
<tr>
<td>Self-Deprecation</td>
<td>Sincerity</td>
<td>Boastfulness</td>
</tr>
<tr>
<td>Surliness</td>
<td>Friendliness</td>
<td>Flattery</td>
</tr>
<tr>
<td>Stubbornness</td>
<td>Dignity</td>
<td>Servility</td>
</tr>
<tr>
<td>Submission to Evil</td>
<td>Endurance</td>
<td>Luxuriousness</td>
</tr>
<tr>
<td>Smallness of Spirit</td>
<td>Greatness of Spirit</td>
<td>Vanity</td>
</tr>
<tr>
<td>Pettiness</td>
<td>Magnificence</td>
<td>Extravagance</td>
</tr>
<tr>
<td>Simplicity</td>
<td>Wisdom</td>
<td>Rascality</td>
</tr>
</tbody>
</table>

Source: Eudemian Ethics 1220b: 39-1221a, 12

Actually, however, these impressions are accurate only insofar as “normal” persons are concerned. If one considers individuals who are regarded as mentally or emotionally troubled, an entirely new picture emerges. Specifically, abnormally high or low scores on the FFM scales are associated with identifiable psychological disorders. Table 3 summarizes these findings.

Notice that there is not a factor in the FFM that is immune from having a psychiatric disorder associated with both poles (Widiger and Trull 1992). On this basis, one might argue that the scales of the FFM define the midpoints between excesses and deficiencies known as human adaptive problems.

Parenthetically, these excesses and deficiencies are not vices in the traditional sense. One does not detect the cardinal sins here or even the extreme points that bracket the cardinal virtues. Again, since the FFM scales are more modern and populistic, such a correspondence should not be expected. Arguably, however, psychological disorders are the vices of contemporary life. The victims of these “vices” may be pitied, but they are generally regarded as incompetent to engage in normal social intercourse.

That the extreme points of the FFM are all associated with excesses and deficiencies supports the case that these traits of character may be virtues. Accordingly, one additional Aristotelian criterion has been satisfied.
Table 3

*FFM and Personality Disorders (Widiger, et. al., 1994)*

<table>
<thead>
<tr>
<th>Big Five Factor</th>
<th>Paranoid</th>
<th>Schizoid</th>
<th>Schizotypal</th>
<th>Antisocial</th>
<th>Borderline</th>
<th>Histrionic</th>
<th>Narcissistic</th>
<th>Avoidant</th>
<th>Dependent</th>
<th>Obs-Compulsive</th>
<th>Pass-Aggress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neuroticism</td>
<td>H</td>
<td>L</td>
<td>H</td>
<td>H</td>
<td>-</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>-</td>
</tr>
<tr>
<td>Extroversion</td>
<td>L</td>
<td>L</td>
<td>L</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>H</td>
<td>L</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Openness</td>
<td>L</td>
<td>-</td>
<td>H</td>
<td>-</td>
<td>-</td>
<td>H</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>L</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>L</td>
<td>-</td>
<td>-</td>
<td>L</td>
<td>L</td>
<td>-</td>
<td>L</td>
<td>H</td>
<td>L</td>
<td>L</td>
<td>L</td>
</tr>
<tr>
<td>Conscientious</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>L</td>
<td>-</td>
<td>L</td>
<td>H</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>H</td>
</tr>
</tbody>
</table>

*Paranoid individuals have the tendency to interpret the actions of others as deliberately demeaning or threatening. Schizoid persons are indifferent to social relationships and have a restricted range of emotional experience and expression. Schizotypal people have a pervasive pattern of peculiarities in ideas, appearance, and behavior and have deficiencies in interpersonal relations. Antisocial individuals show a pattern of irresponsible and criminal behavior. Borderline persons have a pervasive pattern of instability in interpersonal relationships and mood. Histrionic persons express emotions with an inappropriate exaggeration. Narcissistic people exhibit traits of grandiosity, entitlement, arrogance, and exploitation. Avoidant persons are hypersensitive to potential rejection, humiliation, or shame. Dependent individuals engage in a pattern of dependent or submissive behavior. Obsessive-compulsive persons demonstrate both perfectionism and inflexibility. Passive-aggressive people show a pervasive pattern of passive resistance to reasonable demands for performance (American Psychiatric Association, 1987).
Do Any of the FFM Traits Result in Individual and Community Flourishing?

This is clearly the most stringent criterion, for it requires associations of a trait state with both individual well-being and associated community well-being. Since most psychologists are unaware of how their models relate to concepts in ethics, it is not surprising that the evidence here has not been systematically gathered. However, there are hints in research results that give direction to certain conclusions.

Most of the empirical findings involve correlations, and this raises several issues that need to be addressed before we get into the results. First, since we have seen that the extreme ends of each scale are associated with psychological disorders, correlational findings appear to group together sick and healthy people. For example, if there were a high positive correlation between agreeableness and well-being, that would lead to the rather nonsensical conclusion that persons suffering from the psychological pathology of dependency (extremely high agreeableness according to Table 3) are happy and contented persons. Luckily, the correlational studies we will examine are ostensibly of normal people, so this issue should not concern us much. Second, correlation is an insufficient test of causation. So, if agreeableness is correlated with well-being, it doesn’t help us understand whether agreeableness leads to well-being or the other way around.

Individual Flourishing. A productive starting point are the scales of the FFM: extroversion, agreeableness, conscientiousness, neuroticism, and openness. The question becomes whether there is any indication that possessing a personality that is high or low on any of these scales improves individual flourishing.

Before we get into the answers to this question, however, we should really look carefully at the meaning of individual flourishing. Aristotle reasoned that the highest of all goods achievable by human action is eudaimonia, which roughly translates to fulfillment of one’s potential (Waterman 1984). This is by any measure an extremely subjective concept. Freud held that a truly fulfilled life required love and work. Humanistic psychologists like Jung (1933), Rogers (1961), and Maslow (1968) assert that fulfillment requires an openness to whatever life provides. Psychologists have attempted to capture these different meanings of eudaimonia as best they could (Ryff 1989); however, they have been more successful with measures of affect (e.g., positive emotions vs. negative emotions) than with measures that purported to capture all of the nuances of Aristotle’s term. This is not as troubling as it seems. Many of the measures of personal well-being correlate with one another very highly, so statistically, there is reason to believe that when one cites one variable of happiness or fulfillment, for all intents and purposes, one cites them all.7

Quite a bit of research deals with the question as to whether extroverted individuals are more fulfilled than introverted ones. One study by Headey and Wearing (1989) carried out a repeated panel of 600 Australians in 1981, 1983, and 1985. The results indicate that extroversion predisposed people to have favorable life events in the domains of friendship and work, and this led to positive
well-being (Argyle 1987). This is consistent with a McCrae and Costa (1986) study of adults that showed that extroverts handled stressful events much more adaptively than introverts. Research addressing the direct question of extroversion and well-being is about as conclusive as one finds in psychology. Extroverts experience both more positive emotion and less negative emotion than introverts (Emmons and Diener 1985, Costa and McCrae 1980). Moreover, they tend to experience more subjective well-being than introverts (McCrae and Costa 1991, Hotard et al. 1989). In one study incredible for the period of time it indexed, extroverted individuals sustained their positive well-being for up to 17 years beyond their initial assessment (Costa, McCrae, and Norris 1981). The authors concluded that extroversion was a significant factor in the adjustment to aging.

A casual examination of the scales in the agreeableness factor would lead to some speculation about how agreeableness might lead to individual flourishing. In the absence of empirical results, one might easily conclude that people high on this dimension would be markedly pro-social, and this tendency would necessarily redound to individual well-being. The empirical results support this speculation. McCrae and Costa (1991) demonstrated that agreeableness is positively associated with both positive affect and more inclusive measures of life satisfaction. Thus, the research evidence supports the contention that agreeable persons are more fulfilled than disagreeable persons.

When it comes to conscientiousness, there is actually considerable evidence that one might muster on behalf of a conscientious person either enjoying significant personal rewards or avoiding personal misfortune. First, persons high in conscientiousness tend to regulate themselves during instances of frustration (a common event in any social community) (Digman and Takemoto-Chock 1981). This is in contrast to individuals who show an absence of self-control in such situations and who are actually prone to criminal behavior (Gottfredson and Hirschi 1990). Similarly, conscientious persons tend not to engage in alcohol abuse and have the lowest likelihood of a family history of alcohol abuse (Martin and Sher 1994). Conscientious individuals also are least prone to automobile accidents (Arthur and Graziano 1996). What conscientious individuals are prone to seems aligned with individual flourishing. First, they have personal projects (allocation of their personal time) that are rated as productive by independent judges (Little 1989; Little, Lecci, and Watkinson 1992). Moreover, as adolescents, they tend to be rated by their teachers as well-adjusted (Graziano and Ward 1992). And finally, they tend to achieve better in school than anyone else who has the same educational potential (Digman and Inouye 1986, Tomlinson-Keasey and Little 1990). Not surprisingly, then, when conscientiousness has been related directly to individual well-being, it has been positively related (McCrae and Costa 1991).

As for neuroticism, no evidence would seem necessary to support the generalization that individuals high in neuroticism will not flourish in any mainstream contemporary milieu. Institutional arrangements systematically marginalize neurotic people. Any hope very neurotic individuals have for a happy life is contingent on the ability of others to care for them. In fact, Watson and Clark (1984) have
shown that neurotic individuals experience chronic negative emotions, hardly the stuff of individual flourishing. Moreover, McCrae and Costa (1987) have shown correlations between neuroticism and low esteem, poor control of impulses, somatic complaints, and ineffective coping. Moderately neurotic people, on the other hand, may find independence in their ability to perform certain roles in society. We might speculate that comics, actors, artists, writers, and musicians (who seem to team moderate neuroticism with high openness to experience) are examples (Gluck 1996). Yet, that does not diminish the fact that most every study on neuroticism and well-being shows a negative relationship (e.g., Costa and McCrae 1980, Emmons and Diener 1985, Hotard et. al. 1989, McCrae and Costa 1991).

One of the puzzling findings in the personality-happiness literature is that the last factor in the model, openness to experience, shows little if any relationship to well-being. Recall from Table 1 that such individuals are imaginative, aesthetically responsive, curious, and open-minded. These are just the attributes humanistic psychologists have touted as the keys to psychological growth and fulfillment. The empirical evidence shows that openness is a double-edged sword. It is true that open individuals experience positive emotions, but they experience negative emotions as well (Costa and McCrae 1984).

Integrating all of this individual flourishing data leads us to several conclusions. First, although there are clearly different conceptualizations about just what flourishing is, normal adults who are high on extroversion, agreeableness, or conscientiousness or low on neuroticism are more fulfilled than persons with the opposite personalities. There isn't the hard data to support the conclusion that openness to experience is associated with well-being, but it remains a relationship central to theorizing about human potential.

Organizational Flourishing. Any attempt to relate personality characteristics to organizational flourishing is plagued by one fundamental problem. Namely, personality is a measurement at the individual level of analysis and any measure of organizational thriving is a variable at the group level of analysis. Without any prior notions of how individual characteristics aggregate to effect group outcomes, we cannot link the two. One way around this problem is to assume that organizations learn what personalities lead to good organizational outcomes, and they systematically prefer, support, and nurture such individuals (Beyer and Niño 1997). Thus, by showing that a particular personality leads to better job performance, we can show indirectly how personality might impact organizational flourishing.

It is important not to minimize the possibilities of miscalculation if this assumption is used. Some organizations may not learn correctly what personalities are of value to their functioning. Organizational well-being may be independent of the character of their employees (e.g., the organization may have sufficient monopoly power to employ whoever it wants and still flourish). Organizational roles may be so diverse that no single personality profile would ever be preferred. Sheer job performance may predict organizational performance, but it may seriously under- or over-estimate true organizational flourishing. Clearly,
there are significant potential problems in the assumption that a relationship between personality and job performance implies a relationship between personality and organizational flourishing. Yet, this would appear to be the only means possible to satisfactorily address the level of analysis problem.

It should also be clear that the foregoing analysis is about work organizations in general rather than organizations that produce specific goods. Earlier, we pointed out the possibility that certain professions in the arts may be composed of exceptional individuals who are moderate in neuroticism and high in openness to experience. If such speculation is true, that may be the profile for people effective in the organization of artistic endeavors (e.g., curators, orchestrators, accountants for artist cooperatives, photographic editors, etc.). Similarly, if the organization's societal role is doing espionage, a completely different set of personalities may be deemed virtuous. For those at work on an ethics of organization, the central question is whether there are features of character that are virtuous in virtually all types of work.

Some work has been done on this front. For example, Galston (1988, 1989) asserts that every organization needs courage, law-abidingness, and loyalty and that market economies demand the virtues of the work ethic, the capacity to delay gratification, and the ability to change jobs and place of residence. Furthermore, he asserts that the virtues of leadership include the patience to work within the limits imposed by social diversity and (contractual) limitation; the capacity to forge a sense of common purpose; the strength to resist the temptation to pander to the public whim; the capacity to narrow the gap between public preference and wise action and between principles and practices; and the disposition to engage in public discussion. To such taxonomies, Solomon (1992) adds these business virtues: honesty, loyalty, sincerity, courage, reliability, trustworthiness, benevolence, sensitivity, helpfulness, cooperativeness, civility, decency, modesty, openness, cheerfulness, amiability, tolerance, reasonableness, tactfulness, Wittiness, gracefulness, liveliness, magnanimity, persistence, prudence, resourcefulness, cool-headedness, warmth, hospitality, and especially toughness. Moberg (1997) has argued on behalf of the universal collegial virtues of trustworthiness and attachment to common projects for their own sake. In addition, he has attempted to demonstrate that trustworthiness and conscientiousness are managerial virtues no matter what the goods an organization produces (Moberg 1997-98). So, business ethics researchers have begun to identify those traits of character that would be virtuous in any work organization.

Returning to the central issue of this section, have any of the traits of character in the FFM been shown to enhance job performance? Here the answer is both affirmative and mixed. Two large meta-analyses of the relationship between personality and job performance have been conducted (Barrick and Mount 1991; Tett, Jackson, and Rothstein 1991). Although the methodology of meta-analysis remains in the formative stage of development, it subjects to analysis many studies (both published and unpublished) and attempts to draw "scientific conclusions." Peculiarly, the conclusions reached about which elements of personality are critical
to job performance varied with these two studies. Barrick and Mount (1991) surveyed studies involving professionals, police, managers, sales, and jobs that were in the skilled/semi-skilled category. On the basis of multiple performance criteria, they concluded that (high) conscientiousness was most predictive of all the criteria. Furthermore, they showed extroversion was important for jobs requiring social interaction, and openness to experience and extroversion were related to performance criteria involving skills acquisition. In contrast, Tett, Jackson, and Rothstein (1991) found the strongest personality-performance relationship to be with agreeableness (+.33), followed by openness to experience (+.27), neuroticism (−.22), conscientiousness (+.18), and extroversion (+.16) (cf. Tett, Jackson, Rothstein, and Reddon 1994).

Interpreting mixed results like these is difficult, especially when one realizes that Barrick and Mount considered the results from 117 studies and 23,994 subjects, and Tett et. al. looked at 97 studies with 13,521 subjects. My own interpretation is in agreement with Williams et. al. (1995) that conscientiousness and agreeableness are most important for flourishing in the workplace (cf. Moberg 1997–98). This conclusion is supported by one study that showed that managers used conscientiousness and agreeableness as critical criteria for hiring decisions on a diverse array of jobs (Dunn, Mount, Barrick, and Ones 1995). And, in a series of studies with sales personnel (Barrick and Mount 1993; Barrick, Mount, and Strauss 1993, 1994), conscientiousness rather than extroversion was the most consistent predictor of performance.

**Overall Assessment of the Traits Embedded in the FFM that May Be Virtues**

Table 4 summarizes the conclusions of the last five sections of this paper. It shows that all trait states in the FFM are characteristically human in the sense that they are observed in many different cultures. All have been shown to be acquired through developmental experiences, although all of these developmental processes are not precisely known. The FFM defines traits of character that exist between extremes associated with psychological dysfunction. When it comes to individual flourishing, we were able to determine the best point on the factor scales. For extroversion, agreeableness, and conscientiousness, individual flourishing is optimal in the high normal range, and for neuroticism, individual flourishing is optimal in the low normal range. Unfortunately, the factor of openness to experience has yet not been associated with individual flourishing, at least in the sense in which that is conventionally measured in social psychology. The last column represents conclusions about the relation between FFM traits and organizational flourishing. Once again, it is concluded that while organizational performers are usually high normal on agreeableness and conscientiousness, they are sometimes high normal on extroversion and openness to experience, and low normal on neuroticism. Taking all of this into account, then, it appears that the strongest case can be made on behalf of organizational virtues of agreeableness and conscientiousness.
Table 4

**FFM as Organizational Virtues**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Human</th>
<th>Developed</th>
<th>Midpoint</th>
<th>Individual Flourishing</th>
<th>Organizational Flourishing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extroversion</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Openness</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Sometimes</td>
</tr>
</tbody>
</table>

This is not an unreasonable position when one considers the components of these two elements of character. Conscientious people have a sense of competence, have orderly work habits, are principled, diligent, and self-disciplined. Agreeable persons are frank, disposed to trust others, and are humble, compliant, and sympathetic. Although one could surely identify other traits associated with an ideal employee, in no case would conscientiousness and agreeableness be a liability.

**Limitations of These Findings**

It is important to appreciate that this result does nothing to rule out other FFM traits as organizational virtues. In this respect, I must confess a concern that without a virtue of high openness to experience, agreeableness and conscientiousness are entirely too technocratic. I may overstate this point, but the image of a hard-working, cooperative dolt does not have any heroic quality at all. Perhaps it is because I am an educator that I was really pulling for the FFM factor of openness to experience to pass all the tests I subjected the FFM traits to. Unfortunately, the evidence failed me where I think an argument would succeed. I suspect that these tests failed because the only measures of psychological well-being available are too evanescent to capture entirely the sense of flourishing implied by Aristotle. In any event, I am reluctant to endorse any set of virtues including conscientiousness and agreeableness that does not at the same time dispose an individual to the skepticism and practical wisdom implied by high openness to experience or something of the sort.

The principal conclusion of this paper says nothing about the relevance of the cardinal virtues to organizational life. Recall that we set them aside on behalf of the FFM because (a) there is little published work on the cardinal virtues...
in social psychology and (b) they do not define truly independent categories of dispositions. Organizational virtues of conscientiousness and agreeableness come closest to the cardinal virtue of justice, so justice as an organizational virtue is hinted at. No support whatsoever appears for an organizational virtue of courage or temperance, and wisdom fails on the same basis as openness to experience. However, it was the traits of the FFM and not the cardinal virtues that were the subject of this study. Any implications regarding the cardinal virtues are highly speculative.

As a final test of the limitations of any study like this one, it is often useful to subject the findings to a common-sensical "sniff test," i.e., do the results make sense in light of common experience and everyday wisdom? By this standard, one might ask whether conscientious or agreeable persons both thrive in organizations and help organizations become the best that they can be.

On the first score, this paper has shown that conscientious persons generally flourish in modern organizations. Does that jibe with images from contemporary culture? Not always, for images from pop culture often disregard the virtue of conscientiousness beginning with Ferris Bueller, moving on to Beevis and Butthead, and culminating in advertising images that glorify selfish consumption and ridicule hard work. If pop culture is providing the sniff, one wonders whether conscientiousness is a virtue that is merely quaint.

At the risk of espousing corny traditional values, I must rise to challenge this pop-culture image. It is hard to imagine organizations staffed entirely with persons without conscientiousness; and it is hard to imagine persons flourishing who pass through life without dedicating themselves to anything but their own satisfaction. Perhaps the fabric of our work culture can be bent to tolerate slackers, but that is a future that requires more imagination than I am presently able to muster.

A similar attack might be mobilized against agreeableness as an organizational virtue. Here the argument gains strength from the contemporary business media that gives us biographies by admitted S.O.B.s (Neuharth 1989), periodic treatments of disagreeable bosses (e.g., "America's Toughest Bosses," 1993), and stories that accord organizational skills to lucky or technically clever entrepreneurs like Bill Gates (Wallace 1997). As salient as these personalities are, they are not the organizationally virtuous persons who disprove the findings of this paper. If anything, they are the anomalies that owe their individual flourishing mainly to good fortune, excellent timing, and monopoly power. Stripped of these factors, organizational flourishing is highly suspect.

Implications

In this section I intend to discuss some of the theoretical and practical implications of the foregoing analysis. I will begin with the theoretical.

To me, the most interesting theoretical issue to emerge from this analysis regards the psychological underpinnings of any theory of virtue ethics. As we have seen, the master virtue ethicists founded their models on a set of psychological
suppositions based upon their notions of rationality, will, sentiments, and emotion. Contemporary models of the organizational/business virtues (e.g., Maitland 1997, Moberg 1997, Shaw 1997, Solomon 1992) are similarly based on suppositions, this time about the psychology of markets and organizations. In contrast, the FFM is based not on the suppositions of scholars but on the normal, everyday use of trait descriptors by ordinary people. This raises a number of fascinating questions about the field of business ethics. For one, does business ethics as an applied discipline have a responsibility to reflect conceptualizations among practitioners as ordinary people? The FFM gives no voice to scholars, but instead derives models from the categories average people actually use. The resultant conceptual categories may strike scholars as gross and undifferentiated, but they reflect how ordinary people wrestle with character descriptions. Given that business ethics is applied ethics, is this legitimate? Is it desirable for business ethics to mirror practitioner distinctions?

Clearly, if business ethics opens itself to practitioner categories, it may sacrifice conceptual precision (e.g., practitioners may not appreciate the nuances between prudentia and phronesis). Every philosopher worth her salt considers certain conceptual and linguistic differences important. Without them, can philosophers effectively make their arguments?

If business ethics remains true to its own conceptual categories, what will become of practitioner concerns? Will important differences between scholars and practitioners be resolved in a productive discourse? Let us acknowledge that business school professors are closer to business professionals than philosophers. Given that, compare the attributes business school professors associate with wisdom (Sternberg 1985):

- maturity of judgment, understanding of the limitations of one’s actions and recommendations, knowing what one does and does not know, possession of a long-term perspective on things, knowing when not to act as well as when one should act, acceptance of reality, good decision making, the ability to distinguish substance from style and appreciation of the ideologies of others (p. 624)

to the attributes philosophy professors associate with wisdom:

- balanced judgment, nonautomatic acceptance of the accepted wisdom, concentration on fundamental questions, resistance to fads, looking for fundamental principles or intuitions behind a viewpoint, concern with larger purposes, openness to ideas, ability to use facts correctly, avoidance of jargon, possession of a sense of where future progress is possible, unwillingness to become obsessed with a single theory, attention to both detail and scope and a sense of justice. (p. 624)

There are striking differences here, and the question becomes whether these are relevant, and if so, how they work themselves through an ethics of business organizations.

The question of parsimony is also raised by this analysis. Once raised, is it defensible to have a very large number of conceptual categories? For example,
Solomon (1992) offers up thirty organizational/business virtues. These are much more inclusive than the FFM’s five or the cardinal virtues’ four. But who can hold thirty terms in one’s mind simultaneously? Doesn’t the FFM or the cardinal virtues come closer to being an implicit virtue theory each of us can actually use (Borkenau 1992)? Many years ago, psychologist George Miller (1956) showed that man’s conceptual capabilities limit us to holding no more than about seven items in our minds at the same time. The FFM and the cardinal virtues taxonomy reminds us that models of virtue need to be parsimonious if they are to be useful. While no one would ever argue that every human calculation should have fewer than seven factors, intuitiveness is sacrificed when they do not.

Virtue is a concept that has always denoted excellence on the part of an individual. This paper has been faithful to that meaning. With today’s increased focus on teamwork rather than individual contribution, one wonders whether the concept of virtue is a bit shop-worn. For example, is it possible that a partnership of two co-workers might do very well if one person was conscientious and the other agreeable? Alternatively, is the right number of conscientious persons N (the total number of employees) or something less than N in order to stimulate questions about how hard one should work or what duties one has? Taken alone, agreeableness is a virtue that is less prone to such concerns. It is at once both individual and social, and it does not require contrast to demonstrate its value. Nonetheless, there may be value in contemplating the existence of a virtue attributable to a group rather than an individual.

From a practical vantage point, the analysis in this paper is most relevant to the business function of human resource management. This paper offers a prima facie case for conscientiousness and agreeableness as (insufficient) selection criteria in hiring decisions. Obviously, this does not preclude the need to validate other specific selection criteria for specific jobs. Indeed, there may be some organizational positions (e.g., receptionist) that require extroversion. Other positions may require a high level of openness to experience (e.g., philosopher) or a low level of neuroticism (e.g., counselor). In any event, these traits would seem to constitute additions to, rather than substitutions for, the core virtues of conscientiousness and agreeableness.

A final comment about the results of this analysis concerns the meaning of “organizational” in organizational virtues. The general finding that conscientiousness and agreeableness are organizational virtues holds only if work is done with the typical interdependence of a work organization. Aggregations of employees working with minimal necessary cooperation are really not organizations in the conventional sense, and as such any organizational virtues would not apply. For example, I can imagine hiring a professor at my university who was a great teacher and scholar but who was disagreeable as long as we could insulate her from any organizational responsibilities. Indeed, I find this a pleasant fantasy during faculty committee meetings.
Notes

The author thanks Kathleen Kiehl and the editors of BEQ for their helpful comments on this paper. In particular, there was one anonymous reviewer whose comments were so influential that the paper was significantly improved as a result of his/her inputs. In his twenty-five years of published research, this author has never before experienced as meticulous and helpful a series of reviews. Any remaining errors are the author's, of course.

1Goldberg (1993) attempts to distinguish the FFM from “The Big Five” on methodological grounds. Since the findings of the FFM and “The Big Five” are virtually identical, these two terms will be used interchangeably in this paper.

2Allport and Odbert defined a trait as “generalized and personalized determining tendencies—consistent and stable modes an individual’s adjustment to his environment” (p. 26). The trait names chosen were non-judgmental in the sense that they excluded terms like “excellent,” “good,” and “virtuous.” Included were many terms that are virtue- or vice-like (e.g., courageous, fair-minded, cruel, and lazy).

3After the proper number of factors has been obtained in a factor analysis, the residual is the “left-over” data. A concern here is whether there is a factor or factors in this residual that researchers have simply been unable to tease out.

4The evidence would not seem to support the Aristotelian idea that to have wisdom requires possession of all other cardinal virtues.

5This was attempted in Moberg (1997–98), but the argument was criticized for representing a specieist bias.

6The term high normal is used because the studies cited up to this point have involved subjects that were ostensibly normal, i.e., few were apparently suffering clinical psychiatric disorders.

7For a fascinating paper that takes the position that conventional measures of well being focus much more on happiness (hedonia) than fulfillment (eudaimonia), see Ryff 1989.

8Earlier it was asserted that an important criterion for establishing that a character trait is a virtue is community flourishing. Since my concern is with organizational virtues, I take a work organization as the relevant community.

Bibliography


“America’s Toughest Bosses,” Fortune 128, no. 9 (October 18), pp. 38–46.


