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Discovering Your Personality: A Group Exercise In Personal Sensemaking

Marc H. Anderson
University of Waikato

Personality affects a wide variety of issues in organizational behavior, human resource management, and strategic management. Instructors teaching personality often have students take personality tests and then give them their scores. This passive approach to giving test feedback suffers from several weaknesses dealing with distinct perceptual biases. The author presents an experiential group exercise that helps overcome these problems and that has a broad range of applications in management and social science courses that discuss personality.

Keywords: *personality; group exercise; sensemaking; perceptual biases; experiential exercise; experiential learning*

Teaching management students about personality is important because personality is widely recognized as having significant implications for organizational behavior (e.g., Day, Schleicher, Unckless, & Hiller, 2002; George, 1992), human resource management (e.g., Mount & Barrick, 1995), and strategic management (e.g., Haley & Stumpf, 1989). Personality traits can be defined as a person's "characteristics that are stable over time, provide the reasons for the person's behavior, and are psychological in nature" (Mount, Barrick, Scullen, & Rounds, 2005, pp. 448-449). Although researchers have long theorized about and examined the role of personality in management, the lack of an accepted framework of personality made it difficult to accumulate these earlier findings into an overall coherent understanding.

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By the late 1980s and early 1990s, however, there emerged a widespread acceptance among personality psychologists that the structure of personality at the broadest level consisted of five traits known as the "Big Five": Extraversion, Agreeableness, Conscientiousness, Emotional Stability (or Neuroticism), and Openness to Experience (or Intellect) (for additional theoretical background, see Digman, 1990; John & Srivastava, 1999; McCrae & Costa, 1997; McCrae & John, 1992). The relatively recent convergence on this "five-factor model of personality" and the development of reliable and valid personality measures have enabled researchers to more clearly recognize the central role that personality plays in management. Recent research has clearly and convincingly shown that the Big Five personality traits relate to an extensive range of management issues including motivation (Judge & Ilies, 2002), leadership (Judge & Bono, 2000; Judge, Bono, Ilies, & Gerhardt, 2002), job satisfaction (Judge, Heller, & Mount, 2002), overall job performance (Dudley, Orvis, Lebiecki, & Cortina, 2006), creativity (George & Zhou, 2001), entrepreneurship (Zhao & Seibert, 2006), and expatriate success (Shaffer, Harrison, Gregersen, Black, & Ferzandi, 2006).

Although instructors could merely discuss the role that personality traits play in these and other management issues, such an approach would hardly make the topic come alive to students, who would be left wondering how they themselves would score on those personality traits. Not surprisingly, therefore, a widely used approach to making discussions of personality more relevant to management students is to have those students complete personality tests and give them their scores.[1] Indeed, several writers have discussed possible uses of personality tests in management education, such as helping students identify vocations in which they are likely to be more fulfilled (Lowman, Parker, & Dodge, 1982) and in enhancing interpersonal relations and team development (Clinebell & Stecher, 2003). More recent research suggests that personality tests can also be used to help students examine why people with personality traits matching their own may be more or less likely to obtain leadership positions (Judge & Bono, 2000; Judge, Bono, et al., 2002), be motivated by goals (Judge & Ilies, 2002), and have higher levels of job satisfaction (Judge, Heller, et al., 2002). Giving students their personality test scores enables them to relate on a deeper personal level with the extensive range of management issues that personality affects. Yet although having students take personality tests and giving them their feedback can be effective, it offers students a fairly passive role in the process. Such a passive role may become less and less appropriate as students increasingly want and expect to play a more active role in their education (Proserpio & Gioia, 2007). In addition, merely giving students

their personality scores misses a significant learning opportunity for students to more critically examine their own personalities and the validity of personality testing in general.

This article presents an experiential group exercise in which students complete a series of personality tests, but rather than merely being given their test results, students are required to figure out the meaning of their results through an entertaining group exercise. In addition to being a more active exercise that may resonate with modern students, the approach offered here overcomes several other distinct limitations that accompany the more passive and traditional use of personality tests in management education. These limitations are discussed below. The overall purpose of the experiential exercise is to give students a richer and fuller understanding of their own personalities, as well as a demonstration of the limitations of personality testing, so that the relationships between personality and various management issues that instructors wish to discuss are more meaningful and relevant to the students.

Several Problems With Giving Personality Tests to Students

Three issues limiting the usefulness of giving personality feedback as a pedagogical device are that (1) the personality feedback may be seen as common sense, (2) there are well-established psychological biases that lead many people to accept vague or incorrect personality feedback as valid, and (3) giving feedback does little to highlight potential imperfections of the personality test instruments themselves. Each of these warrants discussion.

The first problem with giving students their personality scores is a direct byproduct of a fundamental assumption of personality testing in the first place—that students know themselves reasonably well. After all, personality scores are calculated based on responses students give to various questions about themselves. Indeed, if the tests are accurate, the results should not be a huge surprise (e.g., if I think I am very much an introvert, a test result that said I was an extravert would be suspect). Although this can have the beneficial result of providing face validity for the personality tests and make it more likely students will accept the results, it can also make those results less interesting. Because people generally believe they know what their personalities are like, a likely reaction among many students to their test results is that they simply reaffirm their assumptions, and therefore are obvious and relatively uninteresting (Davis, 1971, 1999; Weick, 1979, 1989). Conducting exercises that merely tell students what they already know contributes to the (incorrect)

perception that much of the academic knowledge about management is merely common sense (Priem & Rosenstein, 2000).

Exacerbating this problem is the hindsight bias, which is the tendency to overestimate how predictable an outcome was once the outcome is known (Christensen-Szalanski & Willham, 1991; Fischhoff, 1975). In the context of personality feedback, once students have their results, this bias suggests they will overestimate how easily they could have guessed what their scores would have been.

But the interesting reality is that people generally do not know themselves as well as they think they do, and this is especially true when they are considering how their personalities *compare with others*. Research shows that people hold positive illusions about the self (Taylor & Brown, 1988). In domains where individuals generally have some degree of familiarity and ability, including many that are directly related to management (such as being intelligent, being honest, possessing communication skills, getting along with others, and having leadership skills), a majority of people consistently rate themselves as above average. This phenomenon has been labeled the Lake Wobegon effect (Kruger, 1999). Because several personality traits are linked with valued outcomes such as career success, students typically will be motivated to appear more positive on those traits and may unrealistically believe that they score higher on those traits than they do. Exercises that highlight such illusions, like the one presented below, can give students a clearer insight into their personalities than the test scores do by themselves. They are also more likely to disconfirm students' assumptions and be considered interesting (Davis, 1971, 1999; Weick, 1979, 1989).

A second problem of administering personality tests is the fact that people are generally overly willing to accept personality test results as valid and hence are less critical than they probably should be. In fact, people even accept completely vague and generic personality profiles and believe they are remarkably accurate and specific descriptions of themselves, a finding known as the Barnum effect (also called the Forer effect; Dickson & Kelly, 1985). This tendency has been linked to the popular belief in such pseudoscientific practices as horoscopes and cold reading (Dutton, 1988). (People do recognize completely random personality feedback, however—see Andersen & Nordvik, 2002.)

A primary reason that people are so accepting of personality descriptions involves the confirmation bias, which is the tendency of individuals to seek evidence that supports a particular belief or hypothesis and ignore evidence that does not fit (Klayman & Ha, 1987; Wason, 1960). In a study of why people believe the predictions of horoscopes, Fichten and Sunerton (1983, p. 131) note that "people may be motivated to ignore predictions that

do not fit and to focus on predictions which do." Research on how human mental systems believe contends that people are initially disposed to treat any statement they hear as true (Gilbert, 1991), and only after this initial acceptance do they consider whether the statement may instead be false and revise their beliefs accordingly, unless distracted from doing so. Personality feedback may thus be initially accepted as true, and research shows that people often then seek and find confirmatory evidence for why personality descriptions are valid (Davies, 2003). Thus, at least to some extent, "any" test results people receive regarding their personality may be uncritically accepted as valid. The class exercise presented below overcomes this problem by having students actively consider their personality in an entertaining way *before* they learn what their results are.

The confirmation bias is related to a third problem with personality tests: the fact that people receiving feedback may overestimate the accuracy and validity of the tests (Oliver, 1982). Although personality tests have clearly been shown to be reliable and valid (John & Srivastava, 1999), no social science measure is perfect. As Oliver (1982, p. 42) claimed, "It is destructive to leave students either with the idea that tests are infallible or that tests are not to be trusted." Lowman et al. (1982, p. 45) also stress the importance of "pointing out the possible imperfections of the theory" and note that this "is especially important to prevent students from placing undue emphasis on their results or stereotyping themselves or others."

In-Class Group Exercise

Given these limitations of administering personality tests to management students, novel approaches are needed. The in-class group exercise presented here is one such approach. It was designed to overcome these problems as well as provide insight into students' personalities relative to their peer group and give them a frame of reference for discussing research showing how personality is related to other management issues. More specifically, the exercise has the following four learning objectives:

1. To engage students experientially so they better learn the traits that comprise the dominant view of personality used by organizations and organizational researchers and can appreciate how these personality traits apply to different managerial and organizational contexts.
2. To generate enthusiasm and interest in the role of personality in management by giving students a personal frame of reference to relate research findings to.

3. To compel students to reflect seriously on their personality traits in relation to their peers, giving them a more critical understanding of their personalities.
4. To more vividly illustrate the potential limitations regarding the validity of personality test instruments.

I present a brief synopsis of the exercise here, and provide full details in Appendix A. The exercise involves having students first fill out a series of personality tests, including one or more measures of the Big Five. This can be done either in a prior class or as a take-home assignment. After collecting these tests, the instructor calculates each student's results (outside of class) and converts their scores into standardized scores, so that scores have a mean of zero and a standard deviation of one. This conversion is done to facilitate students' comparisons with either imagined others or the actual scores of others in their groups, because it makes scores above and below the mean more vivid.

In a later class during which the relationship between personality and various management issues will be discussed, the instructor returns students' standardized scores as a set of unidentified and therefore meaningless numbers, but in a distinct order that is the same for every student. That is, students' personality scores are given in a particular order (e.g., Conscientiousness, Agreeableness, Openness to Experience, Extraversion, and Emotional Stability), but those trait labels are *not* given. The instructor also gives students descriptions of each personality trait and briefly discusses them (see Appendix B for descriptions and sources of several Big Five personality scales). The instructor then tells students that their personality feedback is given as standardized scores, and explains what that means, emphasizing that a score of zero means that the student has an average value on that trait, and differences from zero represent the number of standard deviations above or below the mean.

With this preparation, students are split into groups of five and given the task of determining which trait corresponds with each of their scores. They do this by using their individual scores and their beliefs about how they would score on each of the traits, and then coordinating their guesses about various traits with their fellow group members. This activity is set up as a race between groups to determine the correct order to increase student interest. Although one group will "win" the race, the instructor should provide sufficient time for each group to wrestle with the task before announcing the correct answers, which is typically about 15 min. After giving the correct order, the instructor should debrief the exercise. Because of the importance of debriefing, I discuss it separately below.

Following debriefing, the instructor is ready to discuss research showing how the Big Five personality traits relate to various issues and outcomes of interest and/or other issues related to personality tests. The time required for this will depend on how much material relevant to personality the instructor wishes to cover. Naturally, different courses will involve different material. Although it is impossible to review all the ways that personality might be incorporated into diverse management classes, I offer a few examples here. In human resource management courses, the instructor would likely want to discuss how personality can be used in selection, and whether it should be (see Morgeson et al., 2007, for an excellent review of the relevant issues). The fact that students will have their own scores on the Big Five, and will have thought critically about the validity of their own results and what they mean, sets the stage for a very interesting discussion of whether employers should establish minimum levels for desirable traits for the purposes of recruiting and placement. Furthermore, this discussion leads to the issue of faking—whether applicants can answer in a socially desirable way, to their personal benefit and the detriment of the employer—and whether faking matters and can be detected (e.g., Ones & Viswesvaran, 1998). There is evidence both that faking does occur (Robie, Brown, & Beaty, 2007) and that it affects selection decisions (Winkelspecht, Lewis, & Thomas, 2006).

In organizational behavior classes, the instructor could usefully discuss personality as it relates to the issue of team performance. In particular, an emerging stream of research has investigated the notion of group or team personality, which aggregates the individual personality scores of the group members to the group level. This research has found that group personality strongly affects group performance (e.g., Barry & Stewart, 1997; Halfhill, Sundstrom, Lahner, Calderone, & Nielsen, 2005; Neuman & Wright, 1999). This exercise could also be used very effectively in discussions of perceptual biases (e.g., Lake Wobegon effect) and social comparison processes (Festinger, 1954). Regarding the latter, an important issue is the degree to which personality is a social phenomenon, because judgments of one's own traits are likely assessed in large part through implicit reference to comparison with others such as peers and family. Beyond relating personality to various outcomes and topics of interest to human resource management and organizational behavior classes, this exercise can also be used in research methods courses, where it can serve as an engaging prelude to discussions of such topics as scale reliability, reverse-coding of survey questions, response bias, and factor analysis.

Finally, the instructor can repeat the exercise using a different set of more targeted personality traits (see Appendix C for the five other traits that

I use and the sources of the scales to measure them). I generally also have students write a short reaction paper which forces them to revisit the personality material and consider what they have learned about themselves.

Debriefing the Exercise

Lowman et al. (1982, p. 45) claim that to promote the effective use of personality tests, "The instructor should take pains throughout the exercise to emphasize that no type is superior to another and that each makes a unique contribution to an organization." Prior to modern tests that show convincing reliability and validity, and research showing clear links to important management issues, this advice was particularly needed and helped promote the desirable goal of social equality. Although in an ideal world it would be nice if all personality traits were equally beneficial for people, it is important not to belittle research findings suggesting that certain traits are more frequently associated with various desirable outcomes. This is perhaps most clearly shown in the research relating personality to health outcomes. John and Srivastava (1999, p. 130), for example, note that accumulated evidence "now suggests that the regular and well-structured lives led by individuals high in Conscientiousness are conducive to better health outcomes and longevity, whereas antagonistic hostility (i.e., low Agreeableness) and negative affect (i.e., high Neuroticism) appear to be risk factors." Simply put, some personalities seem to be better suited for various jobs, which is why students typically are motivated to appear positively on these traits. Thus, although one certainly could imagine an extremely introverted motivational speaker, or a successful actor who scores very low on self-monitoring, such cases are likely to be rare and unusual.

Despite this point, it is essential that students leave the exercise with a secure knowledge that people with every conceivable personality trait combination can be very successful at any job. Clinebell and Stecher (2003) briefly discuss the desirability of certain extreme traits that could be mentioned to students. People who score low on Emotional Stability and Agreeableness, for example, may make better bill collectors, who sometimes need to adjust their emotions and become irritable (Sutton, 1991). Similarly, the strong convictions of highly dogmatic individuals may be seen as inflexibility, but this is sometimes beneficial when they are in fact right about a course of action. (See also Nettle, 2006, who provides an evolutionary viewpoint that suggests that there are distinct costs and benefits associated with differing levels of each of the Big Five traits.)

Several other very important points can be legitimately stressed to help overcome any negative feelings that "undesirable" personality scores might engender. First, the calculation of scores is based on a distinctly outstanding group of people—those attending college or the business school—and the means of the entire class may well differ significantly from those of the general population. For example, people attending college may be more likely to score higher on Conscientiousness than those who do not. This is an important point to emphasize, because students who score low relative to their class peers may nonetheless score higher than average relative to the general population or other populations.[2] Second, although there is a significant genetic component to personality traits (Caspi, Roberts, & Shiner, 2005), traits do change over time (Srivastava, John, Gosling, & Potter, 2003). Of particular relevance to college-age students is research suggesting that most people increase on Agreeableness, Conscientiousness, and Emotional Stability as they age and become more mature (Caspi et al., 2005). Third, because the scores are calculated relative to the scores of other students, the instructor can mention that faking and social desirability may have been an issue, and, if some students answered in an unrealistically positive manner, this would serve to lower the scores of other students who answered truthfully. Although it is worth making this statement, the likelihood that this kind of behavior would make a dramatic difference in people's scores seems fairly unlikely. Finally, the instructor should note that although most management and psychology researchers studying personality adopt a trait perspective, this perspective on personality has been strongly criticized by some scholars (e.g., Block, 1995), and personality traits are very clearly only one aspect of the scientific understanding of a "whole person" (McAdams & Pals, 2006), albeit an important one.

Furthermore, as Cervone (2005, p. 429, italics in original) notes, personality traits are not "things people *have*, but . . . summarize things people tend, on average, to *do*." This is significant, because it means that if people change their behavior (i.e., act differently), this effectively will change their personality. My experience has been that differences between students' envisioned personalities and their test results can motivate them to try to change. If students view themselves a particular way, and learn that according to the test results their personality traits are less ideal and distinctive than they formerly thought, they can use their former beliefs as "possible selves" to which they can aspire (Markus & Nurius, 1986). That is, before the test results are known, many possible selves are conceivable, or at least could possibly match the data. After the results are known, there is a potential conflict with their desired self and test results. This cognitive dissonance

may prompt them to take action to change in the direction of their desired self. For example, a student who believes she is more conscientious than others and learns that she is instead average on this trait, may take actions to become more conscientious, particularly after learning that this trait is related to success and health. Having students guess forces them to create a profile that is meaningful to them and makes sense, and often the true results conflict with this created vision, promoting thought and leading to greater self-awareness and understanding.

Discussion

The pedagogical value of this group exercise is that it helps overcome the problems discussed earlier with simply giving students their personality feedback, by requiring students to think more deeply about their personality scores. Students typically have feelings regarding which traits they would like to score high or low on, and most believe themselves to be above average on desirable traits and below average on undesirable traits. For example, few students want to believe that they are more neurotic or dogmatic than their classmates. Students generally want to score high on Conscientiousness, particularly because research shows it is related to individual job performance and career success (Dudley et al., 2006). Higher scores on Openness to Experience are often seen as desirable because they are related to creativity (George & Zhou, 2001). It is also desirable to score highly on Agreeableness, as few students want to believe they are prone to interpersonal conflict (Graziano, Jensen-Campbell, & Hair, 1996) and likely to be less effective team members (Neuman & Wright, 1999). However, male students may think differently if presented with research findings that suggest that low Agreeableness in males is related to increased earnings—most likely because of the increased competitiveness it signifies (see Mueller & Plug, 2006). But because everyone cannot score above average, the exercise can highlight in a personal way how people succumb to the Lake Wobegon effect. The instructor can further illustrate this point by asking how many students believe they score above average on certain desirable traits, and, when a majority raise their hands, noting the logical impossibility of everyone scoring above average.

As students try to determine an order of the traits in which their extreme scores make sense, they often have to accept the possibility that they score differently from how they typically think of themselves or would ideally like to be. The process of coming to a single group order forces them to

consider alternative possibilities, as they encounter conflicts between what they think their most extreme score must represent and what others with either higher or lower scores on those same traits believe. It is this conflict that produces the real value in this exercise, as students realize that they cannot all know themselves as well as they think they do. When groups have finally decided on an order they feel may represent their collective personalities, they often learn their proposed order is wrong, forcing them to revisit their conceptions of their personalities. When students finally get the answer, or are told the answer by the instructor, many students are quite surprised by the results. This is one way the exercise facilitates the third learning objective.

Furthermore, the exercise is interesting because it frequently reveals unexpected discrepancies between how students tend to and would like to perceive themselves in relation to others, which disconfirms their assumptions that they know themselves well relative to others. The combination of the surprising difficulty of the task for some groups, the often unexpected results from the tests, and the interaction within groups adds interest to what could otherwise possibly be seen as a somewhat boring test that merely reaffirms students' existing conceptions of themselves. This is one way the exercise promotes the first and second learning objectives.

A second benefit of the exercise is that it negates the human tendency to be overly accepting of personality descriptions they are given. This occurs because students are not given a personality description but instead have to figure out a description that fits both their conceptions of their personalities as well as those of their group members. In figuring this out, students cannot merely follow the confirmation bias and look for evidence to support a given description. Instead, they must think critically about themselves and their behavior to seek reasons why their scores could reflect any of a variety of possible traits. This leads them to consider reasons why they might score high, low, or average on each particular trait.

A third benefit of the exercise is that it highlights issues of reliability and validity of the personality test instruments themselves.[3] If instructors have students complete two versions of the Big Five measurement instruments, some students will immediately be confronted with concrete evidence that the tests are not perfect, because their scores for the same trait will differ across the two tests (although, for the vast majority, the scores will be fairly similar—for example, it is unusual for the difference between the two scores to be greater than one). As they attempt to figure out what each trait represents and come to consensus as a group, students naturally end up "considering the opposite." This is an established method for overcoming

a wide range of psychological biases (Lord, Lepper, & Preston, 1984).[4] Furthermore, a couple of people in most groups will feel that one or more of their scores must not be entirely correct based on what they "know" about themselves. As they struggle to understand these discrepancies, they are led to consider possibilities affecting the validity and reliability of the tests, such as the possibility that their scores were influenced by their mood on the day they filled in the surveys. Having students write reaction papers in which they consider the accuracy of their scores and why they believe they scored as they did can further cause them to envision limitations to personality tests. This also serves to support the learning objectives (especially the third and fourth).

Contingencies and Variations

Several contingencies might influence the effective application and implementation of this activity. Perhaps the most important is that the instructor needs to know how to administer and score the personality test instruments used and to debrief students as well as have a solid understanding of the Big 5 personality dimensions (which can be gained by reading several of these seminal articles—Digman, 1990; John & Srivastava, 1999; McCrae & Costa, 1997; McCrae & John, 1992). Care must be taken to report accurate results, because giving erroneous feedback to students could have negative effects (although my experience suggests that students tend to be fairly critical if their test results do not match their personal views, so this concern should not be overstated—see also Andersen & Nordvik, 2002). Although administering and scoring personality tests is not difficult to do, it is important that instructors wishing to use this exercise ensure that they have the specific competencies necessary for effectively achieving the learning outcomes. Those with little or no experience administering personality instruments and providing feedback on the scores should consult with more experienced colleagues or seek external assistance.

The effective use of this exercise also depends on students being willing to complete the personality tests in the first place. Instructors should assure students that their responses will be confidential, and to ensure this, instructors should personally collect the personality surveys, enter the data, prepare the feedback, and deliver the personalized results individually in a way that other students cannot see the scores. If the instructor has not established a positive culture in which students are comfortable completing the tests, and students do not trust the instructor, then this would clearly be a problem. In

collecting personality data from more than 10 classes over the past decade, I have had only one person express concern about completing the personality tests. Nonetheless, this points out the importance of establishing a culture of trust and learning within the classroom (see Gentle, 2001; Jones, 1996). It is also important that students not see the survey as being an attempt to force them to participate in research, as this might greatly diminish their willingness to participate or lead them to answer less honestly. If the data *are* to be used for research purposes, then, obviously, this would require human participants' approval and a more formal decision to participate by the students.

Another contingency is that students may be reluctant to share their personality feedback in their groups. Clinebell and Stecher (2003) also noted this potential issue and stated that no student of theirs declined to share his or her traits with their team members. In my experience there has also been no reluctance among students, but instructors should still be aware of this possibility. In any case, sharing one's actual scores is not necessary for the exercise to be effective, because group members can still offer their opinions about which traits they believe correspond with a particular position in the trait sequence without stating the reasons for their opinions. Still, I recommend that instructors be explicit in telling students that they do not have to share their actual scores with their group members if they are uncomfortable doing so, and that they can still participate in the group and offer their opinions without sharing their scores, or can work by themselves instead (although this will make the task much more difficult).

An additional factor to consider is that the task may be more difficult for some groups than others, depending on the distribution of extreme scores among the group members. Groups with greater numbers of average scores will generally have more difficulty with the task. Thus, the instructor might want to deliberately assign groups so that each has at least several people with more extreme scores. In my experience, however, this possibility has not proved to be much of a problem.

A number of variations of the exercise presented here are possible. Obviously, other personality characteristics could be used and related to management issues (e.g., core self-evaluations, see Judge, Erez, Bono, & Thoresen, 2003; proactive personality, see Seibert, Crant, & Kraimer, 1999). To save class time, instructors could use only one form of the Big Five, although this would reduce the illustration of test validity. Something else that I have tried is to add a more concrete illustration of the Barnum effect to this exercise by first giving students identical and bogus feedback, telling them it represents personalized feedback based on their tests, and then asking

them how well they feel the feedback describes their personalities (see Dutton, 1988, for procedures). The deception involved in this latter possibility may suggest ethical concerns, particularly given my earlier statement that people tend to believe personality feedback they are given. However, the bogus personality feedback typically used in Barnum illustrations is so vague that after debriefing, students immediately recognize that the feedback could apply equally well to everybody. Another possibility is to first have students indicate whether they think their scores will be above average, average, or below average for each of the traits (this could also serve as an intermediate step, facilitating their group discussion of the correct order), which would show the Lake Wobegon effect in action.

Student Reactions

I have successfully used this exercise in six classes (in three different courses). Two were concurrent sections of a fundamentals of management class in the spring of 2004 (N = 127 students). These classes consisted primarily of juniors and seniors at a business school at a large, public university in the Midwestern United States. The third class was a 4th-year elective on Sensemaking in Organizations at a large New Zealand university in the second half of 2005 (N = 17 students). The remaining three times were in sections of a 3rd-year required course on business research methods in 2006 and 2007 at that same university. Students responded similarly in both countries, and qualitative and quantitative feedback suggests that the exercise was successful. Illustrative quotes from the qualitative feedback, presented below, indicate typical reactions and provide evidence for several of the learning objectives. Although some found the task relatively easy, others found it more difficult. Students generally thought the exercise was interesting and enjoyable, and many reported that the exercise led them to learn something about themselves. Although some students were surprised and/or initially disappointed by the results, they often recognized that their disappointment led to a new and valuable understanding about their personalities:

- "I remember finding it pretty hard. Our group had trouble deciding which score belonged to which person. I think that people have trouble really observing their own personalities compared to others."
- "I do remember that my guesses were semi right and semi wrong, and pretty surprising in the end. . . . I think that I partially put my guesses in a certain order because I wanted my scores to be highest in that category, not because I actually thought that's what I had.

- "From the personality tests that we conducted in class I could not help but to be a little disappointed with the results. Looking back at it now, I realize that there is no good or bad, it is all relative to my peers . . . some very talented and capable people."
- "I felt the personality test reaffirmed some things about who I thought I am, and also taught me some new things about myself in the process."
- "These results could either be encouraging or depressing depending on the goals and aspirations you have for your life."
- "I found the personality assessments we completed in class to be interesting, considering we had to work in groups to figure out which score went to which dimension. I was surprised to see how some people believed that certain scores went to certain dimensions, but were shocked when the answers were revealed."
- "Overall, I really liked this activity because it gave me further insight into my personality and self."

In anonymous course evaluations at the end of the fundamentals of management courses, I asked students for quantitative feedback regarding both the personality tests themselves as well as this specific group exercise (on a 5-point scale where 1 = *abandon*, 3 = *okay*, and 5 = *definitely keep*), and 102 students gave responses. For the group exercise, the average rating was 4.0 (41% rated the exercise a 5, 35% rated it a 4, 12% rated it a 3, 8% rated it a 2, and 4% rated it a 1). These ratings compare favorably with those for the personality tests themselves, which had an average rating of 4.4 (57% rated the tests a 5, 33% rated them a 4, 6% rated them a 3, 4% rated them a 2, and no one rated them a 1). The lower ratings for the group exercise relative to the personality tests themselves may partially reflect the fact that students' perceptions of themselves did not match up with the actual results that the group exercise brought to light, and this was discomforting. Nevertheless, both the tests and the group exercise were clearly seen as useful and informative. In two of the business research methods classes, I asked students to anonymously evaluate the exercise in terms of four questions using a 7-point Likert scale. A total of 50 students responded (of 79) in the first class, and 24 (of 33) in the second class, and the questions and average ratings were as follows: "The exercise was interesting" (means = 5.5, 5.6), "The exercise helped me understand the concepts better" (means = 5.4, 5.2), "Doing the exercise was fun" (means = 5.2, 5.1), and "The exercise made class more enjoyable" (means = 5.6, 5.6). Based on this evidence, it is clear that students felt the exercise was both helpful and entertaining.

Conclusion

Given the extensive research showing the importance of personality in management, the group exercise presented in this article is a valuable addition to the collection of pedagogical techniques used by management educators. The exercise makes the otherwise passive practice of simply returning personality test results into an interesting experiential exercise, and helps to address a variety of potential problems involved with administering personality tests that relate to perceptual biases. Student feedback clearly shows that students find the exercise to be worthwhile, surprising, and insightful. Given that students may be predisposed to seeing management as a mere collection of common sense (Priem & Rosenstein, 2000), activities like this that disconfirm students' assumption grounds are particularly valuable for showing the benefits of management education.

Appendix A
Conducting the Group Exercise

Preparation for Exercise

Step 1: Have students complete two different measures of the Big Five personality traits and scales for five more targeted personality traits:[5] self-monitoring (Snyder, 1974), need for cognition (Cacioppo & Petty, 1982), tolerance for ambiguity (Budner, 1962), dogmatism (Rokeach, 1954, 1960), and locus of control (Rotter, 1966). State that students should strive to answer honestly, because then the feedback they will get back will be more accurate, personally meaningful, and useful. This takes between 15 and 30 min, and can be done either in class or as a take-home assignment.
Step 2: Enter the personality data into a Microsoft Excel spreadsheet and calculate students' individual personality scores for each trait. Then convert these scores into standardized scores by subtracting the overall class mean from each score and dividing it by the class standard deviation. After doing this, the student scores will have a mean of zero and a standard deviation of one. For example, if a student's raw score for Extraversion is 4.13, and the average score in the class is 3.48 with a standard deviation of .67, the student's standardized score would be (4.13–3.48)/.67 = .97. This indicates that the student scores .97 standard deviations above the mean on Extraversion (roughly the 84th percentile). These calculations can be easily done in Excel or statistical software packages such as SPSS.
Step 3: Create a feedback form for each student that lists his or her standardized scores without any identifying information regarding what the scores mean (see Appendix D

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Appendix A (continued)

for a fictitious example). Present every student's scores in the same order[6] and give the two sets of Big Five scores side by side so that both scores on each line refer to the same trait (i.e., one column for the Big Five Inventory scores and another for the Mini-Marker scores, with each row corresponding to the same trait, such as Conscientiousness for the first row, Agreeableness for the second, etc.). The time required for this will vary, but entering the data and creating the feedback forms for 60 students takes between 1 and 2 hrs.

The Exercise

Time required: About 15 min for the Big Five and 10 min for the other 5 traits.
Step 1: Give students their personality feedback forms (which, to them, will merely be several unidentified and meaningless numbers) and tell them they will learn what the numbers mean later in the class. Also give students a handout with brief descriptions of each of the Big Five personality traits (see Appendix B), and quickly review the meaning of each.
Step 2: Because the personality scores on the feedback forms are expressed as standardized values, spend a couple of minutes reviewing the statistical concepts of a mean and standard deviation (e.g., showing a PowerPoint slide with a normal distribution curve that illustrates the percentage of responses that are one, two, and three standard deviations above and below the mean, that is, 34.13% are one standard deviation above, 13.59% are between one and two standard deviations above, and 2.15% are between two and three standard deviations above). Explain that a score of zero on any trait means that the score is equal to the mean or average; positive scores are above the mean and negative scores are below the mean; and each number represents the number of standard deviations away from the mean.
Step 3: Split the students into groups of five and present them with the task, which consists of having the groups determine what order the personality traits are listed on their feedback sheets. I show a PowerPoint slide with the following description of the task:

> Group Task #1: What's Your Personality—Using the Big Five trait descriptions, and your scores, *discover the order* that the Big Five traits are listed (i.e., what do your scores represent?). Note: Your scores are given in terms of standard deviations from the mean (or average). If negative, you scored below average; if positive, you scored above average; the average = 0, one standard deviation above = 1, one standard deviation below = –1.

Spend a few moments making sure these instructions are clear. Mention that accomplishing the group task does not require that people share their specific scores

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Appendix A (continued)

(if they are uncomfortable doing so). Suggest that students start by finding their most extreme scores, either positive or negative, and guessing which of the traits these extreme scores are likely to be. Some students will have scores mostly near the average (i.e., close to zero), but with five traits, most people have at least one score that is more than one standard deviation away from the mean. Then announce that the exercise is a race between groups to see who can determine the correct order of the traits the fastest. Tell the class that once their group thinks it has figured out the order, it should send a representative to the instructor with their answer written on a piece of paper to learn whether they are correct or not. After groups start the task, present another slide with a task to eliminate potential boredom for those groups who finish the task before the instructor decides to announce the correct order to any remaining groups. I show the following on a PowerPoint slide:

> "If you finish early . . . Discuss with your group why each of these dimensions might be important for managers and organizations: Are any of these likely to lead to success? Are some of these more important for certain types of jobs?"

STEP 4: Once a majority of the groups has guessed the order of the traits correctly, stop the exercise and announce the correct order to the rest of the class. In my experience, the first group representatives start coming with their guesses after about 5 min, but other groups will take longer. Although a couple of groups will be able to guess the correct order on their first try, the majority of guesses will be initially incorrect. Tell groups with incorrect answers to reexamine their scores and try to figure out why they guessed as they did, and come up with another guess when they are ready.

STEP 5: Debrief the exercise, which involves making the following six points. First, tell them that the results, although scientific, are nonetheless not error-free. Ask how many students have one or more cases where their two scores for the same trait (measured with the two different tests) differ by *more* than a value of one. For example, someone's score on the Big Five Inventory test for Extraversion might be 1.83, whereas their score for this trait on the International Personality Item Pool test might be 0.57. This means that one test reports that they are very extraverted, whereas the other suggests they are much closer to average. Given that these tests are quite reliable, there should not be too many students with large differences like this, but there will be several, and these vividly indicate one way that the test results are not perfect.

Second, make sure to stress that people with every combination of traits can be extremely successful in any occupation. Third, mention that the overall mean of the class on certain traits may well differ in desirable ways from that of the

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Appendix A (continued)

general public, given the distinct group of peers one is being compared with. Fourth, note that personality changes over time (especially among college students, who typically increase in Agreeableness, Conscientiousness, and Emotional Stability). Fifth, state that personality is "what people do" (i.e., regularities in their behaviors), not "what people are," and that they can change their personalities by changing their behaviors (which they may or may not care to do). Finally, it is important to note that some scholars have criticized the personality trait approach, and that personality traits are only *one* aspect of the overall unique constellation of beliefs, abilities, experiences, and so on that make up the individuality of every distinct person.

STEP 6: After discussing how personality relates to various management issues (taking as much time as desired), hand out a list of the five more targeted personality traits and discuss each of these in greater detail (see Appendix C). Then repeat the group exercise for the other (non-Big Five) personality traits. This will take less time (about 10 min), because students have a clearer idea of what they are trying to do.

STEP 7: Assign students to write a short reaction paper in which they revisit the personality material and reflect on what they have learned about themselves. Specify that they should discuss which of their trait scores they found most surprising and why, and whether those results might be more accurate than they initially believed (or might want to believe).

Appendix B
Descriptions of the Big Five Personality Traits and Sources of the Scales

Extraversion (energy, enthusiasm): Talkative, assertive, and energetic. Extraversion "implies an *energetic approach* to the social and material world and includes traits such as sociability, activity, assertiveness, and positive emotionality."

Agreeableness (altruism, affection): Good-natured, cooperative, trustful. Agreeableness "contrasts a *prosocial and communal orientation* toward others with antagonism and includes traits such as altruism, tender-mindedness, trust, and modesty."

Conscientiousness (control, constraint): Orderly, responsible, dependable. Conscientiousness "describes *socially prescribed impulse control* that facilitates task- and goal-directed behavior, such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing, and prioritizing tasks."

Neuroticism (negative affectivity, nervousness): Not calm, easily upset. Neuroticism "contrasts emotional stability and even-temperedness with *negative emotionality*, such as feeling anxious, nervous, sad, and tense."

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Appendix B (continued)

Openness to experience (originality, open-mindedness): Intellectual, imaginative, independent-minded. Openness to experience "(versus close-mindedness) describes the breadth, depth, originality, and complexity of an individual's *mental and experiential life*."

The descriptions above are from John and Srivastava (1999, p. 121). There are a wide variety of valid and reliable scales that measure the Big Five personality traits. In the first three classes in which I conducted this exercise, I used John and Srivastava's (1999) *Big Five Inventory* (BFI) and Saucier's (1994) Mini-Markers. In the fourth class, I replaced the BFI with the public-domain, 100-item International Personality Item Pool measure (IPIP; Goldberg et al., 2006), whereas in the fifth and sixth classes I used the 50-item version of this measure. Among the various other measures of the Big Five that instructors could use, Costa and McCrae's (1992) Neuroticism-Extroversion-Openness–Five-Factor Index (NEO-FFI) Personality Inventory is probably the most widely used measure in academic research. This measure has the added benefit of a manual that reports mean levels among various student and nonstudent populations, although it is a commercial measure and typically not free of charge. I recommend that instructors use the 50-item version of the IPIP, which has been shown to have a comparable validity to the NEO-FFI (Lim & Ployhart, 2006), and another measure shown to have adequate validity (like all of the measures mentioned here).

Appendix C
Descriptions of Other Personality Traits and Sources of the Scales

Locus of control: Locus of control is the extent to which individuals feel that their actions determine what happens in their lives versus feeling that what happens in their lives is the result of external forces. People with an *internal* locus of control believe that they determine their destiny, whereas people with an *external* locus of control believe that outside forces determine their fates to a large extent. (Note: A high score indicates an *external* locus of control; Source of scale: Whetten and Cameron [2002].)

Need for cognition: Need for cognition is the extent of mental effort that individuals put forth in their everyday activities. According to Cacioppo, Petty, Feinstein, and Jarvis (1996, p. 197): "Some individuals tend to act as cognitive misers in circumstances that call forth effortful problem solving in most individuals, whereas others tend to be concentrated cognizers even in situations that lull most individuals into a cognitive repose." That is, some people tend to enjoy thinking deeply about everything, whereas others tend to think deeply only when they have to. (Source of scale: Cacioppo, Petty, and Kao [1984].)

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Appendix C (continued)

Tolerance for ambiguity: Tolerance for ambiguity is the extent to which individuals are threatened by or have difficulty coping with situations that are ambiguous, where change occurs rapidly or unpredictably, where information is inadequate or unclear, or where complexity exists. (Source of scale: Macdonald [1970].)

Dogmatism: Dogmatism is the extent to which a person tends to compartmentalize and isolate their beliefs and disbeliefs, and has a closed belief system resistant to change. Individuals high in dogmatism strive to avoid inconsistency in their attitude and belief systems, and they react to inconsistent information by minimizing or ignoring it. They also tend to hold more extreme attitudes. (Source of scale: Troldahl and Powell [1965].)

Self-monitoring: Self-monitoring is "the extent to which [people] *monitor* (observe, regulate, and control) the public appearances of *self* that they display in social settings and interpersonal relationships" (Day, Schleicher, Unckless, & Hiller, 2002, p. 390). High self-monitors are social chameleons, willing and able to present different faces to different audiences at different times. Low self-monitors present the same version of themselves in every social situation. (Source of scale: Snyder and Gangestad [1986].)

Appendix D
Sample Personality Feedback Form (With Fictitious Data)

INDIVIDUAL PERSONALITY FEEDBACK FOR: Andrew Wiggen

The Big Five Personality Dimensions

Trait #1 Scores: 0.67 and 0.91
Trait #2 Scores:–1.13 and –0.85
Trait #3 Scores: 1.52 and 1.29
Trait #4 Scores: 0.07 and –0.13
Trait #5 Scores: –0.43 and 0.55

Five More Specific Personality Traits

Trait #1 Score: –1.02
Trait #2 Score: 0.23
Trait #3 Score: 0.94
Trait #4 Score: –0.24
Trait #5 Score: 2.15

Notes

1. Other useful approaches for teaching personality that have been suggested in the literature include showing animated videos (Champoux, 2001), having students guess the instructor's personality (Reinehr, 1991), and having students create a personality test instrument to demonstrate issues of validity and reliability (Benjamin, 1983).

2. It is worth clarifying that discrepancies of this nature, if they exist, would *not* constitute error (although they might at first glance appear as such). There is no necessarily "appropriate" or "correct" reference group for an individual's personality scores. In certain circumstances and for certain purposes, knowing one's score relative to the general population might be informative, whereas for others, knowing one's score relative to peers might be much more useful. Each provides distinctly different information. This exercise is designed to provide information on the latter. If published norms are available, then giving students information about how their scores compare to these norms could represent an excellent additional source of insight into their personalities.

3. Note that if the distribution of personality scores used for standardization is not normal, then the interpretation of the standardized scores is less straightforward. Specifically, with normally distributed scores, the standardized value gives fairly precise information regarding what percentage of peer scores fall above and below. If the distribution deviates from a normal distribution, standardized scores convey less information about the relative placement of any given score, though the sign of the score still indicates whether the score is above or below the average for the class. For this reason, instructors might want to investigate the extent to which the scores for each trait are normally distributed, and, if significant deviations from normality are detected, discuss the implications this has for the interpretation of the scores.

4. See Oliver (1982) for a somewhat similar approach that has students more explicitly think of behaviors that both support and contradict their test scores.

5. Research has linked each of these personality traits to important management concerns (e.g., Bailey, 1997; Bennett, Herold, & Ashford, 1990; Davies, 1998; Day, Schliecher, Unckless, & Hiller, 2002; Flynn, Chatman, & Spataro, 2001; Hodgkinson, 1992; Spector et al., 2002; Spector & O'Connell, 1994; Verplanken, Hazenberg, & Palenewen, 1992).

6. My experience suggests that a random order is probably preferred, rather than orders in which the first letters of the traits spell a word such as OCEAN (for Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) or CANOE. I once ordered the scores as OCEAN, and at the start of the exercise a student immediately guessed "OCEAN" because that was how he had heard the Big Five described in a psychology class. Fortunately no nearby groups were paying attention, because that would have effectively ended the exercise!

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