Yes, Personality Matters: Moving on to More Important Matters

Murray R. Barrick and Michael K. Mount

Tippie College of Business
University of Iowa

Over the years, personality has had at best a checkered reputation as a predictor of work outcomes. From Guion and Gottier (1965) and Mischel (1968) to Davis-Blake and Pfeffer (1989), personality has been roundly criticized as an ineffective predictor of performance. In recent years, however, researchers have acknowledged and documented the fact that we all have personalities (e.g., Goldberg, 1993), and that personality matters because it predicts and explains behavior at work. This research, based on a construct-oriented approach primarily using the “Big Five” traits, has consistently shown that personality predicts job performance across a wide variety of outcomes that organizations value, in jobs ranging from skilled and semiskilled (e.g., baggage handlers, production employees) to executives. Yet the magnitude of these effects, as reported in the Murphy and Dziewoczynski (this issue) article, can be characterized as modest, at best. If this is true, why should we care about personality?

We begin this article with a review of what researchers have learned about the role of personality at work, and conclude with a discussion about personality’s future. Later, we discuss the findings from seven divergent research streams that, when taken together, demonstrate why we should care about personality.

The first reason is that managers care about personality. Research has shown that managers weight individual personality characteristics as if they were nearly as important as general mental ability, during the hiring decision (Dunn, Mount, Barrick, & Ones, 1995). In fact, it is hard to find a manager who says they would prefer to hire someone who is careless, irresponsible, lazy, impulsive, and low in achievement striving (low in Conscientiousness). Similarly, not many managers seek to hire individuals who are anxious, hostile, personally insecure, and de-
pressed (low in Emotional Stability). In one sense, these findings are not particularly surprising. After all, our mothers could have told us it would be better if we hired people who are dependable, persistent, goal directed, confident, secure, and organized. Nevertheless, because of recent advancements in understanding the structure of personality and improved ways of assessing personality constructs, there is now overwhelming evidence that personality traits such as these will be positively related to performance at work.

Second, a number of meta-analyses (e.g., Barrick, Mount, & Judge, 2001; Hogan & Holland, 2003; Judge, Bono, Ilies, & Gerhardt, 2002; Judge & Ilies, 2002) have significantly helped us develop our empirical and theoretical understanding of the nature of the relation between personality constructs, particularly the Big Five traits, and job performance. By virtue of its ability to extract fairly clear answers from the morass of data accumulated over the years, meta-analysis has shown that the validities of two of the Big Five traits, Conscientiousness and Emotional Stability, generalize in the prediction of overall performance. These two traits refer to the willingness to follow rules and to exert effort (in the case of Conscientiousness), and the capacity to allocate resources to accomplish tasks (in the case of Emotional Stability). Thus, the two “generalizable predictors” can be best viewed as measures of trait-oriented work motivation, and it appears they affect performance in all jobs through “will do” motivational components. On the other hand, general mental ability affects performance in all jobs primarily through “can do” capabilities (Schmidt & Hunter, 1998).

This research also reveals that the other three personality traits, Extraversion, Agreeableness, and Openness to Experience, are valid predictors of performance, but only in specific niches—for specific occupations or for some criteria (Barrick et al., 2001). For example, Extraversion has been found to be related to job performance in occupations where a significant portion of the job involves interacting with others, particularly when that interaction is focused on influencing others and obtaining status and power (Barrick et al., 2001). In such jobs, especially sales and management jobs, being sociable, gregarious, assertive, energetic, and ambitious is likely to contribute to success on the job. Agreeableness also has been found to be an important predictor in jobs that involve significant interpersonal interaction. In this case, however, Agreeableness matters only when that interaction involves helping, cooperating, and nurturing others. Thus, if working in a team comprises an important component of the work, Agreeableness may be the single best personality predictor (Mount et al., 1998). Employees who are argumentative, inflexible, uncooperative, uncaring, intolerant, and disagreeable (low in Agreeableness) are likely to be less effective at teamwork and also engage in more counterproductive behaviors. Finally, Openness to Experience has been found to be related to creativity and to influence the ability to adapt to change (George & Zhou, 2001; LePine, Colquitt, & Erez, 2000). Employees who are artistically sensitive, intellectual, curious, polished, original, and independent are likely to deal with change.
and contribute more to innovation at work. Thus through application of meta-analysis, combined with the use of meaningful personality constructs, like the Big Five, researchers have been able to summarize results quantitatively across a large number of studies to show that personality traits do matter at work.

As Robert Hogan (this issue) notes, the meta-analysis by Joyce Hogan and Holland (2003) is important because it illustrates the benefit of matching specific personality traits to relevant criteria. They found that when the criteria relate to “getting along” performance, the best predictors are Emotional Stability, Conscientiousness, and Agreeableness. In contrast, when the criterion reflects “getting ahead,” the best personality predictors were a facet of Extraversion (Ambition), Emotional Stability, and Conscientiousness. Although not hypothesized, they found, as we would expect, that the two “generalizable predictors” (Conscientiousness and Emotional Stability) have high validities for both criteria, whereas the “niche traits” (Extraversion and Agreeableness) emerged as important predictors only with relevant criteria. Thus, these results show that it is critical that the “niche traits” are carefully matched to relevant criteria. Furthermore, as Robert Hogan notes, this study clearly shows the predictive potential of personality, as the magnitude of the true-score correlations in this meta-analysis range from .34 to .43, which is larger than those reported in previous meta-analyses that examined the validity of individual personality constructs, and are comparable to the true-score correlations reported for other predictors.

Third, we know any meta-analytically derived estimate of the relation between a specific Five-factor model of personality (FFM) construct and performance measure is an underestimate because it reports the validity of an individual personality trait when used alone. When the purpose is to enhance understanding of which personality constructs predict which components of performance, it is appropriate to examine the validity of each personality trait individually. However, when the purpose is to maximize prediction, the appropriate approach is to consider the validity of all relevant personality traits when used together. Murphy and Dzieweczynski (this issue) fail to make this distinction when they compare the validity of Conscientiousness to the validity of cognitive ability. It is important to recognize that the predictive validity of cognitive ability is based on measures that include multiple components, usually verbal, math, and spatial relations. In a similar way, it is appropriate to consider all relevant personality traits jointly when examining the predictive validity of personality. Using this approach will yield higher validities, and in some cases, substantially higher validities. Several meta-analyses have demonstrated this finding for diverse types of criteria. Judge, Heller, and Mount (2002) reported that the multiple correlation using all of the Big Five for predicting overall job satisfaction was .41. Judge, Bona, et al. (2002) reported a multiple correlation, using all of the Big Five when predicting leader emergence was .53 (.48 over both leader emergence and effectiveness). Frei and McDaniel (1998) found a multiple correlation of .50 when predicting customer service with a composite mea-
sure consisting of personality traits (e.g., Agreeableness, Emotional Stability, and Conscientiousness). This is very similar to the composite validity ($\rho = .47$ against counterproductive behavior on the jobs; $\rho = .41$ for predicting supervisory ratings of job performance) found for traits reflecting integrity (Ones, Viswesvaran, & Schmidt, 1993). Thus, although it enhances our theoretical understanding to focus on the validity of specific personality traits, it behooves us to examine the multiple correlation or composite validity to determine the predictive validity of the whole “personality” of an individual. That is, we must study people, not traits, if we are interested in how well personality predicts. As Robert Hogan (this issue) notes, this is rarely done in published research today.

Fourth, research shows that personality contributes incremental validity in the prediction of job performance above and beyond that accounted for by other predictors, including general mental ability and biodata (McHenry, Hough, Toquam, Hanson, & Ashworth, 1990; Mount, Witt, & Barrick, 2000; Schmidt & Hunter, 1998). For example, results from Project A (McHenry et al., 1990) found that the Army can improve the prediction of job performance by adding noncognitive personality predictors to its present battery of selection tests (e.g., $R = .33$ for the criterion of extra effort and leadership; $\Delta R = .11$ due to the inclusion of facets of Conscientiousness and Emotional Stability). Such findings correspond to evidence showing incremental validity of personality measures for long-term educational outcomes, above and beyond general mental ability (Bagge et al., 2004). Hence, even modest effects from personality meaningfully contribute to a selection decision, even after one accounts for other important individual differences.

Fifth, most personality traits, certainly the Big Five, reveal small to nonexistent mean score differences between racial or ethnic groups (Hough, 1998; Hough, Oswald, & Ployhart, 2001; Mount & Barrick, 1995). This is of enormous significance because most organizations are keenly interested in hiring a more diverse workforce. Clearly, the use of cognitive ability tests will result in significant majority–minority differences, which, as Murphy and Dzieweczynski (this issue) note, has resulted in a number of employment discrimination lawsuits. Consequently, for social and legal reasons, personality variables should be included in personnel selection batteries.

Sixth, one of the most compelling forms of evidence regarding the utility of personality is reported in the study by Judge, Higgins, Thoresen, and Barrick (1999). This study was based on a unique longitudinal data set from the Intergenerational Studies administered by the University of California at Berkeley. Results revealed that Big Five personality traits predict multiple facets of career success, whether assessed intrinsically (i.e., satisfaction) or extrinsically (e.g., occupational status), using either subjective reactions or objective indicators, over a span of 50 years or more. Specifically, the results demonstrate that there are enduring relations between personality traits (e.g., Conscientiousness and Emotional Stability) assessed in childhood, and career success assessed in late adulthood, with (uncorrected) correlations ranging up to .49 (Judge et al., 1999). Further, these results showed
that the Big Five traits, as a group, explained significant incremental variance in measures of career success even after controlling for the influence of general mental ability. The joint contribution (multiple correlation) across all Big Five traits was over .60 when predicting occupational status and income, even when success was measured 30 to 50 years after personality was assessed. These findings show that although the magnitude of the correlation between personality and annual supervisory ratings of performance is modest, the effects of personality are cumulative and compound over time. Thus, over a lifetime, the cumulative benefits obtained through personality can be substantial at work. This is more evidence that personality traits do matter.

The seventh and final reason we should care about personality is that researchers have found personality to be meaningfully related to many work-related behaviors and outcomes that managers care about, and that matter to organizations. These include less counterproductive behavior, turnover, absenteeism, tardiness, and more citizenship behaviors, success in groups, job satisfaction, safety, leadership effectiveness, and task performance. They also influence the fit with other individuals (e.g., supervisors), a team, or an organization (Barrick, Mitchell, & Stewart, 2003; Johnson, 2003). In addition, personality has been found to predict individuals’ quality of life, such as freedom from trauma, marital satisfaction and life satisfaction, and even how long people live, which may be the ultimate criterion (DeNeve & Cooper, 1998; Friedman et al., 1993). Importantly, general mental ability does not predict these outcomes (or predicts them poorly). Thus, the statement that general mental ability predicts job performance better than personality is not entirely true. It depends on which aspects of performance one is examining.

Taken together, the results from these seven diverse research streams illustrate that personality plays a meaningful role in nearly all facets of work and our daily lives. Consequently, we think it is time to move beyond debating questions like “Does personality matter?” or “Who cares about personality?” In light of the research evidence, it simply is not feasible to suggest that being hard working and persistent doesn’t matter, or that being cooperative and considerate is not relevant in team settings, or that being ambitious and sociable is unimportant. We believe it is time to move on from this debate, and begin addressing the more challenging issues that are likely to advance our understanding in this area.

FUTURE RESEARCH DIRECTIONS

Let us turn to the future of personality and focus on three issues that particularly deserve our attention as we move forward. The first issue pertains to the effects of the situation. Kevin Murphy’s and Jessica Dziewczynski’s (this issue) insight that it may be insufficient to rely solely on job analytic data to determine when specific personality traits are likely to be relevant to success is important. Empirical evidence demonstrating that situational strength moderates the personality-behav-
ior relation (Barrick & Mount, 1993; Beaty, Cleveland, & Murphy, 2001; Gellatly & Irving, 2001; Hochwarter, Witt, & Kacmar, 2000) underscores the idea that researchers must broadly account for situational affects to determine whether personality is relevant to behavior, and that those affects extend beyond the requirements of the job.

Studies demonstrating the effect of situational strength show that situations can control how an individual behaves rather than his or her personality. When situations are exceptionally strong, all individuals tend to behave in the same way regardless of their personality traits. As a result, strong situations have been shown to decrease the observed relations between personality and behavior. In contrast, weak situations are characterized by few expectations, or many ambiguous demands, and consequently individuals have considerable discretion in how to behave. Consequently, the validity of personality traits in predicting performance has been found to be larger when the situation is characterized as “weak” rather than “strong.”

Similarly, evidence that individuals are attracted to join organizations they fit and to leave those they do not fit (Judge & Cable, 1997; Schneider, Smith, Taylor, & Fleenor, 1998) demonstrates the role organizational level variables have on personality at work. Interestingly, Schneider et al. (1998) reported that the three “niche” traits account for the largest effects on homogeneity or fit within an organization ($R^2 = .08, .04, \text{ and } .02$, respectively, for Agreeableness, Openness to Experience, and Extraversion). This is consistent with earlier comments indicating these three traits are more susceptible to contextual effects. Research on team composition also is increasingly examining the role of personality (Barrick, Stewart, Neubert, & Mount, 1998; Kozlowski & Bell, 2003; Neuman, Wagner, & Christiansen, 1999). Although much of this research has targeted main effects on team effectiveness (Barrick et al., 1998), results also show that the traits of the team’s members influence the group’s processes (Neuman et. al., 1999), and these influences vary based on the contextual demands inherent in the group and the amount of team interdependence (Kozlowski & Bell, 2003). The critical point is that neither the team nor organizational effects on personality, as indicated in these studies, is accounted for in traditional job analyses.

Recognizing the influence of situational strength, along with group and organizational context, on personality, shows that predictive validity is likely to vary by more than job demands alone. Thus, researchers increasingly need to take the interactionist perspective seriously—that is, to fully understand how personality relates to behavior at work we must account for the situation. However, the situation must be broadly defined, beyond understanding derived solely from a traditional job analysis. For the arguments that the situation is all important, little is empirically known or even theorized about how different types of situations (broadly defined) influence personality or behavior, particularly at work (Barrick, Mitchell, et al., 2003). Furthermore, beyond job analysis, little is known about the basic
kinds of situations or what variables are useful for comparing one situation with another (Stewart & Barrick, 2004). Today, a framework for characterizing the psychologically influential aspects of situations is sorely needed, as is a method for assessing these variables.

What further complicates this research is the finding that a person’s traits can also change the situation (Stewart & Barrick, 2004). For example, having “one bad apple” in a team can actually change the work environment. Just having one person who is disagreeable or neurotic (low on Agreeableness or Emotional Stability) has been shown to lead to less communication, lower interdependence, less workload sharing, and more conflict (Barrick et al., 1998). Similarly, Barry and Stewart (1997) found that teams were unable to function effectively if they had too many (or too few) extraverts in a team setting. Thus, situational effects, due to both situational factors and characteristics of those in the setting, have been shown to be important to personality but are not captured through a traditional job analysis. Theoretical explanation requires that these effects be accounted for to fully understand personality’s affect at work.

A second issue future researchers must examine is the process through which personality affects behavior at work. As noted earlier, researchers must account for the characteristics of the work situation. However, the primary means through which personality affects work behavior is expected to be through motivation (Barrick, Mitchell, et al., 2003; Kanfer, 1991; Murray, 1938). These motivational affects are likely to be demonstrated in two ways: first, what would you be happy doing? And second, how motivated will you be doing it? Recent research shows that personality influences the type of environments we seek (Barrick, Mount, & Gupta, 2003; Judge & Cable, 1997; Mount, Barrick, Scullen, & Rounds, in press; Schneider et al., 1998). For example, extraverted people prefer work settings that involve social activities or have an “aggressive” organizational culture. Although this research illustrates that personality plays a role in determining what situations one chooses to be in, recent research shows vocational interests are likely to have a larger impact than personality traits on those choices (Mount et al., in press). That is, interests influence the types of environments we seek and the types of people and activities we prefer. This explains why a recent large scale meta-analysis of fit relations shows that interests and values have a larger effect on person-organization fit (Kristof-Brown, Zim-merman, & Johnson, in press) than do personality traits.

Personality, on the other hand, is likely to be the critical dispositional basis for determining how the person interacts or is motivated once an individual has chosen an environment that is consistent with his or her interests. For example, a recent meta-analysis (Judge & Ilies, 2002) reveals that Big Five traits consistently relate to performance motivation, whether assessed using goal setting ($R = .63$), expectancy ($R = .36$), or self-efficacy ($R = .49$) motivation. These findings show, for example, that people high in Conscientiousness and Emotional Stability are
more likely to set goals, have higher expectations that their efforts will result in favorable consequences, and think they can do more (have higher self-efficacy), than those low in Conscientiousness or Emotional Stability. Enhanced performance motivation, in turn, is expected to be an important predictor of performance.

Research showing that motivation is the major mediating link between personality and performance is important to researchers striving to understand and predict which behaviors employees will exhibit at work. Recognizing that personality is a distal motivational force, which influences behavior through proximal performance motivation variables like goals, self-efficacy, and expectancies, should enable researchers to develop more comprehensive models of job performance. Such theoretically driven explanations demonstrating the role personality plays in how we do our work will enhance scientific understanding, as noted by Murphy and Dziweiczynski (this issue). Furthermore, these are likely to be important affects, given the magnitude of the multiple correlations reported by Judge and Ilies (2002) between Big Five traits and performance motivation.

In contrast, we are not aware of any research which shows that interests are related to the propensity to set goals, to achieve higher self-efficacy, or increase performance expectancies. Consequently, understanding the person’s interests will not likely enhance our understanding of how we do work. This underscores that although interests and personality are two fundamental, noncognitive individual difference domains that influence behavior through motivation, the motivational processes by which they do so differ. By recognizing the different motivational processes involved at work by these individual differences, future research will achieve more significant gains in understanding the specific mechanisms by which personality influences job performance.

The third issue future researchers should give greater attention to are measurement problems. Measurement lies at the heart of much of our applied research. If we don’t assure that we have good measures, then all that we do with those measures is called into question. This is unfortunate because it isn’t that difficult to do better. How? First, we need to understand that although personality is fairly stable and so is the context, the response to items on a personality inventory at any one moment is determined by many traits and states and by many features of the immediate situation. Consequently, traits will usefully predict behavior only when it is aggregated (Epstein, 1979), either over a category of behaviors (e.g., counterproductive behavior) or across time (annual performance or longer). Second, we must recognize that global traits (like the Big Five) are best for explanation and theory development; however, prediction of narrower and more specific behaviors at work will require correspondingly narrower trait constructs (Mount & Barrick, 1995). Effective measurement will require addressing both of these concerns.

Regarding the former point, traits will better explain typical behavior at work, particularly behavior that is aggregated across time and situations. The fact that
personality shows impressive consistencies over time even if the person’s life situation changes (Conley, 1984; Costa & McCrae, 2002; McCrae et al., 1999, 2000), underscores why personality can provide valuable information about what a person is likely to do at work. The stability of traits across situations or over time likely explains why the correlation between Conscientiousness and indicators of external career success were greater than .40, even when assessed over a 50-year span (Judge et al., 1999). Alternatively, it also explains why personality traits cannot predict a single instance of theft. Recognizing this criterion problem, researchers must focus on meaningful aggregates of behavior.

Researchers must also give greater consideration to the appropriate level of trait generality. It is well understood that personality can be measured with scales ranging from specific, narrow facets to broader, more general, global traits (John, Hampson, & Goldberg, 1991; McAdams, 1995). Narrow traits rely on explicit description that may be situated in time, place, or role. Representing personality with narrower subcomponents makes the finer features of each trait more explicit and narrows the range of behaviors represented so they are more similar, which enhances the diagnostic value and offers higher fidelity (predictive accuracy) for specific sets of behaviors. Thus, a measure of sociability will predict whether one tends to talk to strangers better than the broader construct, Extraversion, particularly if the trait and criterion measures are matched to context.

In contrast, the broad global traits, like the Big Five, focus on characteristic responses people persistently make to broad environmental demands. Each of these measures is composed of many variables that have something in common. This offers higher efficiency (parsimony), greater bandwidth, and higher cross-situational replicability. Consequently, Extraversion will predict whether a person likes being with people, actively influencing, negotiating, and leading others, and preferring to seek excitement in groups across work and family settings better than sociability. This explains why the broad factors effectively predict very broad criteria, like extrinsic career success, but are less likely to predict specific criteria. To enhance conceptual clarity, researchers must match the hierarchical level of personality description to the specificity of the aggregated criterion (Hogan, Hogan, & Roberts, 1996; Ones & Viswesvaran, 1996; R. J. Schneider, Hough, & Dunnette, 1996).

Finally, one other measurement issue pertains to the fact that the validity evidence for personality traits is based almost exclusively on self-report measures. However, there is a distinction between the validity of a personality construct such as Conscientiousness, and the validity of Conscientiousness as measured by self-report methods. For example, Mount, Barrick, and Strauss (1994) showed that the validities of Conscientiousness and Emotional Stability in predicting supervisor ratings of sales performance were higher when based on observer ratings of personality than when based on self-reports. Specifically, when Conscientiousness and Emotional Stability were assessed by coworkers and customers, the average
validities were 50% higher compared to self-reports. This suggests that the use of self-reports may actually understate the true validity of personality constructs in predicting job performance. One implication of this is that researchers should explore the usefulness of peer or other ratings on personality traits for internal staffing purposes (e.g., promotions).

**DISCUSSION**

This article has reviewed why we should care about personality and advanced an agenda for future research. There was a period between 1965 and 1990 when some researchers advocated that we had no personalities at work. As suggested here, the influence of personality has been widely accepted by managers and is used by them to guide their decisions about employees and interactions with others at work. However, the more basic consideration that makes personality important is that it is an enduring predictor of a number of significant behaviors at work, behaviors that cannot be predicted adequately by general mental ability, job knowledge, or the situation itself.

Nevertheless, to clearly understand the link between personality and individual job performance, this article has highlighted three areas where additional research could make critical contributions to the future of personality. The first area is investigating the interaction between personality and context. It is now apparent that we must consider situational demands that extend beyond the immediate demands of the job to fully define whether the context is relevant to a particular personality trait. We believe personality will have its greatest effect on behavior when the situation, broadly defined by the demands of the job, group, and organization, is relevant to the trait’s expression and is weak enough to allow the person to choose how to behave in that situation.

The second area of research entails investigating the motivational processes through which personality influences job performance. Although personality is likely to affect both what situations we choose to engage in and how motivated we are to do them, recent evidence demonstrates that the largest influence is through the latter process, performance-oriented motivation. This distinction can be used to guide research linking specific personality traits to specific performance dimensions by helping to identify theoretically relevant mediating motivational variables for different sets of behaviors.

The third area of research identifies critical measurement issues unique to assessing personality. To assure the more effective use of personality measures, we must carefully consider the need to aggregate behavior. Such aggregation should be guided by the need to balance our ability to predict consistency in behavior without eliminating or “factoring out” the influence of the situation. Practical and
theoretical understanding will only occur if we account for the influence of the person and the situation on behavior.

In addition, good measurement requires focusing on the appropriate level of description to reflect meaningful personality structures. Although it will require greater conceptual clarity, researchers must be more explicit about the role of theoretical development and predictive validity in our choice of measures. This suggests that researchers will need to use hierarchically organized taxonomies that comprehensively capture the basic lower level (i.e., more specific) categories of personality, and the more global, superordinate constructs. At present, there is no widely-accepted, meaningful taxonomy of lower level personality traits, although there are a number of efforts presently focused on developing such a framework (Ackerman & Heggestad, 1997; Hofstee, de Raad, & Goldberg, 1992; Hough, 2003; Saucier & Ostendorf, 1999). It is not within the scope of this article to fully describe or to theoretically and empirically justify a specific lower level taxonomy. Nevertheless, we believe the development of such a taxonomy will enable personality research to lift the cloud originating from the proliferation of personality constructs that currently obscures meaningful relations between lower level personality and criterion constructs. And more important, we believe that when lower level personality and more specific criterion constructs are appropriately linked, the magnitude of these relations is likely to be larger than those reported previously using broad, personality constructs.

**CONCLUSION**

Critics of personality would have us believe our personality traits do not matter in the workplace. That is, how we tend to think, feel, and act is not related to job performance. From a commonsense perspective, this notion seems implausible. Further, based on the findings from seven divergent research streams reviewed earlier, we believe this notion can be rejected on empirical grounds as well. However, we do not want to pretend that we have answers to all of our questions. The fact of the matter is that human behavior at work is complex, and understanding the relation of personality traits and job performance is difficult. Personality traits are enduring, distal forces that influence behavior, but there are both mediating and moderating variables that must be accounted for to adequately explain the effects of personality on human behavior. Systematically and carefully studying these mediating and moderating effects are precisely where we need to go in personality research. For these reasons, we remain optimistic that our personalities do matter at work, and anticipate that personality will more and more be viewed as an important predictor of job performance.
ACKNOWLEDGEMENTS

We thank Ken Brown, Tamara Giluk, Greg Stewart, and Ryan Zimmerman for comments on drafts of this article.

REFERENCES

► Costa, P. T., Jr., & McCrae, R. R. (2002). Looking backward: Changes in the mean levels of personality traits from 80 to 12. In D. Cervone & W. Mischel (Eds.), Advances in personality science (pp. 219–237). New York: Guilford.


