

other sciences. For personality psychology, it may be time to go back to the future.

### Notes

The research mentioned in this commentary is supported by University of Ghent Research Council Grants OZF-01173391 and OZF-01112792 to Ivan Mervielde.

I gratefully acknowledge comments made by Filip de Fruyt.

Ivan Mervielde, Department of Developmental and Personality Psychology, University of Ghent, H. Dunantlaan 2, B-9000 Ghent, Belgium.

### References

- Bouchard, T. J., Jr. (1993). Genetic and environmental influences on adult personality: Evaluating the evidence. In J. Hettema & I. J. Deary (Eds.), *Foundations of personality* (NATO ASI Series D, Behavioural and Social Sciences, Vol. 72, pp. 15–44). London: Kluwer.
- De Fruyt, F., & Mervielde, I. (1992). The "Big Five" in children's sociometric judgments [Abstract]. *International Journal of Psychology*, 27, 353.
- Eysenck, H. J. (1967). *The biological bases of personality*. Springfield, IL: Thomas.
- Kohnstamm, G. A., Halverson, C. F., Havill, V., & Mervielde, I. (in press). Parents' free descriptions of child characteristics: A cross-cultural search for the roots of the Big Five. In S. Harkness, C. M. Super, & R. New (Eds.) *Parental ethnotheories: Their sociocultural origins and developmental consequences*. New York: Guilford.
- Loehlin, J. (1992). *Genes and environment in personality development*. Newbury Park, CA: Sage.
- Loehlin, J. C., & Nichols, R. C. (1976). *Heredity, environment and personality*. Austin: University of Texas Press.
- Loehlin, J. C., Willerman, L., & Horn, J. M. (1988). Human behavior genetics. *Annual Review of Psychology*, 39, 101–133.
- Mervielde, I. (in press). A five-factor model classification of teachers' constructs on individual differences among children aged four to twelve. In C. F. Halverson, G. A. Kohnstamm, & R. P. Martin (Eds.), *The developing structure of temperament and personality from infancy to adulthood*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Mervielde, I., & De Fruyt, F. (1993, July). *The "Big Five" personality factors as a model for the structure and development of peer nominations*. Paper presented at the meeting of the International Society for the Study of Individual Differences, Baltimore.
- Moscovici, S. (1985). Social influence and conformity. In G. Lindzey & E. Aronson (Eds.), *The handbook of social psychology* (3rd ed.; pp. 347–412). New York: Random House.
- Plomin, R., Chipuer, H. M., & Loehlin, J. C. (1990). Behavioral genetics and personality. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 225–243). New York: Guilford.
- Plomin, R., & Daniels, D. (1987). Why are children in the same family so different from each other? *Behavioral and Brain Sciences*, 10, 1–16.

## Personality Psychology Has Two Goals: Must It Be Two Fields?

Walter Mischel and Yuichi Shoda

Columbia University

In a field eager to move from critical self-appraisal toward enthusiastic consensus, the prospect of reducing the bewildering array of personality constructs, many of which are highly intercorrelated, to a small set of factors is enticing and welcome indeed. Yet, there is also growing discomfort about this new enthusiasm that is felt even by essentially sympathetic observers like Pervin (this issue), as well as several others (Cattell, 1993; Comer, 1993; Eysenck, 1993; Guastello, 1993; Kroger & Wood, 1993; Shadel & Cervone, 1993). Pervin is troubled because the advocates of the Big Five factor structure equate their model "with trait theory and trait theory with the field of personality" (Pervin, this issue).

To Pervin, this definition of personality seems so preemptive that he takes pains to try to justify his concerns and to document that his reading of the current trait literature is not overwrought. It is not. The equation simply makes explicit what has long been implicit and

never clearly articulated: In personality psychology, since the inception of the field, the personality construct has been defined in terms of an implicit global trait conception, which currently seems even more extreme and unconditionalized in its claims and assumptions (e.g., Funder, 1991; Goldberg, 1993) than it was in its original forms (e.g., Allport, 1937).

Pervin's timely call for a reappraisal of the current claims and assumptions of trait psychology comes in response to the return to the factor-analytic approach to personality traits several decades after its invention 40 years ago. It was noted then, and it is just as true today, that factor analysis describes the structure of the covariation pattern among a set of variables (e.g., Mischel, 1968; Peterson, 1968; Vernon, 1964): This structure is not synonymous with the structure of the objects being described by those variables. The covariation pattern summarizes the characteristics that tend to vary together, whereas the structures of the objects themselves

determine how they work. Neither of these is illusory; both are “real,” but they do not refer to the same structure. This distinction is most clearly illustrated by factor-analytic studies of perceived characteristics of objects whose structures are known. In a factor-analytic study of airplane characteristics, for example, one may discover such factors as maximum speed, handling, reliability, workmanship, and ergonomics as five orthogonal factors. If so, the diverse features of airplanes may be parsimoniously grouped into the five clusters without significant loss of information. But the factors do not reveal the structure of the airplanes or tell us how to make an airplane or how to fix one when it’s broken, and they cannot replace even a rough conception of the components (e.g., wings) and how they are interconnected to make those airplanes fly in their distinctive ways.

It is easy to confuse the factor structure of personality descriptors with personality itself because “personality” has two distinct meanings in personality psychology as well as in everyday discourse: One refers to summaries of observed individual differences in behaviors; the other refers to the individual differences in the processes that generate these behaviors. Used in the former sense, personality consists of a set of descriptions such as *friendly*, *conscientious*, and *open-minded*, which summarize what the person is like on the whole. Used in the second sense, it offers causal explanations for the observed individual differences in behaviors, addressing why and when the person behaves distinctively. When traits are proposed as the basic units for the model of personality, the question becomes: To which meaning of personality do they refer? The descriptive use of trait terms and constructs as summaries of behavior tendencies has never been at issue, but the causal-explanatory role of trait constructs remains unclear and controversial. The issues become further muddled when personality descriptors are equated with the processes that generate and underlie individual differences in behavior, in effect using a description of behavior to explain it (e.g., Bandura, 1969; Mischel, 1968). Those confusions, in part, precipitated the classic paradigm crises in the field and motivated the search for social-cognitive mediating variables—like personal constructs, expectancies, and goals—in the search for more incisive alternative conceptualizations of personality (e.g., Mischel, 1973, 1990; Shoda & Mischel, 1993). Those who remember that history, as Pervin does, worry if a slippage from the summary meaning of trait terms to the causal-explanatory meaning may again be developing currently as the Big Five, offered originally as psycholexical descriptive dimensions about behavior, evolve into the basic units to explain what underlies and generates those behaviors (see also John & Robins, 1993; McAdams, 1992).

Are “traits” being transformed from descriptive summary dimensions to explanatory entities that generate the individual’s distinctive behavior? If so, the logic and evidence that support this transformation need to be stated explicitly and announced clearly. Otherwise, we may have to relive the confusion created in the past when descriptions and explanations become interchangeable. A field tired of debates and eager for euphoria risks moving too easily from acceptance of the Big Five in the first meaning to automatic acceptance of the assumptions about the explanatory nature of personality implied in the second meaning. Pervin senses this hazard, and his warnings are worth heeding.

The two meanings of the personality construct also reflect the two distinctive goals of any science—taxonomic-classificatory and explanatory. Personality psychologists since ancient times have tried to devise a system to place all people along a small number of dimensions or to categorize them into a finite (and small) number of classes or types. An example of a good taxonomy is the Library of Congress cataloguing system. For this goal, the Big Five factors may provide a useful resolution in the enduring search for a psycholexical taxonomy of trait terms.

But if the goal is explanatory, one needs to understand and predict the phenomena of interest and the processes that generate them. Factor analysis of disease symptoms caused by different kinds of virus, for example, does not substitute for an understanding of how HIV replicates and how it ultimately destroys a person’s immune system. Similarly, localization of a person in the factor space defined by psycholexical dimensions does not directly allow one to understand, explain, and predict why and when a person behaves in characteristic ways. For process-oriented personality psychologists, the goal of explanation includes understanding the psychological mediating variables through which distinctive individual differences in behavior emerge, endure, change, and can be influenced. Progress toward such understanding is evident in the growth over the last three decades of process-oriented theories and research in personality psychology, whose contributions Pervin (1990) sampled in his recent *Handbook of Personality*. They include theory and research on social competence, self-theories, interpersonal selves, gender roles, expectancies, goals, culture, psychological unconscious, self-knowledge, person  $\times$  situation relations and interactions, standards and knowledge activation, motivation, and emotion (Mischel, 1993). Considering their diversity and their potential value for any comprehensive conception of personality, one can understand Pervin’s dismay at a definition of personality in traditional trait terms that preempts them or trivializes them into a peripheral role.

In sum, Pervin notes, and is appropriately concerned, that the factor structure of personality descriptors is

becoming equated with the processes that underlie and generate behavior and made synonymous with personality as a construct and as a field. This equation is especially troubling when it is implied but not explicitly stated. If the factor structures of the Big Five for describing individual differences also are to become the basic psychological units for understanding what generates and motivates those individual differences, then the evidence and reasoning that supports this transformation must be made explicit.

In addition to needing to clarify the causal status of the trait construct theoretically, support for the utility of traits as predictive constructs requires demonstrating substantial links to relevant behaviors. In reviewing the data that support the new enthusiasm, perhaps most remarkable is the discrepancy between the bold claims of predictive utility made for trait constructs like those in the Big Five by its advocates (e.g., Goldberg, 1993) and the low validity coefficients (mean  $r = .22$ ) that Pervin (this issue) finds when examining the sources cited to support them. These coefficients are entirely consistent with the critical evaluation of the predictive and incremental validity of global trait measures for specific behavior made by Mischel (1968) and Peterson (1968) when the utility of the traditional trait paradigm was challenged. The basic data of our field remain reassuringly stable: only the interpretations seem to shift (e.g., Mischel & Peake, 1982, 1983).

In conclusion, we ask: In current trait theory, are traits proposed as descriptive constructs that serve to summarize overall behavior tendencies? Or are they constructs that can explain how behavior is generated? If so, how do they exert their hypothesized effects? It is important to distinguish the two goals of personality psychology—taxonomic and explanatory—and to be explicit about differences in agenda that they dictate. The two goals are seen in the concurrent growth of two different fields of personality psychology, with distinct construct systems and purposes, and that seems to be the contemporary reality (Cervone, 1991). We are not convinced, however, that this is a desirable state. Ideally, and ultimately, the same construct system that allows us to understand the psychology of the behavior-generating system also should facilitate a taxonomy that captures individual differences with respect to that system. Until such a day arrives, however, it may be wiser to acknowledge and appreciate the differences than to try to deny or preempt them.

### Notes

Manuscript preparation was supported in part by National Institute of Mental Health Grants MH39349, MH45994, and MH39263 to Walter Mischel.

We are especially grateful to Daniel Cervone and Geraldine Downey for their valuable comments.

Walter Mischel and Yuichi Shoda, Department of Psychology, 309 Schermerhorn Hall, Columbia University, New York, NY 10027.

### References

- Allport, G. W. (1937). *Personality: A psychological interpretation*. New York: Holt, Rinehart & Winston.
- Bandura, A. (1969). *Principles of behavior modification*. New York: Holt, Rinehart & Winston.
- Cattell, H. E. P. (1993). Comment on Goldberg. *American Psychologist*, 48, 1302–1303.
- Cervone, D. (1991). The two disciplines of personality psychology. *Psychological Science*, 2, 371–377.
- Comer, D. R. (1993). Sociopolitical effects on personality research. *American Psychologist*, 48, 1299.
- Eysenck, H. J. (1993). Comment on Goldberg. *American Psychologist*, 48, 1299–1300.
- Funder, D. C. (1991). Global traits: A neo-Allportian approach to personality. *Psychological Science*, 2, 31–39.
- Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist*, 48, 26–34.
- Guastello, S. J. (1993). A two-(and-a-half)-tiered trait taxonomy. *American Psychologist*, 48, 1298–1299.
- John, O. P., & Robins, R. W. (1993). Gordon Allport: Father and critic of the five-factor model. In K. H. Craik, R. Hogan, & R. N. Wolfe (Eds.), *Fifty years of personality psychology* (pp. 215–236). New York: Plenum.
- Kroger, R. O., & Wood, L. A. (1993). Reification, “faking,” and the Big Five. *American Psychologist*, 48, 1297–1298.
- McAdams, D. P. (1992). The five-factor model in personality: A critical appraisal. *Journal of Personality*, 60, 329–362.
- Mischel, W. (1968). *Personality and assessment*. New York: Wiley.
- Mischel, W. (1973). Toward a cognitive social learning reconceptualization of personality. *Psychological Review*, 80, 252–283.
- Mischel, W. (1990). Personality dispositions revisited and revised: A view after three decades. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 111–134). New York: Guilford.
- Mischel, W. (1993). *Introduction to personality* (5th ed.). Fort Worth, TX: Harcourt Brace.
- Mischel, W., & Peake, P. K. (1982). Beyond *deja vu* in the search for cross-situational consistency. *Psychological Review*, 89, 730–755.
- Mischel, W., & Peake, P. K. (1983). Some facets of consistency: Replies to Epstein, Funder, and Bem. *Psychological Review*, 90, 394–402.
- Pervin, L. A. (Ed.). (1990). *Handbook of personality: Theory and research*. New York: Guilford.
- Peterson, D. R. (1968). *The clinical study of social behavior*. New York: Appleton-Century-Crofts.
- Shadel, W. G., & Cervone, D. (1993). The Big Five versus nobody? *American Psychologist*, 48, 1300–1302.
- Shoda, Y., & Mischel, W. (1993). Cognitive social approach to dispositional inferences: What if the perceiver is a cognitive-social theorist? *Personality and Social Psychology Bulletin*, 19, 574–585.
- Vernon, P. E. (1964). *Personality assessment: A critical survey*. New York: Wiley.

