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AUTHORS' RESPONSES

Personality Development and the Person–Situation Debate: It's Déjà Vu All Over Again

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In the two target articles and the series of perceptive responses we find a remarkable range of opinions on the empirical and conceptual viability of personality traits and about the nature of personality development. It seems we have stumbled upon the person–situation debate once again, this time in the context of personality development. We were under the impression that the person–situation debate was settled (Kenrick & Funder, 1988), but it appears to have been lying dormant.

In this response we do three things. First, we rectify an omission on the part of the two target articles. Both target articles failed to cite critical empirical evidence demonstrating the continuity of temperaments and traits from childhood to adulthood. We attempt to briefly remedy this oversight. Second, we attend to several logical and methodological flaws in the situationist and contextualist criticisms of dispositional constructs that continue to plague the debate and unless dealt with directly will continue to do so. Third, we clarify our position on personality traits and argue that they should be included in the panoply of developmental constructs because they not only show remarkable levels of continuity, but they also demonstrate systematic changes throughout the life course.

There Is Ample Evidence for the Continuity of Personality From Childhood to Adulthood

In his target article, Lewis (this issue) takes the position that there is no continuity in personality from childhood and adolescence to adulthood claiming "... most short- and long-term longitudinal studies have failed to find much of a relation between earlier and later events." In contrast, from our overview of the empirical research on personality development, we concluded that there is a surprising level of continuity from childhood to adulthood. Is the truth somewhere in between, as Kagan (this issue) argues? We think not. It should be noted that the reason why we used the word "surprising" was not to imply that the magnitude of the continuity in childhood was large, but because there was any continuity at all. Until recently, the prevailing opinion was that there was little or no continuity of temperaments or traits in childhood, and this was accepted by both developmental and personality psychologists (e.g., Kagan, 1980). Our position, based on the aggregate empirical database, is that there are modest levels of continuity in personality in childhood and impressive levels of continuity in adulthood (e.g., Roberts & DelVecchio, 2000). Because of space limitations (or perhaps lack of foresight), we did not thoroughly review the literature linking childhood individual differences to adult functioning. We briefly attend to that oversight and introduce readers to some of this work, lest they walk away with the impression that Lewis is correct in his assessment.

Contrary to Lewis's (this issue) claim, numerous studies show that childhood temperament and personality factors do predict outcomes in adolescence, young adulthood, middle age, and old age. In relation to the formation of human capital, longitudinal studies show that measures of childhood temperament and personality predict subsequent lower educational attainment, lengthy bouts of unemployment, and less occupational stability (Caspi, Elder, & Bem, 1987; Caspi, Wright, Moffitt, & Silva, 1998). In relation to family formation, longitudinal studies show that childhood measures predict the timing of the transition from one's family of origin into one's family of destination

(Caspi, Elder, & Bem, 1987; Gest, 1997; Kerr, Lambert, & Bem, 1996). In relation to adult intimate relationships, longitudinal studies show that measures of childhood personality predict whether a person is more likely in adulthood to have a conflicted marital relationship and to divorce (Huesmann, Eron, Lefkowitz, & Walder, 1984; Tucker, Kressin, Spiro, & Ruscio, 1998). In relation to criminal behavior, longitudinal studies show that temperament and personality characteristics—measured as early as age 3—predict the age of onset of illegal behavior, the use of illicit substances in adolescence, and recidivistic crime in adulthood (e.g., Block, Block, & Keyes, 1988; Caspi, 2000; Masse & Tremblay, 1997; Raine, Reynolds, Venables, Mednick, & Farrington, 1998; Tremblay, Pihl, Vitaro, & Dobkin, 1994). In relation to health outcomes, longitudinal studies show that measures of childhood temperament and personality predict adult health-risk behaviors and even the length of life (Caspi et al., 1997; Friedman et al., 1993). When samples are well defined, when temperament and personality characteristics in childhood are carefully measured, and when outcome measures are appropriately collected, the conclusion to emerge from the cumulative body of longitudinal studies is this: early-emerging personality differences make a difference to the course and quality of life.

The Logical and Methodological Flaws in the Situationist and Contextualist Criticisms of Dispositional Constructs

Lewis's (this issue) contextualist worldview inadvertently resurrects the debate over whether the locus of human nature is to be found in the person or the situation. If we are to entertain this debate anew within the field of personality development it is important to address several flaws in the original person–situation debate that are recapitulated here as well as to tackle several newly promulgated flaws. We expand on issues raised by Shiner, Tellegen, and Masten (this issue) and McCrae (this issue) concerning the definition of dispositions and the expected level of interjudge agreement about dispositions, respectively. In addition, we outline two additional issues that concern the modal expected effect size in personality psychology and the use of data from children to cast doubt on dispositional constructs.

The first, most fundamental flaw of past and current critiques of personality traits concerns the definition of personality traits employed by situationists and contextualists. In his original critique of personality (Mischel, 1968) and in his recent theoretical writings (Mischel & Shoda, 1995), Mischel assumed that for a disposition to exist one should find "situational invariance." That is, people should demonstrate absolute cross-situational consistency. Likewise, Lewis assumes that personality entails consistency across places, tasks, and interactions. Implicit in these definitions is the expectation that people behave the same across situations, not that they act the same relative to one another. This definition of consistency is psychologically nonsensical; only catatonia would fit this trait definition. Moreover, as Shiner et al. (this issue) points out, these definitions do not reflect the definitions used by most personality psychologists, which normally derive from the seminal writings of Allport (1937) and Murray (1938). As Allport (1961) wrote, "dispositions are never wholly consistent. What a bore it would be if they were—and what chaos if they were not" (p. 362). Most accepted definitions of personality allude to relatively enduring patterns of thoughts, feelings, and behavior. As Tellegen (1991) argued, it is the pattern or family of "if-stimulus-then- response" dispositions that make up personality. Working from these latter definitions, we would not expect situational invariance, but rather complex patterns of behaviors that would need to be examined, interpreted, and aggregated across numerous situations, places and times, to arrive at a reliable and valid index of a personality trait (e.g., Epstein, 1980, 1986).

The second flaw particular to this debate concerns the level of interjudge agreement we should expect to find when assessing personality traits in children. Lewis (this issue) believes that the observed level of interjudge agreement is too low and this calls into question the very existence of traits. As McCrae (this issue) points out, the levels of self and other agreement found for children are comparable to those found in adults (e.g., between .30 and .60; Funder, 1987). Does the average self and other agreement in children or adults constitute an epistemological crisis or a psychometric challenge? We think it is the latter. These estimates are the averages between two judges. Using two judges is like using a two-item self-report scale. Few researchers would endorse the practice in the self-report domain and the observational domain is no different. Indeed, the modal level of interjudge agreement found in both the child and adult literature poses an easily surmountable psychometric challenge with a relatively straightforward prescription: Use more judges. Using more judges increases both the reliability and validity of observational ratings (Block, 1978; Horowitz, Inouye, & Siegleman, 1979). Furthermore, there are uncomplicated formulas for estimating the number of judges one needs to form a reliable and valid composite (Tsujimoto, Hamilton, & Berger, 1990). For researchers interested in children's personality, this means they might have to use more than a parent and a teacher to gauge a child's psychological functioning.

The third flaw is the echoing of Mischel's (1968) argument that personality traits demonstrate small ef-

fect sizes (e.g., below .30). Of course, we now know that levels of test–retest continuity of temperaments and traits start at .30 in the toddler years and go up from there (Roberts & DelVecchio, 2000), demonstrating that in the domain of personality development the magical .30 barrier is easily broken. Admittedly though many of the relationships between individual differences in childhood and adult outcomes are small in magnitude (Shiner, Tellegen, & Masten, this issue). The relevant question is whether this warrants the inference that personality traits are unimportant. We are grateful to Paunonen (this issue) for his helpful and sober discussion, and refer the reader to several additional essays, which should help set the record straight (Funder & Ozer, 1983; Hogan & Roberts, in press; Kenrick & Funder, 1988; Lubinsky, 2000; Lubinsky & Humphreys, 1997). We only wish to amplify a few issues. First, the small effect sizes (e.g., ranging from .10 to .40) found in personality research usually reflect the use of single, homogenous measures to predict single behaviors, such as predicting smoking behavior from a single rating of conscientiousness. According to Ahadi and Diener (1989), we should not expect single measures to predict single behavioral outcomes at a much higher level than .40, because multiple factors contribute to the expression of any given behavior. Second, these small effects are often diminished further by using the "variance accounted for statistic," whereby one squares the correlation and concludes that personality tests account for somewhere between 0% and 16% of the criterion variance. Ozer (1985) argued that the variance accounted for statistic is biased and possibly inappropriate for evaluating statistical results (see also Rosenthal, 1991). Alternative effect size scales abound (Cohen, 1992). For example, one could use Rosenthal and Rubin's (1982) binomial effect-size display (BESD) in which a correlation coefficient is translated into the increase one would expect in a simple 2 × 2 contingency table where the base rate expectation is 50:50. In the case of a .20 correlation we improve our hit rate from 50:50 to 60:40. In the case of a .40 correlation, we improve our hit rate from 50:50 to 70:30. These percentages are not bad. Third, even using variance accounted for statistics, it is erroneous to assume that the 84% to 100% of the variance not accounted for by personality measures is accounted for by situations or contexts. Rather, as Funder and Ozer (1983) showed, the effect sizes for experimental manipulations are comparable to those of personality traits. Fourth, focusing on empirical connections between variables at two points in time (and the associated effect size) is a decidedly nondevelopmental approach because the effects of personality accumulate over a lifetime. A focus on a single outcome variable measured at a single point in time will result in an underestimate of the extent of continuity in behavioral development (see Abelson, 1985).

The fourth flaw endemic to this version of the person–situation debate is that data from children are now used to cast doubt on the entire field of personality psychology and personality development in particular. Interestingly, the original person–situation debate also focused on the cross-situational consistency of dispositional constructs in samples of children and adolescents (e.g., Hartshorne & May, 1928; Shoda, Mischel, & Wright, 1989). We now have formidable empirical evidence that children are substantially less consistent than adults (Roberts & DelVecchio, 2000). For that matter, even college students are less consistent than people between the ages of 22 and 80. It seems imprudent to build a "straw child" and to question so broadly the existence of dispositions based on evidence from children alone. It is also inappropriate because whereas structural models of personality have been tested, evaluated, and compared in adult samples, the psychometric tradition has tended to be ignored by most child psychologists with the result that assessment tools for children are not as good (Shiner, 1998). Fortunately, this situation is beginning to change with a new generation of well-conceived instruments for the assessment of temperament and personality in childhood.

Contextualists to the Left of Me, Essentialists to the Right, Here I Am Stuck in the Middle With You

Our comments thus far notwithstanding, we were genuinely surprised to find ourselves portrayed as defenders of the notion of personality continuity. Admittedly, compared to an extreme contextualist position, our writings do emphasize the role of continuity in personality, but we are also on record as to the importance of social and historical contexts for personality development (Caspi, 1987; Caspi & Roberts, 1999) and have shown in a series of articles that personality traits change in response to social (Roberts, 1997; Roberts & Chapman, 2000; Roberts, Helson, & Klohnen, in press) and historical (Roberts & Helson, 1997) contexts. If we are the saviors of continuity, beware the notion of continuity.

Our presentation of the evidence for continuity in personality should not be taken as an indication that there is no change in temperaments and traits. Unfortunately, it is common for theorists and researchers to assume that if traits demonstrate continuity this is sufficient evidence to justify the conclusion that they don't change. Almost all definitions of traits include the phrase "relatively enduring" or some equivalent. And relative to other constructs, such as self-esteem or life satisfaction, personality traits are quite consistent (Conley, 1984). The key is, of course, to determine what is meant by "relatively enduring." We are in agreement with "essentialists" who argue that traits are

real, consistent, and of use in predicting behavior across the life course, but we fall short of taking this to mean they are fixed and immutable. McCrae et al. (2000) staked out a more extreme essentialist position. They argued that traits are endogenous temperaments and are unaffected by environments. This position must be reconciled with the empirical data that show that personality traits change throughout the life course. For example, we find less than perfect rank-order stability even in old age (Roberts & DelVecchio, 2000). Mean level changes in personality traits have been demonstrated in young adulthood (Helson & Moane, 1987), midlife (Dudek & Hall, 1991), and old age (Field & Millsap, 1991). The extreme essentialist position also must be reconciled with studies demonstrating that individual differences in personality change are related to environmental experiences in young adulthood (Helson, Mitchel, & Moane, 1984), midlife (Helson & Wink, 1992; Roberts, 1997; Roberts, Helson, & Klohnen, in press), and old age (Tower & Kasl, 1996). It is an inescapable fact that traits show evidence for change throughout the life course and that change in personality traits is sometimes related to environmental factors.

These findings suggest that we must revise our modal conceptualization of traits and abandon more extreme essentialist trait theories. We must pursue an alternative, dynamic conceptualization of traits (Pervin, 1994). Functionally, this means that we cannot simply assume that traits are consistent because they are traits (the most problematic circularity of trait theories and definitions). Rather, it is incumbent that we move toward an understanding of the underlying mechanisms that account for continuity and change in personality (Whitbourne, this issue). One of the goals of our target article was to describe the mechanisms that can explain why traits demonstrate both continuity and change.

A dynamic conceptualization of personality traits means that we should treat personality traits as developmental constructs. As Whitbourne (this issue) points out, moving traits into the developmental fold would entail integrating trait notions with process-oriented mechanisms such as identity assimilation and identity balance. One such integration is reflected in a recent trend exploring the intersection of personality trait development and identity formation (e.g., Helson & Sanjay, 2000; Helson, Stewart, & Ostrove, 1995). For example, Pals (1999) showed that identity consolidation leads to changes in ego resiliency in young adulthood. In her more recent work, Pals (this issue) makes a compelling argument for the role of identity narratives in the personality change process. In a recent description of our Cumulative Continuity Model of Personality Development (Roberts & Caspi, in press), we argued that identity structure serves as a mediator between experience and trait development and thus facilitates both consistency and change in personality traits. These positions are integrative in that they assume that traits show both continuity and change, and that the change and consistency in traits can be explained, in part, through the processes of identity development.

One of the reasons why personality psychology remains a viable target for contextualist critiques is its reluctance to move beyond a static notion of traits (e.g., Pervin, 1994). It is time for trait psychology to move forward and revise old theories in ways that fully integrate the empirical fact that traits do change. We see the integration of dispositional constructs with notions found in adult development, like identity structure and consolidation, as one way that this reconceptualization of traits can come about.

Conclusion

In our response we made three points. First, there is ample evidence that childhood individual differences predict important outcomes in adulthood. Second, the criticisms brought to bear by situationists (and now contextualists) on trait constructs are methodologically and logically flawed. Third, the static notion of personality traits should be abandoned for a more dynamic conceptualization that addresses questions such as why personality traits are consistent and why personality traits change.

This revival of the person–situation is disturbing because it is repetitious. It seems as a field we are fated to be periodically drawn to extreme positions, either out of frustration or fatigue, and to make outlandish claims such as "personality traits don't exist" or conversely that "environmental influences are unimportant." Too many studies and too much data exist already to allow responsible scientists to stake out these extreme claims. There are enough data to state with confidence that there are meaningful and reliable links between features of children's personalities and their adult outcomes; that the continuity of adult personality characteristics is strong; and that throughout the life course, but especially in the earlier years of life, personality change is nontrivial. These data need to be explained, not polemicized.

Notes

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References

Abelson, R. P. (1985). A variance explanation paradox: When a little is a lot. *Psychological Bulletin, 97,* 129–133.

Ahadi, S., & Diener, E. (1989). Multiple determinants and effect size. *Journal of Personality and Social Psychology, 56,* 398–406.

Allport, G. W. (1937). *Personality: A psychological interpretation.* New York: Holt.

Allport, G. W. (1961). *Pattern and growth in personality.* New York: Holt.

Block, J. (1978). *The Q-sort method in personality assessment and psychiatric research.* Palo Alto, CA: Consulting Psychologists Press.

Block, J., Block, J. H., & Keyes, S. (1988). Longitudinally foretelling drug usage in adolescence: Early childhood personality and environmental precursors. *Child Development, 59,* 336–355.

Caspi, A. (1987). Personality in the life course. *Journal of Personality & Social Psychology, 53,* 1203–1213.

Caspi, A. (2000). The child is father of the man: Personality continuities from childhood to adulthood. *Journal of Personality & Social Psychology, 78,* 158–172.

Caspi, A., Begg, D., Dickson, N., Harrington, H., Langley, J., Moffitt, T. E., & Silva, P. A. (1997). Personality differences predict health-risk behaviors in young adulthood: Evidence from a longitudinal study. *Journal of Personality and Social Psychology, 73,* 1052–1063.

Caspi, A., Elder, G. H., & Bem, D. J. (1987). Moving against the world: Life-course patterns of explosive children. *Developmental Psychology, 23,* 308–313.

Caspi, A., Elder, G. H., Jr., & Bem, D. J. (1989). Continuities and consequences of interactional styles across the life course. *Journal of Personality, 57,* 375–406.

Caspi, A., Entner Wright, B. R., Moffitt, T. E., & Silva, P. A. (1998). Early failure in the labor market: Childhood and adolescent predictors of unemployment in the transition to adulthood. *American Sociological Review, 63,* 424–451.

Caspi, A., & Roberts, B. W. (1999). Personality change and continuity across the life course. In L. A. Pervin & O. P. John (Eds.), *Handbook of Personality Theory and Research* (Vol. 2, pp. 300–326). New York: Guilford.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112,* 155–159.

Conley, J. J. (1984). The hierarchy of consistency: A review and model of longitudinal findings on adult individual differences in intelligence, personality, and self-opinion. *Personality and Individual Differences, 5,* 11–26.

Dudek, S. Z., & Hall, W. B. (1991). Personality consistency: Eminent architects 25 years later. *Creativity Research Journal, 4,* 213–231.

Epstein, S. (1980). The stability of behavior: II. Implications for psychological research. *American Psychologist, 35,* 790–806.

Epstein, S. (1986). Does aggregation produce spuriously high estimates of behavior stability? *Journal of Personality and Social Psychology, 50,* 1199–1210.

Field, D., & Millsap, R. E. (1991). Personality in advanced old age: Continuity or change? *Journal of Gerontology : Psychological Sciences, 46,* 299–308.

Friedman, H. S., Tucker, J. S., Tomlinson-Keasey, C., Schwartz, J. E., Wingard, D. L., & Criqui, M. H. (1993). Does childhood personality predict longevity. *Journal of Personality and Social Psychology, 65,* 176–185.

Funder, D. C. (1987). Errors and mistakes: Evaluating the accuracy of social judgment. *Psychological Bulletin, 101,* 75–90.

Funder, D. C., & Ozer, D. J. (1983). Behavior as a function of the situation. *Journal of Personality & Social Psychology, 44,* 107–112.

Gest, S. D. (1997). Behavioral inhibition: Stability and Associations with adaption from childhood to early adulthood. *Journal of Personality and Social Psychology, 72,* 467–475.

Hartshorne, H., & May, M. A. (1928). *Studies in the nature of character: Studies in deceit* (Vol. 1). New York: Macmillan.

Helson, R., & Mitchell, V., & Moane, G. (1984). Personality and patterns of adherence and nonadherence to the social clock. *Journal of Personality and Social Psychology, 53,* 531–541.

Helson, R., & Moane, G. (1987). Personality change in women from college to midlife. *Journal of Personality and Social Psychology, 53,* 176–186.

Helson, R., & Sanja, S. (2000). *The construction of the individual's adult development.* Unpublished manuscript, University of California, Berkeley.

Helson, R., Stewart, A. J., & Ostrove, J. (1995). Identity in three cohorts of midlife women. *Journal of Personality and Social Psychology, 69,* 544–557.

Helson, R., & Wink, P. (1992). Personality change in women from the early 40s to the early 50s. *Psychology and Aging, 7,* 46–55.

Hogan, R., & Roberts, B. W. (in press). Personality and I/O psychology. In B. W. Roberts & R. T. Hogan (Eds.), *Applied personality psychology: The intersection of personality and I/O psychology* (pp. 1–23). Washington, DC: American Psychological Association.

Horowitz, L. M., Inouye, D., & Siegelman, E. Y. (1979). On averaging judges' ratings to increase their correlation with an external criterion. *Journal of Consulting and Clinical Psychology, 47,* 453–458.

Huesmann, L. R., Eron, L. D., Lefkowitz, M. M., & Walder, L. O. (1984). Stability of aggression over time and generations. *Developmental Psychology, 20,* 1120–1134.

Kagan, J. (1980). Perspectives on continuity. In O. G. Brim, Jr. & J. Kagan (Eds.), *Constancy and change in human development* (pp. 26–74). Cambridge, MA: Harvard University Press.

Kenrick, D. T., & Funder, D. C. (1988). Profiting from controversy: Lessons from the person- situation debate. *American Psychologist, 43,* 23–34.

Kerr, M., Lambert, W. W., & Bem, D. J. (1996). Life course sequelae of childhood shyness in Sweden: Comparison with the United States. *Developmental Psychology, 32,* 1100–1105.

Lubinski, D. (2000). Scientific and social significance of assessing individual differences: Sinking shafts at a few critical points. *Annual Review of Psychology, 51,* 405–444.

Lubinski, D., & Humphreys, L. G. (1997). Incorporating general intelligence into epidemiology and the social sciences. *Intelligence, 24,* 159–201.

Masse, L. C., & Tremblay, R. E. (1997). Behavior of boys in kindergarten and the onset of substance use during adolescence. *Archives of General Psychiatry, 54,* 62–68.

McCrae, R. R, Costa, P. T. Jr, Ostendorf, F., Angleitner, A., Hrebickova, M., Avia, M. D., Sanz, J., Sanchez-Bernardos, M. L., Kusdil, M. E., Woodfield, R., Saunders, P. R., & Smith, P. B. (2000). Nature over nurture: Temperament, personality, and life span development. *Journal of Personality & Social Psychology, 78,* 173–186.

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

Mischel, W., & Shoda, Y. (1995). A cognitive-affective system theory of personality: Reconceptualizing situations, dispositions, dynamics, and invariance in personality structure. *Psychological Review, 102,* 246–268.

Murray, H. A. (1938). *Explorations in personality.* New York: Oxford University Press.

Ozer, D. J. (1985). Correlation and the coefficient of determination. *Psychological Bulletin, 97,* 307–315.

Pals, J. L. (1999). Identity consolidation in early adulthood: Relations with ego-resiliency, the context of marriage, and personality change. *Journal of Personality, 67,* 295–329.

Pervin, L. A. (1994). A critical analysis of current trait theory. *Psychological Inquiry, 5,* 103–113.

Raine, A., Reynolds, C., Venables, P. H., Mednick, S. A., & Farrington, D. P. (1998). Fearlessness, stimulation-seeking, and large body size at age 3 years as early predispositions to childhood aggression at age 11 years. *Archives of General Psychiatry, 55,* 745–751.

Roberts, B. W. (1997). Plaster or plasticity: Are work experiences associated with personality change in women? *Journal of Personality, 65,* 205–232.

Roberts, B. W., & Caspi, A. (in press). The cumulative continuity model of personality development: Striking a balance between continuity and change in personality traits across the life course. In U. Staudinger & U. Lindenberger (Eds.), *Understanding human development: Lifespan psychology in exchange with other disciplines.* Dordrecht, The Netherlands: Kluwer Academic.

Roberts, B. W., & Chapman, C. N. (2000). Change in dispositional well-being and its relation to role quality: A 30-year longitudinal study. *Journal of Research in Personality, 34,* 26–41.

Roberts, B. W., & DelVecchio, W. F. (2000). The rank-order consistency of personality from childhood to old age: A quantitative review of longitudinal studies. *Psychological Bulletin, 126,* 3–25.

Roberts, B. W., & Helson, R. (1997). Changes in culture, changes in personality: The influence of individualism in a longitudinal study of women. *Journal of Personality and Social Psychology, 72,* 641–651.

Roberts, B. W., Helson, R., & Klohnen, E. C. (in press). Personality development and growth in women across 30 years: Three perspectives. *Journal of Personality.*

Rosenthal, R. (1991). *Meta-analytic procedures for social research* (Rev. ed.). Newbury Park, CA: Sage.

Rosenthal, R., & Rubin, D. B. (1982). A simple general purpose display of magnitude of experimental effect. *Journal of Educational Psychology, 74,* 166–169.

Shoda, Y., Mischel, W., & Wright, J. C. (1989). Intuitive interactionism in person perception: Effects of situation-behavior relations on dispositional judgments. *Journal of Personality and Social Psychology, 56,* 41–53.

Tellegen, A. (1991). Personality traits: Issues of definition, evidence, and assessment. In W. M. Grove & D. Cichetti (Eds.), *Thinking clearly about psychology: Vol 2. Personality and psychopathology* (pp. 10–35). Minneapolis: University of Minnesota Press.

Tsujimoto, R. N., Hamilton, M., & Berger, D. E. (1990). Averaging multiple judges to increase their correlation with an external criterion. *Psychological Assessment, 2,* 432–437.

Tower, R. B., & Kasl, S. V. (1996) Depressive symptoms across older spouses: Longitudinal influences. *Psychology & Aging, 11,* 683–697.

Tremblay, R. E., Pihl, R. O. Vitaro, F., & Dobkin, P. L. (1994). Predicting early onset of male antisocial behavior from preschool behavior. *Archives of General Psychiatry, 51,* 732–739.

Tucker, J. S., Kressin, N. R., Spiro, A., & Ruscio, J. (1998). Intrapersonal characteristics and the timing of divorce: A prospective investigation. *Journal of Social and Personal Relationships, 15,* 211–225.