

The Grand Challenges of Personality and Individual Differences for Social, Behavioral and Economic Science

Association for Research in Personality

Abstract. Individuals respond differently to social situations, economic circumstances, and physical environments, with important consequences for physical and mental health, occupational attainment, economic well-being, community involvement, and mortality itself. The key questions in the psychological study of *personality and individual differences* are: What are the primary dimensions of personality and ability how can they best be measured? What are the origins of these individual differences? What are the psychological processes that underlie individual differences in personality? To what degree and in what ways is personality stable, variable, and changeable across the lifespan? What are the behavioral implications of personality and how do these implications vary with situational circumstances? What are the long-term implications of personality for important life outcomes and how do these implications vary according to the nature of physical, social and cultural environment? Personality psychology is a “hub” discipline that stands at the crossroads of social psychology and economics, and also cognitive science, developmental psychology, health psychology, and biology. The key questions of personality psychology thus are both foundational and potentially transformative of broad areas of social science.

Written on behalf of the Association for Research in Personality

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People are not all the same. Individuals respond differently to social situations, economic circumstances, and physical environments, with important consequences for life outcomes including physical and mental health, occupational attainment and economic well-being, community involvement, and mortality itself. The increasing diversity of American society highlights the importance of appreciating and understanding the wide range of ways in which people perceive, respond to, and cope with their physical, social, and cultural environments. The study of *personality and individual differences* aims to understand the nature, functioning, origins, and consequences of these differences

This topic presents a grand challenge to social, behavioral and economic science because many important, influential and useful theoretical models in these fields nonetheless follow a “one size fits all” approach. Analyses of the effects of social and physical environments often implicitly assume that everyone responds to them in the same way, and the design of interventions may insufficiently appreciate how a program that is effective for one person may be ineffective for another. At the level of basic science, much has been learned about the key dimensions of individual differences and their consequences, but much more remains to be fully explained including the nature and causes of individual differences, their underlying psychological mechanisms, their specific behavioral manifestations, and their wider implications for diverse fields of knowledge ranging from economics, social psychology and philosophy to biology and genetics.

The challenge questions are:

1. What are the primary dimensions on which people differ in personality and ability, and how can these differences best be measured?
2. What are the origins of these individual differences?
3. What are the psychological processes that underlie individual differences in personality?
4. To what degree and in what ways is personality stable, variable, and changeable across the lifespan?
5. What are the behavioral implications of personality? How do these implications vary with situational circumstances?
6. What are the long-term implications of personality for important life outcomes? How do these implications vary according to the nature of physical, social and cultural environment?

1. What are the primary dimensions on which people differ in personality and ability, and how can they best be measured?

This question has garnered a large amount of sustained research attention over the past few decades and important progress has been made towards identifying the key variables in personality and mental ability. In personality, the “Big Five” traits of extraversion, emotional stability (or neuroticism, reversed), conscientiousness, agreeableness and openness to experience account for substantial variance in life outcomes such as psychological well-being, happiness, family and peer relationships, job performance, career satisfaction, and physical health (Ozer & Benet-Martínez, 2006). But these five key traits tell less than the whole story. Much remains to be learned about the nature and predictive value of the specific facets of the big five, and a large research literature documents the importance of individual differences that fall outside the big five framework (e.g., differences in values and moral behavior). At the same time, dimensions of “normal” personality are being extended to the study of personality disorders and severe psychopathology, and a growing trend within clinical psychology (such as is guiding the DSM-5) is moving towards characterizing mental illness in terms of dimensional variation rather than discrete categories. Meanwhile, the study of mental abilities is yielding increasingly detailed models to explain the unique pattern of capacities that characterizes every individual and the learning and work environments in which each person is most likely to thrive. The necessary basic research in support of this progress includes the development of taxonomic systems including sophisticated psychometric models that more fully account for the structure of individual differences and the invention of new assessment tools including behavioral, reputational, and even biological methods.

2. What are the origins of individual differences?

The question of origin goes back at least as far as the ancient Greeks. Theophrastus asked more than 2000 years ago “why it is, that while all Greece lies under the same sky..., it has fallen to us to have characters so variously constituted.” The modern version of this question occupies behavioral geneticists and psychologists who study personality development, and their work makes it increasingly clear that while genetics and environment are both critically important, neither offers a complete account by itself. Exciting new work on genotype-environment interactions suggests possible candidates for specific genes that magnify or even protect against the long-term effects of difficult childhood environments and challenging social circumstances. Yet these findings remain difficult to obtain and even more difficult to replicate, and it is clear that the complex ways in which environments, genotypes and phenotypes interact to produce and maintain important individual differences are just beginning to be

understood. Therefore, this area of research presents a second domain in which the continued support of basic research is essential.

3. What are the psychological processes that underlie individual differences in personality?

Traditionally, research on individual differences in personality has paid more attention to their measurement than to exploring the processes of perception, cognition, judgment and emotional response that underlie their effects. It is important for future research to focus more tightly on the processes underlying personality traits both for enhanced theoretical understanding and for developing means to disrupt causal chains that lead to negative outcomes and to enhance or facilitate changes that lead to positive outcomes. One promising direction is the extension of the study of cognitive processes and heuristics into personality psychology, examining the different strategies of interpretation and planning that might partially explain individual differences in behavior. Pursuit of this topic will also promote the integration of the study of cognitive ability with the study of personality. A second promising direction is offered by the use of fMRI and other imaging technologies to show individual differences in action and to identify specific brain regions associated with particular traits. Neuroimaging is an expensive, challenging area of research fraught with methodological difficulties. Basic research on personality can provide the important theoretical and methodological tools that will be essential for further progress.

4. To what degree and in what ways is personality stable, variable, or changeable across the life span?

Several decades-long longitudinal studies have recently begun to bear rich fruit, and all of them, without exception, provide new and compelling evidence as to the long-term stability of basic attributes of personality. It is abundantly clear that personality is something that abides with an individual, independently of context, over very long periods of time. One recent study showed that personality as rated by third and fourth-grade teachers was predictive of behavior (as directly observed via video recordings) more than 40 years later.¹ Findings such as these—and they are accumulating at a rapid rate—only raise further questions. What aspects of

¹ Nave, C.S., Sherman, R.A., Funder, D.C., Hampson, S.E., & Goldberg, L.R. (in press). On the contextual independence of personality: Teachers' assessments predict directly observed behavior after four decades. *Social Psychological and Personality Science*. Prepublished July 8, 2010. DOI:10.1177/1948550610370717

personality are most and least variable over time? What aspects of the physical, social and cultural environment serve to maintain stability in personality? Perhaps the most engaging question raised by this research is: Can personality change? A recent meta-analysis suggests that large changes in personality are in fact rare, including among individuals who have sought therapy in pursuit of change.² Other recent data indicate that there are large individual differences in change itself – most people may not change much, but a few change dramatically. These conclusions underline the importance of finding and understanding ways in which and circumstances under which people can grow and change for the better.

5. What are the behavioral implications of personality? How do these implications vary with situational circumstances?

The study of personality intersects explicitly with social psychology in the study of “person-situation interactions.” Such interactions are ubiquitous because no two individuals ever respond to a situational circumstance in precisely the same way, and sometimes the behavioral differences are large. Persons and situations interact in three basic ways. First, different people seek out or find themselves in different kinds of situations. A boisterous party might evoke extraverted behavior, but only in those individuals who have chosen to attend the party in the first place. Second, different people will through their presence or actions have differing effects on the situations they encounter. When the “life of the party” arrives, circumstances change for everybody present including that individual; other less stimulating individuals could have the reverse effect. Third, variations in environments or stimuli have varying effects on different individuals. A social situation can be inviting or intimidating, an opportunity motivating or daunting, a potential social partner attractive or repelling, all depending as much on the individual as on the actual situation, opportunity, or partner.

While these basic interactional mechanisms have been understood on a theoretical level for years, direct empirical demonstrations are surprisingly lacking. A focus on self-report questionnaires, and more generally a lack of the necessary resources, historically prevented personality psychology from giving the behavioral implications of personality the attention they deserve. In the past few years this state of affairs has begun to change, as new techniques for behavioral observation have been developed, including unobtrusive listening and recording devices, along with new psychometric instruments for the sound measurement of meaningful behavioral variables. A particularly promising direction for personality assessment is via the “digital fingerprints” that people leave at virtually every moment of their lives. The soaring use of social media such as Facebook and tools such as smartphones means that people are

² Ferguson, C.J. (in press). A meta-analysis of normal and disordered personality across the life span. *Journal of Personality and Social Psychology*. DOI:10.1037/a0018770

constantly expressing (and creating records of) their interests, activities, and social relationships. But this envisioned source of data will only fulfill its potential if it co-evolves with and is informed by advances in the theoretical understanding of how individual differences create and shape these digitally expressed behaviors. The fundamental, basic questions concerning what people with different personalities actually do, and how the relations between personality and behavior vary across situations, deserve a high priority for encouragement and support.

6. What are the long-term implications of personality for important life outcomes? How do these implications vary according to the nature of physical, social and cultural environment?

The long-term implications of personality for important life outcomes are amply documented. We now know not only that personality assessed early in life is predictive of a wide range of important life outcomes, but that the size of the effect of personality on mortality, divorce and occupational attainment is about the same as that of socioeconomic class and intelligence (Roberts et al., 2007). In addition, the close relationship between personality and economics is just beginning to be understood (Borghans et al., 2008). Personality variables are associated with dimensions of behavioral economics such as time preference, and can predict important economic outcomes such as income and wealth. Implications of personality research even extend to the most basic questions about ethics in the field of moral philosophy. Philosophers have taken a new and deep interest in findings concerning the existence and nature of personality, because they have serious implications for the conceptualization of ethics and virtue. Support for basic research on individual differences will therefore have major consequences for the successful interface and cross-pollination of other fields of knowledge from philosophy to economics.

Conclusion

Personality psychology is a “hub” discipline that stands at the crossroads of many other areas of behavioral science, including social psychology and economics, but also cognitive science, developmental psychology, health psychology, and biology. The study of personality and individual differences provides a conceptual and empirical foundation underlying core concepts of many other fields, and serves to unify these fields in an era that otherwise seems characterized by the increased specialization and fragmentation of knowledge. The key questions of personality psychology, outlined above, thus are both foundational and potentially transformative of broad areas of science.

Relevant Readings

Borghans, L., Duckworth, A.L., Heckman, J.j., & ter Weel, B. (2008). The economics and psychology of personality traits. *Journal of Human Resources*, 43, 972-1059.

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