

PERSONALITY PSYCHOLOGY

Personality psychology focuses on understanding individual variability in people's thoughts, feelings, and behaviors: why is one person shy and another sociable, one person irritable and another even-tempered, and one person reliable and another irresponsible? One of the hallmarks of the field is that such questions are investigated at multiple levels of analysis, from genes to sociocultural contexts. Consequently, personality researchers use a broad array of methods, including self-report questionnaires, computerized tasks, behavioral observation, brain imaging, and DNA analyses. Individuals trained in personality psychology work at universities, private and federal research institutes, test-publishing companies, organizational consulting firms, and government agencies such as the CIA.

Since its founding as a scientific discipline more than 100 years ago, the study of personality has had a rocky history, rising and falling from prominence within the broader field of psychology. However, recent advances in the understanding of the nature, structure, and development of personality have sparked a renaissance in the field, and personality is now an integral and vibrant part of psychology with close ties to clinical, developmental, and social psychology (John, Robins, & Pervin, 2008).

Although college courses in personality psychology often focus on the grand theories of Freud, Skinner, Rogers, and others, these theories have relatively little direct impact on contemporary research. Instead, most personality psychologists conduct research in one or more of the following areas: (1) personality structure (what are the basic building blocks of personality, and how are they organized?), (2) personality development (what are the developmental origins of personality, and how does it change across the life span?), (3) personality processes (what are the biological, cognitive, emotional, social, and cultural factors that account for personality differences?), and (4) personality applications (what are the real-world consequences of personality for love, work, health, and well-being?). Here we summarize the recent findings and conclusions emerging from each of these areas of research.

Identifying and Organizing the Basic Building Blocks of Personality

The basic building blocks of personality have been conceptualized in a variety of ways by theorists from a wide range of perspectives: as defense mechanisms by psychodynamic theorists, as learned stimulus-response patterns by behaviorists, as information-processing tendencies by cognitively oriented theorists, and as evolved neurologically based systems by biologically oriented theorists. However, most contemporary researchers conceptualize personality in terms of traits. Traits are commonly defined

as relatively enduring patterns of thoughts, feelings, and behavior that influence a person's interactions with, and adaptations to, the environment.

One monumental task has been to identify and classify the nearly unlimited number of traits on which individuals differ from each other (John, Naumann, & Soto, 2008). A surprisingly helpful starting point has been language itself. According to the lexical hypothesis, the most important and socially relevant personality characteristics eventually become encoded into the language of all human cultures. Using the logic of the lexical hypothesis, many personality psychologists believe that an empirical analysis of how personality-related attributes (e.g., calm, talkative, dominant, kind) cluster together might provide some insight into the number and nature of the basic units of personality.

Based on extensive analyses by multiple investigators working in the lexical tradition, there is now considerable agreement that five broad domains, known as the Big Five dimensions, capture most of the personality-descriptive terms in the English language. Each domain consists of a cluster of related characteristics: extraversion (talkative, energetic), agreeableness (cooperative, kind), conscientiousness (responsible, dependable), neuroticism (tense, nervous), and openness to experience (traits like curious and artistic). Over the past decade or two, these same five domains have been replicated in many other languages, although in some cases a distinct openness domain fails to emerge, and one or two "culture-specific dimensions" emerge in addition to the Big Five. In general, though, the Big Five dimensions appear to be more or less robust across languages and cultures.

Personality researchers working in different traditions and using other methods also find evidence that the Big Five dimensions provide a useful taxonomy for the major domains of personality. For instance, the dimensions of extraversion and neuroticism are included in nearly all models of personality trait structure, including biologically based models. Consequently, there is now considerable agreement that the Big Five can serve as a reasonable model of the basic dimensions of adult personality. Moreover, the Big Five traits have proven useful as a way to organize the major dimensions of temperament assessed in children. This downward extension of the Big Five helps to focus attention on a core set of personality dimensions that are broadly relevant for functioning and adaptation across the life span.

Current work on traits is focused on (1) better understanding cross-cultural variability in the Big Five dimensions, (2) developing neurobiologically based theories of the mechanisms underlying each dimension, (3) creating a hierarchical taxonomy by identifying how specific dimensions of personality (e.g., sensation seeking) align with each broad dimension, and (4) investigating novel ways to assess the everyday manifestations of personality traits through the coding of personal spaces,

online self-presentation, and interpersonal encounters. Moreover, work continues on further refining the existing personality tests that reliably and validly assess the Big Five dimensions.

Origins of Personality and Its Development across the Life Span

Research on personality development focuses on the age at which individual variability in personality first emerges, the role of nature (genes) and nurture (environment) in shaping personality, and patterns of consistency and change in personality across the life span. Early in development, children show relatively stable individual differences in the way they interact with strangers, form bonds with caregivers, explore and manipulate their environment, regulate their needs, respond to reinforcements and other environmental contingencies, and express their distress. Where do these individual differences come from? Do they reflect nature, nurture, or both?

The eminent psychologist John Watson once famously claimed that he could take any infant at random and train her or him to be anything that he wanted. Researchers now know that Watson was wrong; a voluminous body of research has demonstrated that all psychological attributes reflect the combined influence of both nature and nurture.

Indeed, virtually all personality traits are influenced by genetic factors (Krueger, South, Johnson, & Iacono, 2008), suggesting that they are rooted in neurologically based tendencies that have been shaped by evolution. However, there is no one-to-one correspondence between a person's genetic makeup and her or his personality; personality develops through complex interactions between genetic factors and environmental experiences. An important discovery in this area of research is that genetic and environmental influences are not entirely independent. People select, modify, construct, and reconstruct their experiences, in part based on their genetic propensities. For example, children who have trouble with impulse control seem to evoke harsher parenting than those with easier temperaments. Examples such as this highlight the inappropriateness of the nature-versus-nurture debate and suggest that the critical question is how nature and nurture work together to shape personality development.

Research pointing to a genetic basis for personality does not preclude the possibility that it changes with age or can be affected by life experiences. Researchers investigating these questions often use longitudinal designs, in which the same group of individuals is followed over long periods of time and assessed repeatedly with the same personality measures. Such studies have been used to assess two forms of stability in personality, differential and absolute.

Studies of differential stability evaluate whether individuals maintain the same relative ordering on a trait over time. For example, a researcher might investigate whether

individuals who are relatively extraverted compared with their peers in their 20s are also relatively extraverted compared with their peers in their 40s. A summary of the vast number of studies on this topic concluded that the Big Five traits showed increasing differential stability with age (Roberts & DelVecchio, 2000). Specifically, there was a fairly modest amount of differential stability when individuals were followed during their early childhood years, whereas there was a very strong amount of differential stability when individuals were followed in their 50s and older. This pattern of increasing differential stability was basically the same for all Big Five traits and applied to both men and women.

These findings are noteworthy because they confirm that the Big Five traits are relatively enduring characteristics by the time a person reaches adulthood. The current explanation for increasing differential stability with age is that adulthood is a time in the life span when maturational changes are reduced, social roles stabilize, environmental changes are increasingly subject to individual control, and individuals have a more stable sense of self. These conditions tend to promote stability. Even so, such findings also indicate that there is never a time in the life span when personality ceases to change. This seems to contradict a suggestion by William James, who said that personality is "set like plaster" by the age of 30. The Big Five traits do become increasingly stable after age 30; however, there does not appear to be a point when personality is fixed for all people.

Studies about absolute stability examine the degree of stability in the exact amount or level of a personality attribute over time. For example, a researcher might evaluate whether, on average, individuals are more extraverted in their 20s or in their 40s. Both longitudinal and cross-sectional studies suggest that average levels of agreeableness and conscientiousness increase with age, whereas average levels of extraversion, neuroticism, and openness decline. Many of the absolute changes in the Big Five tend to be small and gradual when viewed as year-to-year comparisons. Over decades of life, however, the changes can be quite substantial.

The absolute changes in the Big Five tend to reflect increases in personal qualities that help individuals meet the demands of the adult roles of worker, committed romantic partner, and parent. This trend has been labeled the maturity principle of personality development, because it suggests that personality maturity increases with age. Young adulthood (i.e., the years between the late teens and late 20s) is a time when many absolute changes in personality occur. This is also a time when individuals first assume the roles of worker, partner, and parent. Thus, the average absolute changes in the Big Five seem to match the demands of the life course. This finding raises important, but mostly unanswered, questions about the causal connections between adult roles and personality change.

In summary, research in personality development indicates that personality characteristics are shaped both by intrinsic biological factors and extrinsic life experiences. As people age, they show personality changes that suggest increasing psychological maturity and an increasing capacity to fulfill important adult roles. Personality tends to become more stable with age, but it continues to change throughout the life span. Current work is focused on (1) identifying specific gene–trait linkages that would help to explain the heritability of personality, (2) better understanding the precise features of the environment that interact with genetic dispositions, (3) better understanding how characteristics of temperament in early childhood become elaborated into adult personality characteristics, and (4) better understanding the mediating processes that explain the link between, on the one hand, important life events and roles and, on the other, personality changes.

Personality Processes

Researchers interested in personality processes study why and how a person with particular characteristics acts a certain way. That is, what are the biological, cognitive, affective, social, and cultural processes that account for individual variability in personality? For example, what are the thoughts and feelings that underlie the tendency to be shy, and what are the biological factors (genes, hormones, neurotransmitters, neural activation patterns) that account for those thoughts and feelings?

Recent research has made considerable progress toward identifying the neurobehavioral systems that underlie the basic dimensions of personality (Canli, 2008). Extraversion is associated with the biological system governing incentive motivation and approach behavior, which is linked to the neurotransmitter dopamine. Neuroticism is associated with the biological system governing withdrawal behavior, anxiety, and the detection of threat, which is linked to the neurotransmitter serotonin. Agreeableness is associated with the biological system governing the enjoyment of social bonds and affiliation, which is regulated, at least in part, by the hormone oxytocin. Conscientiousness, particularly effortful control, has been linked to systems associated with executive control involving regions of the prefrontal cortex. Although the biological underpinnings of openness to experience are less well understood, certain facets of this broad domain, such as those related to sensation-seeking and exploratory behavior, are probably connected to the approach system and other biobehavioral systems involved in sensitivity to reward, such as the nucleus accumbens region of the brain and the associated dopaminergic system.

Another active area of research focuses on social cognitive processes implicated in personality differences. Researchers in this tradition examine how expectancies, goals, attributions, and other information-processing tendencies shape the way people perceive situations

and their behavior in those situations. These different patterns of thinking can explain why two people interpret the same objective event in often dramatically different ways. For example, according to the social cognitive view of aggression, aggression-prone individuals show a “hostile attribution bias” and perceive ambiguous social cues as threatening and confrontative; as a result, in social interactions, they are relatively likely to feel that they have been insulted, maligned, attacked, or maltreated, even in situations that others might perceive as benign.

Researchers interested in personality processes also study the social-contextual factors that influence how traits are manifested in different situations and life contexts. There is increasing evidence that people are not passively shaped by the environment but instead actively seek out, modify, and even create environments that are consistent with their personalities. These processes, referred to as “person–environment transactions,” play out in several ways. First, personality traits draw out or elicit particular responses from the social environment. For example, individuals who are friendly may evoke more supportive responses from their peers, which in turn reinforce their disposition to be friendly. Second, personality traits shape how people construe social situations. The same objective environment, such as a cocktail party, may mean something quite different to an extravert (an opportunity to make friends) as opposed to an introvert (an anxiety-inducing situation). Third, individuals play an active role in selecting and manipulating their own social experiences. Outgoing and sociable individuals may choose careers that fit well with these tendencies and shun solitary occupations with limited potential for social interaction. Together, these three processes promote a match between personality and social contexts. Consequently, many life experiences accentuate and reinforce the personality characteristics that were partially responsible for the particular experiences in the first place.

Finally, with regard to the broader cultural context, recent research suggests that although traits vary somewhat across cultures (e.g., people seem to be more extraverted in some cultures than in others), the structure of personality, the underlying processes that generate personality differences, and the real-world consequences of personality tend to generalize across nations, cultures, and ethnic groups. Despite dramatic differences in cultural customs and practices, people from a wide range of cultures seem to fall in love, hate their neighbors, persist at work, and care for their children in much the same way, and for many of the same reasons, as people in other parts of the world.

With respect to personality processes, then, research identifies the mechanisms through which traits affect behavior and the mechanisms by which factors from genes to cultural contexts influence personality traits and their expression. Current work is focused on (1) developing a better understanding of the neurological systems, brain

structures, and specific genes that underlie the broad traits and how these biological substrates interact with life experiences to shape personality differences; (2) more precisely identifying and assessing the cognitive mechanisms underlying personality traits; (3) better understanding how emotion and cognition interact to shape personality differences; and (4) better understanding the underlying dimensions of culture (e.g., individualism vs. collectivism) that account for cross-cultural variability in personality.

Real-World Consequences of Personality

Collectively, personality traits predict many of the outcomes that truly matter in life—health and mortality, academic success, job performance, the capacity to have a successful and lasting romantic relationship, and a wide range of personal and societal problems, including drug abuse and criminality (e.g., Ozer & Benet-Martínez, 2006; Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007). The precision of these predictions is comparable with that of many biomedical measures that predict diseases, such as electrocardiogram stress tests, ultrasound exams, and screening mammograms.

A life outcome of great importance to individuals and society is health and longevity. Meta-analytic findings suggest that conscientious people live longer than irresponsible and unreliable people (Roberts et al., 2007). The association between conscientiousness and longevity can be explained by the fact that conscientious people tend to engage in behaviors that promote health (e.g., exercise, following doctors' orders) and tend to refrain from behaviors that lead to health problems (e.g., drug and alcohol abuse, risky sexual behavior, unsafe driving, involvement in crime and violence) (Bogg & Roberts, 2004). In addition, but to a lesser extent, individuals who are extraverted, agreeable, and emotionally stable (i.e., low in neuroticism) tend to live longer (Roberts et al., 2007).

Crime and antisocial behavior have enormous consequences to society. Meta-analytic findings suggest that agreeable and conscientious people are less likely to engage in antisocial behavior (Miller & Lynam, 2001). In contrast, individuals who tend to be antagonistic and impulsive are more likely to engage in delinquency and be convicted of a crime.

Close relationships are valued by most adults, and there is consistent evidence linking personality with relationship satisfaction and stability. Meta-analytic findings suggest that low neuroticism is the strongest and most consistent predictor of relationship satisfaction (Heller, Watson, & Ilies, 2004); neurotic individuals tend to be less happy in their relationships and tend to have romantic partners who are themselves less happy. In terms of predictors of divorce, individuals who are neurotic, disagreeable, and lacking in conscientiousness are more likely to get divorced; these three personality effects were

each stronger than the association between socioeconomic status and risk for divorce (Roberts et al., 2007).

Meta-analytic findings suggest that conscientiousness is the best personality predictor of both job and school performance (Barrick, Mount, & Judge, 2001; Nofle & Robins, 2007). Importantly, conscientiousness predicts performance in these domains above and beyond the effects of traditional measures of cognitive ability such as IQ tests and SAT scores. Finally, personality influences a person's overall level of happiness and life satisfaction (Heller et al., 2004). Not surprisingly, individuals who are generally free of neuroticism reported having the most satisfying lives. In addition, extraverted, agreeable, and conscientious individuals are generally happier than those who are low on these traits.

Personality is an active area of psychology that intersects with many disciplines. However, personality is also a contentious field, and there are vigorous debates and disagreements, in part because of the complexity of the topic—no other field attempts to explain the whole person. Despite the abundance of unanswered questions and seemingly endless paths for future work, researchers have learned a considerable amount about the structure, development, and consequences of personality over the past 100 years. Using a diverse array of methods, including survey research, computer simulations, brain imaging, and population and molecular genetics, researchers have shown that personality tendencies are highly heritable, replicable across a wide range of cultures, generally stable across the life span, and linked (albeit weakly) to specific genes, hormones, neurotransmitters, and brain activation patterns. This is an exciting and opportune time for personality psychology. The field is well poised to play a significant role in the future of psychology, as it moves toward multilevel, interdisciplinary approaches and an increasing emphasis on individual differences.

REFERENCES

- Barrick, M. R., Mount, M. K., & Judge, T. A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next? *International Journal of Selection and Assessment*, 9, 9–30.
- Bogg, T., & Roberts, B. W. (2004). Conscientiousness and health-related behaviors: A meta-analysis of the leading behavioral contributors to mortality. *Psychological Bulletin*, 130, 887–919.
- Bouchard, T. J., Jr. (2004). Genetic influences on human psychological traits. *Current Directions in Psychological Science*, 13, 148–151.
- Canli, T. (2008). Toward a neurogenetic theory of neuroticism. In D. W. Pfaff & B. L. Kieffer (Eds.), *Molecular and biophysical mechanisms of arousal, alertness, and attention. Annals of the New York Academy of Sciences* (pp. 153–174). Malden, MA: Blackwell Publishing.

- Caspi, A., Roberts, B. W., & Shiner, R. L. (2005). Personality development: Stability and change. *Annual Review of Psychology*, 56, 453–484.
- Heller, D., Watson, D., & Ilies, R. (2004). The role of the person versus the situation in life satisfaction: A critical examination. *Psychological Bulletin*, 130, 574–600.
- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big Five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, and L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 114–158). New York: Guilford Press.
- John, O. P., Robins, R. W., & Pervin, L. A. (Eds.). (2008). *Handbook of personality: Theory and research* (3rd ed.). New York: Guilford Press.
- Krueger, R. F., Caspi, A., & Moffitt, T. E. (2000). Epidemiological personality: The unifying role of personality in population-based research on problem behaviors. *Journal of Personality*, 68, 967–998.
- Krueger, R. F., South, S., Johnson, W., & Iacono, W. (2008). The heritability of personality is not always 50%: Gene-environment interactions and correlation between personality and parenting. *Journal of Personality*, 76, 1485–1522.
- Miller, J. D., & Lynam, D. (2001). Structural models of personality and their relation to antisocial behavior: A meta-analytic review. *Criminology*, 39, 765–798.
- Noftle, E. E., & Robins, R. W. (2007). Personality predictors of academic outcomes: Big Five correlates of GPA and SAT scores. *Journal of Personality and Social Psychology*, 93, 116–130.
- Ozer, D. J., & Benet-Martínez, V. (2006). Personality and the prediction of consequential outcomes. *Annual Review of Psychology*, 57, 401–421.
- 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., Kuncel, N. R., Shiner, R., Caspi, A., & Goldberg, L. R. (2007). The power of personality: The comparative validity of personality traits, socio-economic status, and cognitive ability for predicting important life outcomes. *Perspectives on Psychological Science*, 2, 313–345.
- Roberts, B. W., Walton, K. E., & Viechtbauer, W. (2006). Patterns of mean-level change in personality traits across the life course: A meta-analysis of longitudinal studies. *Psychological Bulletin*, 132, 1–25.
- Roberts, B. W., Wood, D., & Caspi, A. (2008). The development of personality traits in adulthood. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (3rd ed., pp. 375–398). New York: Guilford Press.
- Robins, R. W., Fraley, R. C., & Krueger, R. F. (Eds.). (2007). *Handbook of research methods in personality psychology*. New York: Guilford Press.

SUGGESTED READINGS

- Funder, D. C. (2001). Personality. *Annual Review of Psychology*, 52, 197–221.
- Funder, D. C. (2007). *The personality puzzle* (4th ed.). New York: W. W. Norton.
- McAdams, D. P. (1995). What do we know when we know a person? *Journal of Personality*, 63, 365–396.

RICHARD W. ROBINS
University of California, Davis

M. BRENT DONNELLAN
Michigan State University

See also: Personality Assessment; Personality Development; Personality Disorders