

# Handbook of Research Methods in Personality Psychology

*edited by*

**Richard W. Robins**  
**R. Chris Fraley**  
**Robert F. Krueger**



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## CHAPTER 1

# The Role of Theory in Personality Research

Dan P. McAdams  
Jennifer L. Pals

Theory is at the heart of science. A common misconception has it that scientists mainly gather objective facts about the world. The truth of the matter, though, is that **scientists traffic in theory, and shamelessly so.** They formulate theories to describe and explain their interactions with the world, be those interactions the observations of cancer cells or interviews of people with schizophrenia. Over and over, scientists critically evaluate theories, eventually refining their conceptions to better reflect what they see, and sometimes throwing out their theories altogether when the data suggest that they are downright wrong. In the broadest terms, scientific theories deeply influence how scientists approach their observations (data), and their observations (data) ultimately come to influence the nature of the theories that scientists construct. It is an intricate dialectic: Observations lead to theories, which lead to new observations, which change theories, which result in yet newer observa-

tions, and on and on. Ideally, the process is open and progressive. The most secure theory can, in principle, be shot down in a hurry when new and repeated observations show it to be flawed. Over the long haul, the ongoing dialectic between observation and theory should lead to greater understanding, or what is often called “scientific progress.”

**The general process described above, however, plays itself out differently in different scientific fields.** Physicists, for example, display different practices and adhere to different scientific conventions than biologists. What passes for theory in cultural anthropology may strike an organic chemist as odd. The purpose of this chapter is to consider some of the common and peculiar ways in which scientific theory relates to research in the particular subdiscipline of *personality psychology*. Like all scientists, personality psychologists have traditionally sought to develop the best possible theories for making sense of their observations.

And like all scientists, personality psychologists have developed a wide array of methods for observation and analysis to test hypotheses drawn from those theories. Nonetheless, the particular ways in which they have done these things and the problems they have historically faced are especially characteristic of the field they have pursued (Caprara & Cervone, 2000; Wiggins, 2003). Put differently, when it comes to the role of theory in research, personality psychology has its unique virtues and challenges.

In what follows, we first identify the characteristic features of personality psychology and consider the kinds of theories the field has historically offered. We next argue that a main function of these personality theories is to propose scientific *constructs* that help to describe and explain psychological individuality. Accordingly, the validation of constructs is a central task for personality research. The many different constructs that personality psychologists have examined may be grouped into three broad levels or domains—(1) dispositional traits, (2) characteristic adaptations, and (3) integrative life stories. In three successive sections of the chapter, we focus on one particular construct from each of these three levels. We examine the original theory behind the construct, the development of research methods to operationalize the construct, and important theoretical and empirical issues that have arisen as the construct has evolved over time. We end the chapter by considering the ways in which different theoretical constructs and the research programs they inspire each approach the study of psychological individuality in a different way, asking different questions and finding answers in different kinds of causal arguments. Although some might look with dismay upon the theoretical and empirical diversity in personality psychology today, we see it as a sign of a vibrant and dynamic science.

### Personality Psychology and Personality Theory

What is personality psychology? In the field's first authoritative textbook, Allport (1937) considered 49 different definitions of the term *personality* before he settled on one he liked. Since then, many other definitions have been offered. Rather than propose our own, we prefer to consider what it is that personality psy-

chologists *do*. What makes the work of personality psychologists different from what other psychologists do? A survey of conceptual trends in the history of personality psychology suggests that the field has traditionally distinguished itself from other branches of psychology with respect to three different emphases: individual differences, motivation, and holism (McAdams, 1997).

First and probably most important, personality psychologists have always prioritized *individual differences* between people. Whether considering Freud's oral and anal types, Eysenck's traits of extraversion and neuroticism, or the self-report scales that make up the California Psychological Inventory (CPI; Gough, 1987), variability in human responding has traditionally captured the imagination of personality psychologists. To paraphrase a canonical passage in the history of personality psychology, every person is (1) like all other persons, (2) like some other persons, and (3) like no other person (Kluckhohn & Murray, 1953, p. 53). If the first panel in this famous triptych applies to common features of human nature, numbers 2 and 3 speak to what makes people different from each other—in particular those dimensions that make for recurrent and consistent differences between people. Beginning with Bernreuter's (1931) *multitrait inventory*, personality psychologists have designed hundreds of paper-and-pencil measures to assess individual differences on such dimensions as dominance, self-sufficiency, sociability, and neuroticism. The conceptual emphasis on inherent variations among persons and the development of instruments to assess these consistent variations have traditionally rendered the *correlational method* an especially suitable research strategy for studies focused on individual differences. In the correlational method, presumably stable and consistent individual differences in basic dimensions of personality can be related to corresponding variations in important behavioral outcomes.

A second traditional emphasis is *motivation*. More than most other fields in the social sciences, personality psychology concerns itself with the internal engines of human behavior and experience. This orientation is evident even in textbooks written before Allport (1937): "It is surely in the springs of human action, if anywhere, where the key to the problem of personality is to be found" (Garnett, 1928, p. 14). From Freud's drives to Murray's needs to Rog-

ers's self-actualizing tendencies, most influential personality theories have tried to identify the internal factors that energize and give direction to human behavior. Motivational approaches focus on the dynamics of action, the forces that move people to do what they do—be those forces biological drives, evolved brain modules, cognitive schemas, or emotional scripts. Personality psychologists interested in human motivation have often shown a research preference for the *experimental method*. Motivational states may be readily aroused or activated under controlled laboratory conditions, and their effects on important dependent measures may be observed (see, e.g., Atkinson & Birch, 1978). Of course, experiments have been used in all branches of empirical psychology, and personality psychologists of many different stripes have employed the experimental method. But controlled laboratory experiments have traditionally been a favorite methodological choice for personality researchers who examine the internal forces responsible for energizing and directing human behavior.

Third, personality psychologists have long claimed that, unlike most other kinds of psychologists, they focus their attention on *the whole person*. The conceptual implications of this claim are at least twofold. First, personality psychologists have long sought to encompass a broad range of factors operating at many different levels in an effort to do justice to the complexity of the single individual's life. Second, many personality theories have shown a fondness for integrative concepts, terms like Allport's *proprium* and Erikson's *ego identity*, designed to explain how whole persons them-

selves find or construct wholeness, how their very lives suggest some degree of unity, purpose, and integration. Stern (1924) argued that a person is a *multiform dynamic unity*. Murray (1938) believed that many lives exhibit a *unity thema*. More recently, Deci and Ryan (1991) have described organismic needs for autonomy, competence, and relatedness—each of which serves an integrative function while expressing an authentic wholeness of self. These conceptual commitments to holism and integration have opened the methodological door to case studies of individual lives (Runyan, 1982). Correlational and experimental studies typify *nomothetic* research in personality psychology—that is, research examining propositions that apply to persons at large, or to some identifiable group of persons. In contrast, case studies typify *idiographic* research—the study of one particular person. It is only through the intensive examination of the single case, some have argued, that the holistic and integrative nature of personality can be fully seen and appreciated (Nasby & Read, 1997; Schultz, 2005).

As summarized in Table 1.1, personality psychologists develop theories and conduct research on individual differences, human motivation, and the whole person. Personality psychologists study those broad and socially consequential features of a person's psychological makeup that account for his or her individuality. In that human beings are goal-directed organisms, furthermore, it is impossible to articulate such an accounting without paying careful attention to motivation. In a nutshell, personality psychologists focus their attention

TABLE 1.1. Three Traditional Emphases in Personality Theory and Research

Emphasis	Questions	Traditional concepts	Method preferred
Individual differences	How are persons different from each other? What is the <i>structure</i> of human individuality?	Temperament, traits, types	Correlational studies
Motivation	Why do persons do what they do? What do persons want? What energizes and directs the person's behavior? What are the <i>dynamics</i> of human action?	Instincts, needs, values, goals, conflicts, complexes, defenses, self-actualizing tendencies	Laboratory experiments
Holism	How do we understand the whole person? What does a person's life mean? What integrates a life?	Ego, self, <i>proprium</i> , style of life, unity thema, identity, life structure	Case studies

on the *agential (goal-directed) individuality of whole persons*. They seek ultimately to make sense of individual persons as integrated and intentional agents living in a complex social world (Caprara & Cervone, 2000). Accordingly, personality theories address intriguing questions about the most socially consequential features of psychological individuality, questions like these: What makes individual persons different from each other? Why does this particular person do what he does (as opposed to doing something else), or live the way she lives (as opposed to living some other way)? Psychologically speaking, what is *this* individual person—and *any* individual person—fundamentally about?

In the first half of the 20th century, personality psychologists formulated a large number of grand theories designed to describe and explain the agential individuality of whole persons (Hall & Lindzey, 1957). Freud, Jung, Adler, Allport, Murray, Angyal, Goldstein, Murphy, Horney, Fromm, Erikson, Sullivan, Rogers, Maslow, Kelly, and a few others drew widely from case studies, clinical experience, philosophy and literature, common sense, and their own personal stories to develop all-purpose personality theories. More influenced by the conventions of laboratory science, Miller and Dollard, Rotter, Cattell, and Eysenck developed grand theories whose inspirations came largely from existing research findings and/or the general tenets of midcentury behaviorism.

Following World War II, personality researchers began to encounter important limitations in the grand theories developed only a few years before. For one, many of the statements articulated by Freud, Jung, and a number of other theorists proved too general or too ambiguous for empirical tests. How do you measure Freud's Oedipus complex? How do you evaluate the Jungian claim that all persons share a collective unconscious? In other instances, researchers found ways to test specific hypotheses derived from these theories, and the hypotheses received little support (Mendelsohn, 1993; Robins, Gosling, & Craik, 1999). Nonetheless, the grand theories helped to generate and sustain distinctive research programs, identified with particular personality researchers, their students, and their laboratories. For example, Murray's (1938) personological theory gave birth to McClelland's (1961) and Winter's (1973) more focused research programs for studying achievement and power

motivation, which ultimately came to influence research on personal strivings, goals, and projects (see, e.g., Emmons, 1986; Little, 1999).

The theories developed by personality psychologists in the past 30 years are more focused on circumscribed domains of human individuality and much more closely tied to systematic empirical observation than were most of the classic grand theories. Among the many examples of influential midlevel theories in personality psychology today are attachment theory (Bowlby, 1969; Fraley, 2002), socioanalytic theory (Hogan, 1982), self-determination theory (Deci & Ryan, 1991), various theories of self-regulation (e.g., Carver & Scheier, 1981), cognitive-affective systems theory (Mischel & Shoda, 1995), Loevinger's (1976) theory of ego development, Block's (1981) theory of ego control and resiliency, Tomkins's (1979) script theory, the life story model of identity (McAdams, 1985, 2001), and (despite its name) the Big Five trait taxonomy (Goldberg, 1993; McCrae & Costa, 1997). Although many of these theories offer relatively broad perspectives on human individuality, they tend not make the sweeping and untestable claims that were so common in the grand personality theories from the first half of the 20th century. Some contemporary observers lament the field's inability to merge these many new theories into one megatheory of everything. Yet many scholars have argued that science is often best served by a proliferation of many different theories, some competing with others, operating at different levels of analysis and seeking to explain somewhat different aspects of reality (Lakatos, 1970; Leary, 2005).

## Formulating Constructs

A central function of personality theories is to propose measurable features of individual variation. These features are often called *constructs* (Wiggins, 1973), and the effort expended in developing appropriate measures for these features and exploring the meanings of these measures in research is essentially the process of *construct validation* (Cronbach & Meehl, 1955; Loevinger, 1957; Ozer, 1999). *Constructs are convenient fictions that help us to describe and explain what cannot be directly assessed*. Nobody has ever seen, heard, smelled, touched, or tasted the constructs of extraversion or the need for achievement. In-

stead, influential communities of like-minded behavioral scientists have essentially agreed to talk about psychological individuality in terms of constructs such as extraversion and the need for achievement. Even though constructs are socially consensual fictions, some constructs turn out to be extraordinarily useful in describing and explaining reality. And some do not. Rorer (1990) articulates a widely shared understanding of personality constructs:

I believe that one can reasonably argue for an ontological realism while holding a pragmatic constructivist epistemology. Given this view, constructs are admittedly constructed, but reality, which we cannot know directly, places limits on the extent to which different constructions will work. Those that work, we keep. With respect to psychological constructs in particular, there are probably many that will work to varying degrees. (p. 713)

Research suggests that many personality constructs *do* work to varying degrees, and some better than others. Those that appear to work best are usually the ones that have generated the greatest amount of research activity. As more and more empirical studies are conducted on a given construct, the corpus of scientific findings builds up and the scientific community's understanding of the construct is

further articulated. The construct becomes embedded in what Cronbach and Meehl (1955) called a *nomological network* of research findings. The overall usefulness and validity of the construct itself, therefore, is a function of the richness and extensiveness of the nomological network. The nomological network tells the scientific community "what we now know" about the construct, with the caveat that knowledge in science (and especially in personality psychology) is always provisional. In principle, each new study on the construct makes a small contribution to what we know, offers a further extension of or connection within the nomological network. In this way, the nomological network (what we know) is always developing.

There currently exists no broad theory or conceptual system that elegantly integrates *all* of the useful and valid personality constructs formulated by personality theorists and researchers. But most of the constructs can be provisionally arranged according to *three broad conceptual domains or levels* (Hooker & McAdams, 2003; McAdams, 1995, 2006a; McAdams & Pals, 2006; Sheldon, 2004). As shown in Table 1.2, level 1 encompasses *dispositional traits*, such as those organized within the popular Big Five framework. Dispositional traits account for broad individ-

TABLE 1.2. Three Levels of Personality Constructs

Level	Definition	Examples
Dispositional traits	Broad dimensions of psychological individuality that describe assumedly internal, stable, and global individual differences in behavior, thought, and feeling. Traits account for consistency in individual functioning across different situations and over time.	The Big Five Cattell's (1943) 15 personality traits Gough's (1987) folk concepts (the CPI) Ego resiliency and ego control
Characteristic adaptations	More particular features of psychological individuality that describe personal adaptations to motivational, social-cognitive, and developmental challenges and tasks. Characteristic adaptations are usually contextualized in time, place, situation, or social role.	Motives, goals, and projects Values and beliefs Cognitive schemas and styles Ego and psychosocial stages Relational modes and styles Identity statuses Coping strategies, defense mechanisms
Life stories	Internalized and evolving narratives of the self that people construct to integrate the past, present, and future and provide life with some sense of unity, purpose, and meaning. Life stories address the problems of identity and integration in personality—problems especially characteristic of modern adulthood.	Self-defining memories Nuclear scripts Recurrent life narrative themes: agency and communion The redemptive self

ual differences in behavioral trends across situations and over time. Typically assessed via self-report questionnaires, traits sketch an outline of psychological individuality. Level 2 brings together a wide assortment of *characteristic adaptations*, such as motives, goals, interests, values, strategies, and developmental tasks. Contextualized in time, place, or social role, characteristic adaptations address what people want in life and how they go about getting what they want, and avoiding what they do not want, during particular developmental periods, in particular situations and contexts, and with respect to particular social roles. Characteristic adaptations fill in many of the details of psychological individuality. Level 3 encompasses the individual's *integrative life story*. The life story consists of the person's internalized and evolving self-narrative(s), serving to reconstruct the past and imagine the future in such a way as to provide life with meaning, unity, and purpose. Life stories speak directly to what a whole life, situated in time and society, means and how the person believes that meaning has changed over time.

Personality constructs at each of the three levels in Table 1.2 have attracted active and vigorous research programs in personality psychology over the past few decades. In what follows, we examine how one particular construct at each of these three levels has been formulated, measured, and validated, with an emphasis on the research methods employed.

### Dispositional Traits: The Case of Extraversion

The most extensively validated construct in all of personality psychology is probably *extraversion*. The classic example of a broad dispositional trait, extraversion refers to how outgoing, sociable, spontaneous, and energetic a person generally is, with individuals low on extraversion (that is, high on introversion) seen as generally withdrawn, retiring, quiet, and deliberate. Folk conceptions of extraversion can be traced back at least as far as Galen's (200 C.E.) ancient typology of the four temperaments (sanguine and choleric individuals were relatively extraverted; phlegmatic and melancholic persons were relatively introverted). In modern times, such pioneers in psychological science as Wundt, Pavlov, Heymans, Spearman, Guilford, and Cattell all studied the extraversion-introversion dimension in one way or another, and Jung popularized the distinction between extraverted and introverted types in his clinical writings. The one personality psychologist, however, who is most responsible for turning extraversion into a valid scientific construct is Hans J. Eysenck (1947, 1967, 1973).

Eysenck began with a clear and simple theory of extraversion drawn from folk wisdom and the results of a small body of previous research. He conceived of the trait as a general, bipolar, and linear continuum on which each person may be positioned, with the end points saved for those relatively pure or extreme types—the most extraverted or most introverted people of all. How might this individual difference be measured? Eysenck followed what may be called a *commonsense theory of trait manifestation*. According to this well-accepted view, people know themselves well enough to produce accurate self-reports regarding the ways in which they are similar to and different from other people. There is nothing deep, dark, or disguised about extraversion, Eysenck reasoned. Its manifestations should be readily observed in social behavior. Therefore, individual differences in extraversion should emerge clearly when people are asked to observe themselves.

Hogan (1976, 1987) distinguishes between personality from the standpoint of the observer (*Personallichkeit*) and personality from the standpoint of the actor (*Personlichkeit*). Dispositional traits, like extraversion, are framed mainly in terms of the former, as dimensions of a person's *social reputation* in the eyes of others (observers). In self-report questionnaires, like those Eysenck developed to assess extraversion, individuals implicitly adopt the standpoint of observer vis-à-vis their own individuality. Their target of observation is the self. They evaluate each item with reference to the target, implicitly comparing themselves to others they know (or imagine) in order to come up with an accurate response. The test asks, "Do you enjoy yourself at lively parties?" Making a quick self-observation, I say, "Well, sometimes but not usually, not as much as many people I know." I answer "no." The test demands, "Rate yourself on a 1–7 scale with respect to how energetic you are." I think: "More than most people I know (and observe), certainly more than most people my age, though not as energetic as my wife." I answer "6."

Critics of trait theory love to poke fun at the items on trait inventories. For those dichoto-

mous response formats wherein one is asked to answer either “yes” or “no” to each item, critics argue that an accurate answer would most surely be something like “sometimes” or “it depends” or even “what a dumb question this is!” However, most people have little trouble responding. In taking the commonsense role of self-observer, they realize that each item is asking about a simplified generality, a broad trend (Funder, 1995). They realize it is okay to ignore the specifics (“it depends on who is at the party”) and the exceptions (“I really did enjoy myself *one time* at a lively party”). They know that they could rate other people they know on these same kinds of items, so why not rate the self? After all, the logic goes, the most accurate observer of the self is probably the self, given all the opportunities the self has had to observe what it usually does, how it usually thinks, what it usually feels.

Working from the premise that people are able to report accurately on their own traits, Eysenck followed well-accepted psychometric conventions in designing and validating trait questionnaires. The first step is to generate items that cover the substantive content of the trait domain (Jackson, 1971; Loewinger, 1957). Each item on the trait scale covers a small piece of what theory suggests is the content domain for the trait. When they are taken together, however, the items converge on the construct from a multitude of angles. The many items are then administered to large samples of respondents. Responses are factor analyzed and subjected to other statistical procedures in order to refine the scale and determine its structural features. In the process, some items are dropped and new ones added. In Eysenck’s case, the results of these procedures showed that scales measuring extraversion yielded two related factors: sociability and impulsivity. Eysenck came to view these as the two faces of extraversion. Factor analyses of larger item pools led Eysenck to conclude further that extraversion and *neuroticism* are two broad and independent dimensions of personality, a conclusion that was originally suggested by Spearman (1927). In recent years, the Big Five trait taxonomy has appropriated versions of these as the first two dimensions in its five-factor scheme.

Once items have been generated and the structural features of the scale identified, researchers then look for evidence of the scale’s predictive power. Drawing from theory, researchers deduce hypotheses and then test them

in experiments and correlational studies. The results of these studies come to comprise the nomological network for the construct. Construct validation largely depends on the extent to which studies are able to document empirical association between the construct and *external criteria* (Loewinger, 1957; Wiggins, 1973). Ozer (1999) spells out the logic of this step:

Construct validity arguments must have a hard criterion core. Although there will rarely, if ever, be a single unequivocal external criterion for test validation purposes, there will nearly always exist a set of external variables, be they behavioral outcomes, group memberships, age changes, or assessment results using quite different sources of data (e.g., relation of a self-report scale to observer ratings), that collectively constitute a set of appropriate criteria. (p. 681)

Beginning with Eysenck, researchers have published hundreds of studies documenting associations between extraversion and a wide range of cognitive, emotional, and social variables. For example, extraverts talk more and sooner in a variety of social interactions than do introverts; they engage in more eye contact; they enjoy larger friendship networks and more social support; they seek out social activities for leisure time pursuits; they do more gambling; they engage in more sexual activity; and they are more likely to reside in households with other people rather than to be living alone. In the occupational realm, extraverts are more drawn to and tend to excel in jobs that involve dealing directly with other people, such as sales, marketing, personnel work, and teaching. By contrast, individuals scoring lower in extraversion (toward the introversion pole) tend to prefer jobs and professions in which they are more likely to work alone or in which social interaction is less sustained and intense, sharing interests with artists, mathematicians, engineers, researchers, and the like.

A significant body of research has found that extraversion is positively associated with reports of feeling good about life. In other words, extraverts report greater levels of positive emotion in everyday life than do introverts. This is most strongly shown when extraversion scale scores are correlated with reports of mood and affect *aggregated* across situations and over time (see, e.g., Emmons & Diener, 1986). Extraversion is consistently and positively associated with measures of subjective well-



being. Typically, subjective well-being includes assessments of both positive and negative affect. Extraversion tends to predict positive emotions, but tends to be unrelated to negative emotions. (In contrast, the trait of neuroticism tends to predict individual differences in negative emotional states, but not positive emotions.) The empirical associations between extraversion and positive emotionality have proven to be so strong and consistent that some researchers now argue that extraversion is not so much about social interaction but is fundamentally instead a tendency to experience positive affect, or a tendency to approach situations that offer opportunities for experiencing positive affect (Watson & Clark, 1997). Although other researchers take issue with this line of reasoning, it is clear that the meaning of extraversion as a personality construct has changed since the time when Eysenck began his work. Over the past 50 years, the notion of impulsivity has migrated to the periphery of the broad extraversion construct (indeed, some conceptions see impulsivity to be part of [low] conscientiousness) whereas positive affectivity and energy level have tended to move more to the center. This kind of development is a common pattern in personality psychology, suggesting that as new findings come in, the theory behind a construct may change. Over time, a construct comes to be defined and understood primarily in terms of the evolving nomological network within which it is embedded.

Beginning with Eysenck, research on extraversion was strongly influenced by the behaviorist theories of learning and conditioning so popular among empirical psychologists in the 1930s, 1940s, and 1950s. Eysenck believed that Pavlov's description of the *weak nervous system* in dogs characterized the nature of the central nervous system for individuals low in extraversion (introverts). Dogs with weak nervous systems experienced a higher state of resting arousal, rendering them more readily conditionable in Pavlov's classical conditioning experiments. Midcentury behaviorists, such as Hull (1943), argued that higher arousal, or drive, enhanced the acquisition of stimulus-response (S-R) associations. Such dogs, furthermore, could tolerate only modest increases in stimulus arousal before S-R connections began to break down and they began to withdraw from the stimulation (what Pavlov called the threshold of transmarginal inhibition). Dogs with *strong nervous systems*, by contrast, re-

quired more stimulus trials or more potent stimuli to make classical conditioning happen. In their cases, lower drive levels retarded the acquisition of S-R connections. In addition, they could tolerate greater levels of stimulation increase before they reached the point of transmarginal inhibition. Correspondingly, Eysenck figured that extraverts experienced less resting-state arousal and therefore required stronger stimulation for conditioning. Laboratory experiments involving the classical conditioning of eyeblink responses in introverts and extraverts provided some initial support for Eysenck's view.

Eysenck eventually expanded his conception of extraversion to suggest a cortical explanation for differences in arousal levels between introverts and extraverts. He suggested that the brain's ascending reticular activating system (ARAS)—a network of nerve fibers ascending from the spinal cord to the thalamus and assumed to govern attention and general arousal levels—is responsible for the differences. For introverts, the ARAS is dispositionally set at a relatively high level. More aroused to begin with, introverts are more sensitive to any kind of stimulation. They can tolerate only relatively small increases in arousal (think: relatively little social stimulation) before they reach an optimal level of arousal. Once they reach that level, they are likely to engage in withdrawal behaviors to reduce arousal. In contrast, the extravert is endowed with an ARAS that is dispositionally set at a relatively low level. Less aroused to begin with, the extravert needs considerably more stimulation than does the introvert in order to reach a level of optimal arousal. The extravert is stimulus hungry—on the lookout for opportunities for social stimulation.

Eysenck's theory of cortical arousal produced many interesting hypotheses, which led to hundreds of experiments. Among the most famous were studies done with what Eysenck called the *lemon drop test*. Based on the general hypothesis that introverts should react more strongly to small increments in stimulation as compared with extraverts, Eysenck predicted that drops of lemon juice on the tongue should elicit greater salivation (a stronger response) for introverts than extraverts. Amazingly, Eysenck (1973) obtained a correlation of  $-.71$  between amount of salivation produced and self-report extraversion scores in one study ( $N = 100$ ). The finding has been replicated in subsequent studies, though with less statistical

magnitude. Other studies with different conditions and stimuli provide some support for the overall idea that introverts are more physiologically reactive to stimulation at low-to-moderate levels of arousal. Support has also been garnered for the general prediction that extraverts seek out higher levels of stimulation as compared with introverts. However, studies have not provided support for the basic idea that introverts and extraverts differ in resting-state arousal to begin with. Furthermore, many researchers today are skeptical about the viability of the concept of general cortical arousal, pointing out that while one region of the brain may appear underaroused, other regions may be highly aroused at the same time (Geen, 1997).

As researchers have developed more sophisticated methodologies for studying brain activity, recent efforts to articulate a brain-based explanation for extraversion have shifted from Eysenck's arousal theory to the conception of a *behavioral approach system* (BAS). As a functional system of the brain, the BAS is hypothesized to govern positive approach behaviors in response to incentives. Important components of the BAS may be dopamine pathways and electrical activity in the left anterior portion of the brain. A small but growing body of research evidence links dopaminergic activity (Depue, Luciana, Arbisi, Collins, & Leon, 1994) and frontal-left brain activity (Davidson, 1992; Sutton & Davidson, 1997) to positive affect and approach behavior in some animals and humans. It has been proposed that individuals with a relatively strong BAS, being more sensitive and responsive to positive incentives for reward, may be more likely to be highly extraverted (and/or highly impulsive). Scientists have yet to flesh out an articulated picture of the BAS or to offer compelling evidence linking the BAS to extraversion directly. Nonetheless, this line of investigation may offer promising leads for future research on the biological origins of extraversion.

In sum, Eysenck formulated a clear descriptive theory of extraversion and developed measures of the construct based on a commonsense conception of trait assessment. Strongly influenced by one brand of midcentury behaviorism, Eysenck eventually expanded his theory of extraversion to encompass psychophysiological features. This second theoretical move led to hundreds of studies conducted by many different scientists and helped to establish a

strong research tradition in personality psychology dedicated to exploring the cortical underpinnings of basic personality traits. As findings accrued over many years, the meaning of extraversion changed substantially and in ways that Eysenck may not have predicted. The history of the construct, therefore, shows how a strong initial theory can shape research methodology and design, but also how the findings of research often feed back to reshape the theory, which in turn stimulates new research.

### Characteristic Adaptations: Loevinger's Stages of Ego Development

There exists a large and varied collection of personality constructs whose theoretical underpinnings resist their being viewed as broad, stable, linear, decontextualized, and noncontingent dimensions of human individuality accounting for cross-situational consistencies in behavior, feeling, and thought. Following Costa and McCrae (1994), we use the term *characteristic adaptations* for these important motivational, social-cognitive, and developmental concepts.

The key factor that keeps us from categorizing a number of concepts in personality psychology as dispositional traits is *context*. Context may refer to situation, domain, or role. For example, personality psychologists often propose constructs that are meant to apply only to particular settings in a person's life, rather than to broad consistencies across many settings (Cervone & Shoda, 1999; Mischel & Shoda, 1995). A person may be dominant only in the presence of family members or when interacting with children, or anxious only in the presence of people who remind him of his father or in the presence of snakes (Thorne, 1989). Characteristic adaptations may spell out a pattern of consistent individuality that manifests itself only within a particular social role—the authoritarian father, the bleeding-heart liberal (MacDermid, Franz, & De Reus, 1998). Many other characteristic adaptations are contextualized in *time*. Motivational concepts like goals (Roberts & Robins, 2000), strivings (Emmons, 1986), and personal projects (Little, 1999) are contextualized in time, for they all spell out how a person is *currently* orienting his or her life *for the future*. A developmental task or stage—for example, Marcia's (1980) *iden-*

*tity status*—qualifies in the same way. A young adult may be in the *moratorium* status during a particular period in his or her life. During that time period, identity moratorium is a key aspect of his or her personality makeup. A decade later, however, the developmental issues of identity may no longer be relevant for construing the same person's psychological individuality.

One of the most influential developmental constructs in personality psychology is Jane Loevinger's (1976, 1979, 1983, 1987) *ego development*. Drawing from theoretical traditions in cognitive-developmental psychology (see, e.g., Kohlberg, 1969) and interpersonal psychodynamic psychology (Sullivan, 1953), Loevinger conceived of ego development as the sequence of changes that plays itself out in the way people make sense of themselves and the world over the human life course. The ego is one's overall interpretive frame and existential stance vis-à-vis the world at any given point in developmental time (Westenberg, Blasi, & Cohn, 1998). The interpretive frame encompasses many content domains. Loevinger (1976, p. 26) wrote that "what changes during the course of ego development is a complexly interwoven fabric of impulse control, character, interpersonal relations, and cognitive complexity, among other things."

Loevinger's full conception of ego development came many years after she began research on the construct. Equipped with only vague expectations regarding how people's sense of themselves and the world might change over time, Loevinger looked for a research method that might tap directly into sense making. She rejected the kind of self-report questionnaires used by Eysenck and other trait researchers in favor of a *sentence completion test (SCT)*. On the SCT, a person actively constructs meanings in response to sentence stems. The researcher's challenge is to interpret the constructions in a psychologically useful way. Eysenck and Loevinger, therefore, followed very different research paths. Whereas Eysenck began with a clear conception of a stable personality feature, Loevinger began with general observations of developmental change. Whereas Eysenck wrote self-report test items to cover the content domain of the feature, Loevinger created opportunities for individuals to express different frames for making meaning (through the SCT) so that she could ultimately derive a conception of the construct in the developmental differ-

ences she observed. "My conception of ego development did not precede its measurement by the SCT; rather, the stages of ego development that developed from our many studies with the SCT embody and shaped my conception of ego development" (Loevinger, 1998, p. 353). Put differently, whereas Eysenck began with theory and moved to method, Loevinger began mainly with method (and some general observations about change) and eventually moved to theory. Only after administering the SCT to many subjects in a number of different studies did she eventually come to see what the method was indeed measuring.

Although Loevinger's concept of the ego is broad, like a dispositional trait, it is specifically contextualized in time. Over time, Loevinger argues, people move through a series of qualitatively distinct stages of meaning making. Young children see the world from a very egocentric point of view. Their framework is driven by impulses, the exigencies of the here and now, and such superficial concerns as physical appearance. As they grow up, however, they become better able to adopt the perspectives of others and, eventually, of society as a whole. In these middle stages of ego development, therefore, people's ways of making meaning are highly sociocentric and conventional; their views conform to and are defined by social convention and consensus. Later (higher) stages (which many people do not reach) show a kind of return to the self, but now from a more principled and autonomous perspective. Meaning making becomes especially complex and involves efforts to balance conflicting perspectives in light of deeply held convictions about self and world (see Hy & Loevinger, 1996).

Results from the SCT show that children tend to score lower than adolescents on ego development, and adolescents lower than adults. But among adults, one may still find the full range of stage scores represented. Therefore, the construct and the measure ultimately yield a developmental typology in adulthood. Stage scores are estimates of where on the ego developmental road an adult may be located at a particular time in the adult's life, with each stage suggesting a distinct type of interpretive frame or approach for making sense of self and world.

Loevinger's theory of ego development and the corresponding SCT method of measurement have stimulated a substantial body of per-

sonality research over the past three decades. Testing straightforward predictions about links between ego stages and discrete behaviors, however, can be tricky. Unlike extraversion, ego development is not a linear continuum with a clearly defined low end. Among well-educated adults, for example, “low” ego development may be the conformist stage, or even one stage above that. Among junior high students, however, the conformist stage may represent a relatively high level of ego development. Relatedly, many predictions about ego development are curvilinear. In examining the entire range of stages, for example, obedience to authority would be expected to be low at both the very low and very high stages of ego development and to peak in the middle. Among midlife women, John, Pals, and Westenberg (1998) found that those scoring at the lowest stages of ego development tended to present a *conflicted* personality prototype, those at the middle levels were rated as especially *traditional*, and those scoring in the highest region of the scheme manifested what the researchers called an *individuated* pattern of personality.

The construct of ego development has proven especially congenial for researchers more interested in patterns of thought and interpretation than in discrete behaviors per se. For example, studies have documented positive associations between ego development and stages of moral reasoning (Lee & Snarey, 1988), but research on how ego development predicts prosocial, moral, or altruistic behaviors is sparse. McAdams, Booth, and Selvik (1981) found that among religious college students, those who reported they had never gone through a period of strong religious doubt and those who described such a period but who suggested they had gotten “back on track” tended to score in the conformist range of ego development. By contrast, those scoring at higher levels of ego development tended to say that they were currently experiencing a period of religious questioning or that they had once done so and now saw questioning as integral to a lifelong journey of faith. Helson and Roberts (1994) showed that women high in ego level were open to thinking about difficult life experiences in new ways; apparently, high ego levels lead people to construct new schemas in the face of challenging life experiences. Studies like these suggest that among young and middle-aged adults, higher stages of ego development predict a more complex understanding of life, a

greater tolerance for change and ambiguity, and an appreciation for life’s challenges as opportunities for growth (King & Raspin, 2004; Pals & John, 1998).

Given that ego development taps into how people *think* about and make sense of things, one would expect the construct to overlap with the general idea of intelligence. Studies have shown low but (often) significantly positive correlations (between +.15 and +.30) between IQ and ego scores on the SCT. The potential overlap between ego stage and intelligence raises the important issue of *discriminant validity* in personality research (Campbell & Fiske, 1959). A measure should measure what it says it measures, and not anything else. If IQ and ego scores are highly correlated, then one wonders if in fact the SCT is but an alternative measure of intelligence. The problem is a thorny one for ego development research, because the SCT is a verbal measure and more than a modicum of verbal intelligence seems to be required to produce sentences that are complex enough to score for higher stages of ego development. The current view has it that ego development measures may indeed tap partly into a general factor of intelligence, but the overlap seems modest and the problem is probably endemic to any personality measure that relies so heavily on verbal construction.

### Life Stories: The Redemptive Self

Narrative theories of personality first made their appearance in the late 1980s. Although a few of the classic theories (e.g., Adler, 1927; Murray, 1938) intimated that human lives seem to take a storylike shape, it was not until Tomkins (1979; Carlson, 1981) articulated his *script theory* and McAdams (1985) proposed a *life-story model of identity* that personality psychologists began to take seriously the idea that the stories people tell about their lives are not simply reflections of personality trends but are instead *features of personality itself*. Rejecting approaches to personality that emphasize drives, motives, and even traits, Tomkins argued that from birth onward human beings unconsciously arrange their lives into affectively charged scenes and organizing scripts, which themselves become the structural features of psychological individuality. McAdams (1985) asserted that the development of what Erikson (1963) called ego iden-

tity is largely a matter of constructing and internalizing an integrative self-narrative to provide life with some sense of unity, purpose, and meaning. According to McAdams, people living in modern societies begin to arrange their lives into self-defining life stories—complete with settings, scenes, characters, plots, and themes—in the emerging adulthood years (see also Hermans, 1996; Singer & Salovey, 1993).

Life narrative constructs provide a stark conceptual counterpoint to dispositional traits (McAdams & Pals, 2006). The contrast mirrors the distinction in cognitive psychology between *episodic* and *semantic* memory. Life stories are framed in episodic terms. They package information about the self within an episodic frame, specifying when and where something happened (setting), who was involved (characters), how the action unfolded over time (plot), and what the significance of the episode might be (meaning). Life stories largely consist of the self-defining episodes of a person's life—both those from the past and those imagined for the future—and their arrangement into a broader narrative structure that provides what the narrator him- or herself believes to be a convincing explanation for how he or she came to be and where his or life may be going in the future. Life stories are expected to change markedly over the life course. In contrast, dispositional traits like extraversion and conscientiousness are framed as semantic categories of the self, and their framing emphasizes stability over time. An extravert sees him- or herself as generally outgoing, lively, and spontaneous. In the same semantic sense in which I “know” my phone number or the number of elements in the periodic table (not needing to recall the episodes from my past in which I learned this information), I may also “know” that I am lively and outgoing and respond accordingly on a self-report trait questionnaire. Some cognitive scientists have argued that episodic and semantic information about the self are processed in very different ways and with respect to different systems in the brain (see Klein, Loftus, & Kihlstrom, 1996). It should not be surprising, then, if dispositional constructs (level 1 in personality) and narrative constructs (level 3) do not map neatly onto each other.

Life narrative constructs are typically assessed through interviews or open-ended questionnaires wherein respondents are given an opportunity to describe key scenes, characters, and plots in the stories of their lives. The chal-

lenge for researchers is to develop reliable coding systems for analyzing the structural and content features of the narrative responses. One method used in a number of studies is McAdams's (1985) life story interview. The life story interview is a 2-hour procedure wherein an individual provides a narrative account of his or her life—past, present, and imagined future—by responding to a series of open-ended questions. The procedure begins by asking the respondent to divide his or her life into chapters and provide a brief plot outline for each. Next, the interview asks for detailed accounts of eight key scenes in the story, including a high point, low point, and turning point scene. The interview protocol goes on to cover main characters in the story, conflicts and challenges in the plot, imagined future chapters, and the basic values and beliefs on which the story's plot is developed.

Let us briefly consider one particular research program on life stories, a line of study that led to McAdams's (2006b) conception of *the redemptive self*. The program began with this question: What kinds of life stories do especially caring and productive adults in their midlife years construct? The researchers used self-report measures of generativity—an adult's concern for and commitment to promoting the well-being of future generations—to identify especially generative and less generative midlife adults, who then participated in individual life story interviews.

The researchers then examined carefully the interview transcripts produced by a small number of highly generative adults and a matched subsample of less generative adults. They compared and contrasted the two groups of stories in an attempt to discern the main thematic differences between them. The researchers were guided, in part, by the theoretical literature on generativity available at the time and by their own hunches regarding what kinds of life stories these two groups might produce. Mainly, though, they were guided by the rich narrative data. The researchers followed guidelines for what qualitative sociologists call *grounded theory methodology*, which basically involves constructing thematic categories to characterize groups and then refining those categories through successive readings of new data and repeated efforts to compare and contrast (Glaser & Strauss, 1967). After many meetings and discussions, the researchers settled on a small set of themes that seemed to differentiate

between the two groups. They designed coding systems to operationalize these themes, and they trained new coders to achieve high levels of intercoder reliability.

The project then moved to a hypothesis-testing phase. Blind to identifying information for the respondents, the new coders analyzed a new sample of 70 life story interviews, 40 told by adults high in generativity and 30 told by adults scoring low in generativity. Some coding adjustments needed to be made along the way as some of the original categories proved difficult to apply to the new data. Once all of the coding was completed, the researchers employed standard statistical procedures to evaluate the extent to which the two groups showed statistically significant differences on the thematic categories hypothesized to differentiate between the two groups. Some of the categories did show the predicted differences, and some did not. The most interesting and robust category was what the researchers called a *redemption sequence* (McAdams, Diamond, de St. Aubin, & Mansfield, 1997). **In a redemption sequence, a bad or affectively negative (sad, humiliating, fearful, shameful, guilt-provoking) scene gives way to a positive outcome or interpretation.** The negative scene is saved, salvaged, or redeemed by a positive turn of events or by the narrator's conclusion that some redemptive meaning eventually emerged. Highly generative adults told life stories containing significantly more redemption sequences as compared with the life stories told by less generative adults.

Subsequent studies have shown that the redemptive pattern in life narratives can be reliably observed and scored in written accounts of self-defining memories, including those provided by college students (McAdams, Reynolds, Lewis, Patten, & Bowman, 2001). Redemptive imagery in life narratives is positively associated with self-report measures of subjective mental health for both college students and midlife adults. A related line of research has examined how individuals who have faced difficult life experiences construct stories to suggest they learned lessons, gained insights, or experienced positive psychological growth as a result (Bauer & McAdams, 2004; King, Scollon, Ramsey, & Williams, 2000; Pals, 2006; Thorne & McLean, 2003). These studies underscore the importance of (1) acknowledging and fully expressing strong negative emotions with respect to a negative life scene and

(2) constructing a narrative ending or meaning for the scene that affirms personal growth or greater integration of the self (Pals, 2006). The most redemptive narrative accounts in life plumb the depths of human experience before they eventually affirm growth and hope for the future.

McAdams and Bowman (2001) conducted a second intensive study of life stories told by highly generative adults. In this study the researchers sampled about 260 community adults, ranging in age from 35 to 65 years, approximately half of whom were African American and half White. Coding of 74 life story interviews chosen from the larger sample, half from adults scoring high in generativity and half from adults scoring low, replicated and extended the findings from McAdams and colleagues (1997). Again, redemption sequences differentiated between the two groups. In addition, a set of related narrative features again emerged as significant differences between the stories told by highly generative and less generative adults. These features included (1) early memories of enjoying a special *advantage* in life, (2) early memories of witnessing the *suffering or oppression of others*, (3) *moral steadfastness* and clarity stemming from ideological commitments made in adolescence, and (4) *prosocial life goals* for the future.

Along with the redemption theme, this suite of four narrative features converges on a general life story prototype, called **the redemptive self, that is especially characteristic of the narrative identities constructed by highly generative adults**, both Black and White, male and female. According to McAdams (2006b), the redemptive self is an especially well-designed narrative identity for supporting a generative approach to life in midlife. The redemptive self functions to affirm hope and commitment in the face of the many difficulties and challenges generativity poses for midlife adults. For example, believing one enjoyed an early advantage in childhood while others suffered may motivate a person to give back to others for the good fortune he or she has enjoyed. **Expecting that bad things will ultimately be redeemed may help highly generative adults make the daunting investments of time, energy, and money that are often required to make a long-term, positive contribution to family or community.** Holding to firm beliefs and values consolidated in adolescence may help keep away those nagging doubts and uncertainties that

might compromise one's best generative efforts in the midlife years.

Most recently, McAdams (2006b) has reinterpreted the redemptive self in cultural terms, arguing that this particular life narrative prototype has a distinctively American flavor. In American cultural history and in contemporary popular culture, the most powerful stories of redemption employ the discourses of Christian atonement (from sin to salvation), political emancipation (from slavery to freedom), upward social mobility (from rags to riches), life-long recovery (from illness/addiction to health), and individual self-development (from immaturity to the full actualization of the inner self). Drawing from a rich storehouse of cultural scripts, the redemptive self is a characteristically American kind of life story, well designed to support a generative life for midlife American adults. Caring and productive midlife adults living in very different cultural contexts are likely to construct different kinds of narratives to make sense of their lives and support their generative strivings. McAdams suggests that culture is most closely implicated in personality at the level of life narrative. More so than may be the case with dispositional traits and characteristic adaptations, life narrative studies push the personality psychologist to consider the many complex ways in which psychological individuality is intimately tied with society, history, and culture.

### **Conclusion: When Theories (and Their Constructs) Compete**

We have argued that an important function of personality theory is to propose constructs to account for socially consequential aspects of psychological individuality. Most constructs proposed by personality theories may be located in one of three different conceptual levels or domains: dispositional traits, characteristic adaptations, and integrative life stories. We have examined the ways in which theory informs research and research informs theory with respect to representative constructs from each of these three levels. Research programs examining extraversion, ego development, and the redemptive self, respectively, illustrate many of the challenges and opportunities that personality psychologists have traditionally encountered and continue to encounter today.

At the present time, personality psychology

is a field wherein many different theories, with their corresponding constructs and preferred methods, continue to develop, interact, and sometimes compete. Whereas some research programs focus exclusively on a single construct, many others attempt to relate different constructs to each other, to examine patterns of constructs in individual lives, and/or to chart the development of patterns over time. Even though no single grand theory exists to synthesize these many different strands of inquiry, the field of personality psychology continues to grow and flourish. We believe the field is best seen today as a broad and diverse set of somewhat overlapping programs of inquiry, each attracting a corresponding community of scientists who combine theory and research in a characteristic way (Wiggins, 2003). Different programs and their intellectual communities have different strengths to offer. No program or community can do it all, so the judicious scientist or student is well-advised to sample broadly, to acquaint him- or herself with a wide range of theories and research traditions.

One of the reasons that different programs of theory and research have different strengths to offer is that each asks somewhat different questions and sets forth somewhat different forms of scientific argument. One of the main functions of any program of research and theory in personality psychology is to suggest what kinds of causal arguments will be convincing to a particular scientific/scholarly community. Different theoretical traditions favor particular kinds of causal explanations that just seem "right" to those scientists who consider themselves part of, or at least strongly influenced by, the tradition. For example, proponents of social learning theories and related situationist approaches (e.g., Mischel & Shoda, 1995) have never been impressed with the evidence for cross-situational consistency in behavior linked to broad personality traits. Their disdain for trait theories has relatively little to do with empirical findings but instead reflects their commitment to arguments that privilege proximal determinants of particular behaviors displayed in particular social situations—arguments about process and context—rather than arguments about what general forms behavioral continuities take from one situation to the next. (But see Fleeson's, 2004, effort to reconcile trait and situationist approaches.) From the standpoint of situationist approaches, conceptions of personality that

privilege broad trait continuities are asking the wrong questions and posing the wrong causal arguments. Of course, proponents of trait theories, who aim to describe and explain the basic tendencies that broadly differentiate people from each other, are quick to return the favor (McCrae & Costa, 1997). They find little of interest in questions asked by social learning theories and related approaches, and they find their causal arguments unconvincing and even irrelevant.

Going back to Aristotle, Rychlak (1981) asserts that the different causal arguments to be found in personality psychology may be classified into four groups: (1) *material*-cause arguments, which explain a phenomenon in terms of what substances make it up; (2) *efficient*-cause arguments, which explain a phenomenon in terms of the events that lead up to it; (3) *formal*-cause arguments, which specify the design or form of a phenomenon; and (4) *final*-cause arguments, which focus on the function or ultimate reason for a phenomenon. Most theories and their corresponding programs of construct validation research address all four of Aristotle's explanations in one way or another. Nonetheless, each approach seems to privilege one or two of the four, attracting scientists who find those corresponding kinds of arguments to be especially convincing.

The different preferences are quite apparent in the three programs of research reviewed in this paper. One of the reasons the construct of extraversion has enjoyed so much research attention in the past 50 years is that, beginning with Eysenck, scientists have proposed and tested intriguing arguments about material cause. Whether considering Eysenck's early hypotheses regarding arousal and the ARAS or more recent formulations that foreground a behavioral approach system in the brain, a strong research tradition in personality psychology has focused on the psychobiological underpinnings of extraversion. For scientists attracted to this tradition, the most interesting theoretical questions are about brain circuitry, neurotransmitters, and the patterns of cortical activity that essentially make up the basic material stuff of extraversion. Of course, the brain is surely involved in ego development, redemptive life narratives, and any other well-validated personality construct one may name. But the research programs that have developed with respect to these constructs have had little to say about material-cause issues.

As a developmental construct, Loevinger's ego stages chart a kind of efficient-cause sequence for the life course. People's overall perspectives for making sense of themselves and the world develop according to a predictable sequence. In addition, the particular stage one finds oneself in at any given point in the life course provides the basic form or structure, Loevinger argues, for psychological individuality at that stage. Loevinger's research program, therefore, seems to privilege efficient-cause and formal-cause arguments. Scientists attracted to her program find especially appealing questions like these: What is the sequence of stages through which people develop over time? How do people get to a particular developmental level? At any given stage in life, what form does a person's understanding of self and world assume?

Life narrative approaches seem to privilege formal-cause and final-cause explanations. Beginning in the emerging adulthood years, McAdams argues, people put their lives together into narrative forms. An especially compelling form, and one that seems to support a highly caring and productive life at midlife in contemporary American society, is the redemptive self. In a final-cause sense, life stories are constructed for the sake of personal integration. People find unity, purpose, and meaning in life through the psychosocial construction of life narrative. Furthermore, certain life stories function to support certain kinds of lives. Scientists attracted to life narrative research may find questions like these to be especially interesting: What do people think their lives mean? What kinds of narrative forms do people articulate in making sense of their lives? Do some life stories work better than others?

Personality psychologists pursue a great many questions in their efforts to account for the psychological individuality of persons. The different accounts they ultimately offer privilege certain kinds of arguments over others. One might imagine an ultimate, fully satisfying accounting of the individual person as providing compelling arguments regarding material-cause, efficient-cause, formal-cause, and final-cause explanations. To understand a person's individuality is ultimately to identify the essential substances of which that individuality is made, to chart the developmental sequences that account for how that individuality has come to be, to formulate a compelling picture of the design of that individuality, and to ex-



plain fully the ends or functions for which that particular form of individuality exists. What is the person made up of? How did the person come to be? What is the person's design or form? What purpose does that design fulfill? If we knew the full and unequivocal answers to these questions, we would no longer need personality psychology, its theories, its constructs, and its research. But we will likely never know all we need to know. Or if we ever do, that day is surely far in the future. In the meantime, we have personality theory and research.

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