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## TARGET ARTICLE

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### A Systems Framework for the Field of Personality

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*The framework for an academic field outlines the content of that field. The field's textbooks and reviews organize the field according to the framework's outline. Today, the field of personality psychology lacks a single, integrative framework. As a consequence, the field appears disorganized and weak. The systems framework developed in this article provides a unified presentation of the field. The framework employs 4 topics to organize the field: personality's (a) identification (or definition), (b) components, (c) organization, and (d) development. Each of the four topics is associated, in turn, with its own subsidiary framework that outlines its more specific coverage. The systems framework communicates personality psychology more effectively than previous presentations of the field. Its fieldwide overview provides a unified perspective for studying, explaining, and evaluating the personality system.*

The framework of an academic field is the outline that organizes its most important topics of study. Today, the field of personality psychology lacks an integrated, agreed-on framework to organize its areas of inquiry. Instead, multiple frameworks are used, with some emphasizing theory, and others emphasizing research. The theoretical frameworks divide the discipline according to its major theorists: Freud, Jung, Rogers, Maslow, and so forth. The research frameworks divide the discipline according to its major areas of empirical investigation: repression, traits, social cognition, and so on. The research frameworks often deemphasize the theories underlying the research they cover, and thereby present the field as “directionless,” “fragmented,” and “faddish” (Carlson, 1984, p. 1305; Maddi, 1993). Conversely, the theoretical frameworks often deemphasize the research justifications for the theories they cover, and thereby present the field as “speculative,” “non-paradigmatic,” and “prescientific” (Derlega, Winstead, & Jones, 1991; McAdams, 1990, p. iii; Wheeler, 1994, p. 8).

An academic discipline without a unified framework cannot be organized coherently. Personality psychology faces several difficulties because it lacks a coherent framework. The discipline is harder to teach and harder to explain, and consequently, poorer at attracting good students and at attracting funding for study. In the past several decades, personality psychology faced a “near-

death experience” at the hands of those who denied that stable personality existed. Thus weakened, the field was reduced, for a time, to an offshoot of social psychology and lost much of its political influence in its division of the American Psychological Association (Kenrick & Dantchik, 1983; Westen, 1995). Today, clinical psychologists and psychiatrists increasingly turn away from personality psychology toward such neighboring fields as psychopharmacology for an understanding of the mind (Kramer, 1993; Wyatt & Livson, 1994). The fact that personality psychology has undergone a modest academic renaissance in recent years is a testament to its potential substance. Such a field deserves a unifying framework.

I believe there exists a coherent, general, systems philosophy—already implicitly employed in personality psychology—that can be used to create a framework superior to those now in use. It is the aim of this article to make explicit that implicit philosophy, and to employ that philosophy to develop a single, rational framework for the field. This systems approach will be used to locate personality, to study its parts, its organization, and its development as a system. In addition, I examine such extrascientific considerations as the valuation of a personality as good, bad, or indifferent. The new framework meets high standards by communicating the essence of the field as completely, accurately, and coherently as possible—and does so compellingly. My

intention here is to focus on an overview of the framework so as to create an emergent sense of a coherent discipline. The supporting details of this framework may be found elsewhere (e.g., Mayer, 1993–1994, 1994, 1995a, 1995b, 1997a, 1997b; Mayer, Chabot, & Carlsmith, 1997).

This article is divided into several sections relevant to the new framework. A change of framework is a potentially sweeping change for a discipline, and it raises broad questions: What is the basis for such a framework; what is the framework; and, in what direction does the framework point the field? In the “Switching Frameworks” section of this article I address a series of questions intended to answer why we need a new framework and what the basis of such a framework is. In the second section, the “Systems Framework,” I present the actual framework itself. The framework’s exposition coordinates the multiple perspectives of the field as it identifies what personality is, the parts of personality, its organization, and its development. Moreover, the framework serves theory, research, teaching, and applications (cf. Mayer, 1993–1994, 1994). A brief addendum to the second section examines such extrascientific issues as how the framework can be used to evaluate personality and personality outcomes. Finally, in the “General Discussion,” I discuss the advantages and disadvantages of such a new framework and its implications for the field.

### Switching Frameworks

To understand why it is necessary to switch frameworks, it helps to understand the historical and current status of personality frameworks. This section describes the current frameworks in personality and related fields. It examines how personality psychology has gotten into difficulty, and suggests several criteria any framework should meet. Finally, it describes some promising foundations for a new framework in the field.

### What Major Frameworks in Personality Psychology Have Been or Are Presently in Use?

The frameworks for personality psychology in use today arose in a haphazard fashion compared to the framework for psychology as a whole. A brief history of frameworks in personality psychology sheds light on the sort of framework the field needs.

When Wundt and James helped found psychology they did so with the conscious intention of creating a framework that defined the field’s central topics: neural

activity, sensation, perception, memory, emotion, the self, and so on (James, 1890; Wundt, 1897). Introductory textbooks followed this design as did annual reviews of the field (e.g., Butler et al., 1960). Over time the topics were modified somewhat, but the general list has remained remarkably unchanged to this day. For example, among the chapters of one current introductory textbook are those on (neuro)biological bases of behavior, sensation, perception, memory, emotion (with stress and health), and human personality in the same order as previously (Zimbardo & Gerrig, 1996). Each subdiscipline of psychology, in turn, developed its own framework.

The subdiscipline of personality emerged without such a conscious framework. The first personality theories of this century were those belonging to Freud, Jung, Adler, and others. The theories originally appeared not to be a part of any subdiscipline of psychology in particular—Murchison (1930) referred to them at the time simply as alternative *psychologies*. There was a great competition as to who could develop the best theory. Freud’s theory was the most developed and influential. Jung, Adler, and Horney introduced their own theories and claimed that their own were superior or “superordinant” to Freud’s (Adler, 1927; Horney, 1939/1966; Jung, 1956, p. 51).

Allport (1937) and Murray (1938) are generally credited with recognizing that a new academic discipline was emerging, and going some way toward systematizing it. Allport exhaustively reviewed possible definitions of the term *personality*, and Murray collected 25 “Primary Propositions” of personality from across multiple theories of the time. But Allport and Murray were not insensitive to the possibilities of introducing their own theories as well. For example, Allport’s (1937) framework focused on developing his own theory of traits, and Murray’s (1938, p. 36) framework promoted his own list of 23 principles concerning “The Concept of Need or Drive” at the expense of a more universal approach. Both of their works were subsequently treated as theories rather than as frameworks (e.g., Hall & Lindzey, 1978; Maddi, 1989). What was needed was a more impartial approach to organizing the field.

The field’s organizational dilemma might have ended in the post-World War II era had one good framework been introduced at that time. Between the years of 1950 and 1957, however, three alternative and incompatible frameworks attained widespread influence. The first of these was introduced by Sears, and appeared in the inaugural volume of the *Annual Review of Psychology*. Sears (1950) divided the study of personality into the three topics of personality development, which traced the origins of personality, personal-

ity structure, which referred to personality's parts, and personality dynamics, which covered personality's actions and reactions to frustration and conflict. This framework was perhaps transitional between Freud's psychodynamic theory and the broader systems formulation to be advanced here; it was employed by a number of subsequent reviewers over the next 15 years, but ultimately discarded due to a lack of clarity (e.g., Child, 1954; Messick, 1961).

The second framework of the 1950 to 1957 period also appeared in the *Annual Review of Psychology*. This individual differences approach referred to the study of personality as "an attempt to systematize IDs [individual differences]" (Jensen, 1958, p. 295), and the study of an individual's unique mind "as differentiated from that of others" (Nuttin, 1955, p. 161). The individual differences framework divided the field into several topics involving differences due to individual traits, to traits acting in combination, to group characteristics (e.g., racial or sexual), and to such personality types as the genius. (The topics were drawn from the more general area of differential psychology; e.g., Anastasi & Foley, 1949).

The third competing framework was the theoretical perspectives approach developed in the textbook, *Theories of Personality* by Hall and Lindzey (1957). This textbook simply reported the competing theories of the field—Freud's, Adler's, Jung's, and by then, Allport's and Murray's—in an evenhanded manner with no attempt to integrate them.<sup>1</sup>

Between 1957 and the present these frameworks have slowly evolved in form. Today's common frameworks can be viewed as more or less direct descendants of the three frameworks of 1950 to 1957. The first "theories" framework is essentially unchanged from the days of Hall and Lindzey (1957) and is employed widely by textbooks today. The second "big perspectives" framework is essentially a revision of Hall and

Lindzey's approach. Rather than cover individual theorists, it covers a series of broad theoretical perspectives on the field, such as psychodynamic theory and trait theory, within which multiple theorists and their research are discussed. For example, the psychodynamic perspective would collectively cover Freud, Jung, and Horney, and research relevant to them all (Emmons, 1989).<sup>2</sup> A second trait section might cover the trait theorists Allport, Eysenck, and Cattell, and research relevant to them. Other sections might include humanistic or social cognitive approaches. In contrast to the earlier theorist-by-theorist approach, this newer framework provides more room for research coverage.

Today's third "research topics" framework combines portions of Sears' framework with portions of the individual differences framework. Sears' major subdivisions of the field into development, structure, and dynamics were abandoned over time as arbitrary and difficult to maintain (Holtzman, 1965; Klein, Linton Barr, & Wolitzky, 1967, p. 467; cf. Sears, 1951, pp. 477–478). What remained was essentially a succession of research topics such as the frustration–aggression hypothesis, the unconscious, and the self. Individual differences topics, such as traits, were also added (e.g., Derlega et al., 1991; Pervin, 1990). These research areas often were arranged according to the individual author's preference and in many volumes this seemed rather unsystematic.<sup>3</sup>

This outline of personality frameworks, brief though it is, suggests several criteria important to establishing an acceptable framework. First, the framework must be impartial relative to theory and research in the field. Both Allport and Murray's frameworks had favored a particular approach to research and both ultimately became viewed as specific theories. A related criterion is that the framework must be inclusive. For example, the individual differences framework probably failed because it did not include a means of treating the universals of personality such as the id, ego, and superego. Third, the framework must be developed so that its theoretical distinctions are sufficiently clear. Sears' structural–dynamic distinction was defined in only a sentence or two, which left subsequent reviewers guess-

<sup>1</sup>At a time when individual theories of personality had not before been collected, the textbook provided a comprehensive and authoritative review of them that was of substantial value to the field. Psychologists of the time found no easy choice among the three new frameworks for a means to organize the field. Sears' structural versus dynamic distinction appeared ambiguous (Sears, 1951, pp. 477–478), "often arbitrary" (Holtzman, 1965), and "difficult to maintain" (Klein, Linton Barr, & Wolitzky, 1967, p. 467). The individual differences approach faltered as well; it had excluded a means for organizing the universals that were integral to the field, such as Freud's concept of repression, or the *id*, *ego*, and *superego* components. Hall and Lindzey's framework prevailed in a limited sense. Their textbook dominated others in sales and many other textbook authors emulated their approach. But as already noted, researchers found it uniformly unacceptable for fieldwide reviews of research. By 1970, the split between research and textbook frameworks that had begun in the 1950s became firmly institutionalized.

<sup>2</sup>Emmons referred to this framework as the *big paradigm*. I have substituted *big perspective* for his term because the different theoretical orientations seemed to me, judging by Kuhn's (1962) original terminology, something less than paradigmatic. Admittedly, however, current usage would support Emmons' terminology.

<sup>3</sup>One interesting activity associated with these frameworks was the attempt to factor analyze the contents of the discipline, so as to find a more rational progression, say, through theories. The studies until 1975 or so are reviewed in Hall and Lindzey (1978, pp. 693–694). An additional substantial study was conducted by Rosenberg and Gara (1983).

ing as to their exact meanings. Meeting such criteria may require some intentional planning, just as James and Wundt planned the framework for psychology as a whole. It is reasonable to inquire, "Do any newly proposed frameworks meet the aforementioned criteria of impartiality, inclusiveness, and clarity?"

### Are There Any New Frameworks That Are Impartial, Inclusive, and Clear?

At least one well-developed new framework has been proposed for the field, aside from the systems framework to be presented here. McAdams' (1996) contemporary framework begins its exposition of personality with a distinction between the *I* (the personal knower) and the *Me* (the part of personality that is known), originally proposed by James. The *I*, according to McAdams, tells a "life story" about the *Me*. The person's life story is the best way to understand the person because it provides the richest, most contextualized understanding of him or her. There exist two other levels of understanding in McAdams' framework. One level down is the understanding of an individual's goals, plans, and other personal concerns that assist, along with the life story, to place the individual in a social context. Finally, the lowest level of understanding begins with generalized, noncontextualized traits. McAdams' framework seems focused on degrees of understanding a person. In fact, the framework is meant to answer the question "What do we know when we know a person?" I think this is a brilliant question, but it is different than "What is personality?" and this difference suggests it is insufficiently broad to organize all studies of personality. Indeed, when McAdams' framework is evaluated as a fieldwide organizational tool, its inclusiveness and internal coherence come into question (Mayer, 1996; Ouellette, 1996; Singer, 1996).

Aside from McAdams' framework, another framework for the field is sometimes said to be evolving from the Big Five personality traits (e.g., McCrae & Costa, 1997, p. 509). The Big Five refers to five broad traits important to personality including Extraversion–Introversion, Neuroticism–Stability, Conscientiousness–Carelessness, Agreeableness–Disagreeableness, and Openness–Closedness. These trait factors emerge with impressive consistency from many data sets, and are often recommended for organizing aspects of personality study (e.g., Costa & Widiger, 1994; Digman, 1990). When proponents of the Big Five argue it can serve as a framework for the field, however, I read their usage of the term *framework* differently from my own. The term *framework* is sometimes used to describe the organization of a specific program of research (e.g.,

McCrae & Costa, 1997, p. 509). I am employing *framework* here, however, to refer to a fieldwide outline of a complete academic discipline; this is something different, which the Big Five researchers seem to recognize (cf. McCrae, 1996). As the experiences of Allport and Murray attest, no framework based on a single research perspective can hope to organize the field. I would argue that the danger some perceive, that contemporary research on the Big Five will eclipse all other work in the field, would not even be raised if personality psychology had a stronger fieldwide framework that better kept its individual research areas in perspective.

As neither McAdams' contemporary framework, nor the Big Five research framework(s) seem ready to organize the field as a whole, it is worth asking, "Are there still other frameworks that might be employed, perhaps from such neighboring fields as biology or sociology?"

### Are There Frameworks in Biology or Sociology That Could Be Used in Personality Psychology?

Some have examined frameworks outside personality to see whether they might be of use in organizing the field. Consider biology, which often employs an evolutionary framework to organize its subject matter. Buss (1984) suggested that such an evolutionary framework could profitably be applied to personality psychology.<sup>4</sup> Among other uses, it would establish rational criteria to evaluate the importance of traits, based on the

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<sup>4</sup>Biology's widely accepted evolutionary framework divides the field into three large-scale topics: *chemical building blocks*, which concern the chemical origins of life, genes, and cells, *evolutionary diversity*, which concerns how different forms of life evolved, and *ecological synthesis*, which concerns how those forms operate together (e.g., Campbell, 1996; Gould & Keeton, 1996; Solomon, Berg, Martin, & Villet, 1996).

Also within biology's evolutionary framework, the final topic of ecological synthesis is responsible for providing an integrated view of biological life. Ecological synthesis is parallel to personality in the sense that personality is similarly expected (by some) to provide an integrated view of psychology (e.g., Wundt, 1897). Thus, the positions of ecology and personality relative to their disciplines mean that a subframework for one might be partially generalizable to the other. Ecology's ordering of topics, however—population density, dynamics of ecosystems, succession, energy—seems haphazardly intermixed, and there is no established means by which different authors handle those topics. The systems framework presented later could conceivably be used to organize ecology, for example, into *components*, which would examine the parts of life; *organization*, which would examine ecosystems, population dynamics, and energy cycles; and *development*, which would examine the succession of one ecosystem after another. Such interdisciplinary applications of the framework, however, are beyond the scope of this article.

trait's heritability. Although such a framework could be useful to personality, its origins in biology may mean it would underemphasize the importance of more social aspects of personality (Buss, 1984, p. 1144).

Moving upward from the relatively molecular science of biology, one crosses psychology to the relatively molar field of sociology. Sociology was once expected to integrate economic, political, and psychological systems in a unified view of society (Smelser, 1994, p. 13). The hoped-for unification is still to occur, however, and today sociology employs several partial frameworks surprisingly similar to those found in personality. A classical theories framework covers such sociologists as Comte, Durkheim, and Mead (Ashley & Orenstein, 1995); a more research-oriented framework covers contemporary scholarly activity in no particular order, from symbols and culture, to socialization, to institutions, and to disorder and deviance (e.g., Turner, 1994). Thus, neither biology nor sociology possess frameworks that would improve on those already employed in personality. So, it is crucial to ask, "Is there some other framework approach for personality psychology that is inclusive and well defined?"

### **A Systems Conception of Personality as a Universal Theory for the Field**

The alternative framework to be developed here is based on a systems foundation. A chief advantage of a systems approach is that, like many moderate, compromise positions, it is obvious and bland. (Admittedly, one challenge in discussing it is conveying its excitement.) Although systems concepts are clearly meaningful, they are sufficiently flexible in interpretation to allow some growth in their usage. Theorists from essentially all perspectives on personality agree that they employ a systems perspective (Mayer, 1993–1994). When Hall and Lindzey (1957) introduced their theories framework, they employed the term *organismic* to refer to systems theorists. Hall and Lindzey criticized these systems and organismic theorists on the grounds that everyone agreed with them! Hall and Lindzey (1957) wrote:

Who is there in psychology today who is not a proponent of the main tenets of organismic theory that the whole is something other than the sum of its parts, that what happens to a part happens to the whole, and that there are no separate compartments within the organism[?] ... Who believes that there are isolated events, insulated processes, detached functions? Very few if any psychologists subscribe any longer to an atomistic viewpoint. (p. 329)

Virtually all major perspectives in personality psychology today are systems theories in this sense. Psychodynamic theory describes the system's parts and their conflicts; trait theory studies the system's dimensions of preferred activity; social cognitive theory describes the system's information processing of the social world; and humanistic theory describes the system's growth. But if systems conceptions are so compatible with the field, why hasn't a workable systems framework been developed?

### **Historical Impediments to the Development of Systems Frameworks**

Personality psychology has seemed to benefit little if at all from systems thinking, beyond a vague sense of a shared perspective. In fact, some systems approaches may have diverted their followers from productive work. Consider the case of General Systems Theory, a philosophical movement focused on discovering the general laws by which systems operate (Von Bertalanffy, 1937/1975). Adherents to General Systems Theory search out correspondences between personality and other systems. For example, the evolutionary advent of motor activity in mammals might be seen to correspond to the psychological need for autonomy (Angyal, 1941). Or, a personality's intellectual capacities might correspond to society's natural resources. Or, the personal aim of self-actualization might correspond to society's aims of justice and equality (Smelser & Smelser, 1963).

These theoretical correspondences are of considerable interest in their own right. Yet, no search for correspondences across systems is likely to result in an adequate description of personality. Each scientific system from the carbon atom to the human liver has required an investigative approach specific to it. Explaining the human liver by looking for correspondences to a carbon atom may tell us something about systems in general, but it will not help us understand much about livers or carbon. We must not be shy about fully directing our powers of analysis to the personality system itself, independent of its actual or imagined correspondences to other systems. So, is there anything that systems theory can offer a contemporary framework?

### **Systems Theories' Contributions to the Field**

The previous section indicated that much systems work devolved into the search for correspondences between systems, under the influence of General Sys-

tems Theory. Along with this approach, however, a fundamentally useful contribution was developed: the identification of a few topics or issues that are central to understanding systems: How is the system defined? What is a system's structure? What are its elements or parts? How is it organized? Can its wholeness be described? And so forth (Angyal, 1941; Levy, 1970; Pervin, 1990; Rapaport, 1960; Sanford, 1963, 1970; Sears, 1950). These topics, however, are insufficient to make a systems framework in and of themselves. The topics must be defined, ordered, organized, and developed. No framework prior to the systems framework developed here does this. This leads to the question of what is the system framework?

### The Systems Framework

The systems framework is an impartial, inclusive, and clear framework for personality psychology that is highly developed. Like earlier systems-oriented frameworks, it begins with a few overarching topics. These are the: (a) *identification* (definition) of the system, (b) *components* of the system, (c) *organization* of those components, and the (d) *development* of the components and their organization.

The four topics head the four columns of Table 1. The coverage of each is described in the first row of the table. For example, the first column discusses the identification topic, which describes what and where the personality system is. The second column discusses the components topic, which is intended to describe the parts of personality, and so forth.

The four concepts were chosen as the basis of the system in part because they are so straightforward. Everyone knows what a definition is, or what organization is. As one becomes expert in systems thinking, however, it is useful to have recourse to deeper, more sophisticated concepts. For that reason the four basic topics have yoked to them slightly more complex approaches to describing systems. These appear in the second row of Table 1. For example, the components topic (second column) has yoked to it the concept of functional principles, because components such as memory or the ego are frequently defined by their function. The auxiliary concepts are paired to the central ones (e.g., function to components) as a matter of expositional convenience rather than according to any required correspondence.

Third, each topic has associated with it one or more subsidiary frameworks for organizing its coverage. For example, personality components can be organized by a relational classification system that divides personality's parts into four central types (and further subtypes;

Mayer, 1995a). These subsidiary classification systems are described briefly in the third row of Table 1. Finally, each topic, excepting identification, also has associated with it a class of individual differences. For example, individual differences can arise from differences in components (e.g., extraverted people possessing an "extraversion" component).

The final row of the table includes some specific examples of what is covered under a particular topic. For example, organization would include coverage of both the structural (static) organization of personality components in relation to themselves and to the outer environment. It would also include coverage of the dynamic (causal) interactions between components and the environment, including interactions between mood and cognition, id and ego, and between personality and society.

The systematization represented in Table 1 reflects an already substantial advance in relation to earlier frameworks. Each of the four topics is clearly defined and described in multiple ways to ensure its clarity. The framework's four topics are also more complete in their coverage. The next four portions of this section illustrate how each of the four topics systematizes coverage of the field.

### First System Topic: The Definition of Personality and Its Relation to Other Systems

**Defining and locating personality.** The first system topic is identification and its goal is to seek out the personality system amidst other systems of scientific interest such as biological and social systems. The term *personality* suggests that the object of study is attached in some way to the person—but where? Allport's (1937) now-famous dictum that personality is "the dynamic organization within the individual of [psychophysical systems]" (p. 48) places the system entirely inside the person. In contrast, Sullivan (1953) viewed personality as mostly outside the person when he described it as "interpersonal processes occurring in the interpersonal situations" (p. 20). At a concrete level these two definitions are plainly in disagreement. The framework's aim is only to represent these two views rather than to reconcile them because frameworks juxtapose and integrate related ideas rather than settle disputes. To juxtapose the two, the framework need only point out that the two definitions (and all others) share in common the recognition that personality exists somewhere along an internal-external continuum, divided at the person's sensorimotor boundary. According to this internal-external dimension, personality is

Table 1. A Progressive Overview of the Systems Framework

The Four System Topics				
	Identification	Components	Organization	Development
Coverage of the topic	The system is identified among its neighboring systems such as biology and the family. In so doing, personality is located and defined.	The concept of a component is first defined. Next, the major classes of personality components are discussed.	The major components within personality and systems external to personality are organized together.	The manner in which the personality components and their organization develop over time is examined.
Principles introduced when studying the topic.	<i>Structural principles</i> are introduced to describe static, comparative relations (e.g., molarity) among personality, its parts, and other systems.	<i>Functional principles</i> are introduced to describe the purpose of a given personality component (or of personality as a whole).	<i>Dynamic principles</i> are introduced to describe the interaction among components within personality and between those components and systems outside personality.	<i>Progressive principles</i> refer to how the organism and its parts progress through time, be it gradually, through discontinuous stages, or according to some other model.
Integratory subframeworks	A <i>spatio-temporal organization of the system</i> employs three dimensions: internal-external relative to the person, molar-molecular in relation to biology and sociology, and organismic-constructed.	A <i>relational table of personality components</i> divides components into four major classes: enablers, establishments, themes, and agencies, as well as into further subclasses.	A <i>transactional table of personality dynamics</i> arranges personality dynamics according to the component classes they connect.	A progressive table of personality development describes change in a component or the system over the major epochs of a person's life span (e.g., early childhood, young childhood, etc.).
Consideration of individual differences	None (instead, the framework for personality data may be introduced here; see text).	<i>Component typologies</i> are formed from the presence of one or more independent components that exert strong influence over the system.	Dynamic typologies describe the types of individuals formed through dynamic processes. The dynamic processes also create differences in components.	Maturational typologies describe personalities in which subsets of components and other dynamic interactions are mature or immature relative to the rest.
Examples of possible coverage	Definitions of personality, data in personality psychology.	Components such as memory, basic emotions, self-concept, self-esteem, extroversion, id, ego, superego.	Structural organization including the arrangement of personality components; dynamic organization including id-ego conflicts, ego functioning, individual-society conflicts.	Development of motivation, emotions, cognition; development of personality-situation and personality-group relations.

often said to begin at the innermost conscious self (according to James and Freud), to extend to the sensorimotor boundary, and thereafter to interact with the external world (Mayer, 1995b).

Once personality is located partially or wholly inside the person it must still be distinguished from other systems such as the nervous system. The molecular–molar continuum, introduced by Auguste Comte, can help to do this (Oldroyd, 1986, p. 171). Molecular sciences study relatively small phenomena such as particles or atoms, and molar sciences study larger, more inclusive systems such as society. Each step up the molecular–molar continuum represents a transition in which a molecular system becomes organized at a more molar level. For example, organic chemicals form into living cells. Those living cells, in turn, form the human nervous system (or other systems). The nervous system gives rise to psychological processes, which in turn form personality. The next steps up organize groups of personalities into families, communities, nations, and so forth.<sup>5</sup> Definitions of personality place the system between the more molecular neurology and the more molar family.

A third, organismic–constructed continuum can be employed to divide portions of personality that are most connected to the organism (and develop earliest), such as survival urges, from those that are most constructed and independent, such as personal knowledge of algebra and calculus. Finally, a fourth dimension, time, can be employed that would illustrate a sequence of views of a given personality as it changes and grows across time.

The four dimensions discussed earlier can be represented spatially. Such a spatial representation provides a visual check of whether personality and its neighboring systems are arranged in an adequate fashion. In Figure 1, the internal–external dimension runs left to right and personality is organized on the left side within the organism. To the right are situational interactions, wherein the person acts and is acted on by various situations. The second dimension, molecular–molar, is represented vertically with the nervous system at the bottom and groups at the top. The third dimension, organismic–constructed, runs depthwise. This dimension is, as of yet, left empty, but it will be employed later in the system's development. The fourth dimension, time, can be displayed by arranging multiple versions of Figure 1 in a developmental progression.

Recall that the Table 1 overview stated that structural concepts are introduced along with the identification topic. The internal–external, molecular–molar, and organismic–constructed dimensions can be considered structural because they compare one system to another according to mostly unchanging, static properties such as how molecular a system is, or how internal to the person a system is. Later on, these same three structural dimensions will be employed to arrange the major components of personality within the internal personality area of Figure 1. The ability to do this will provide a further check of the framework's internal consistency.

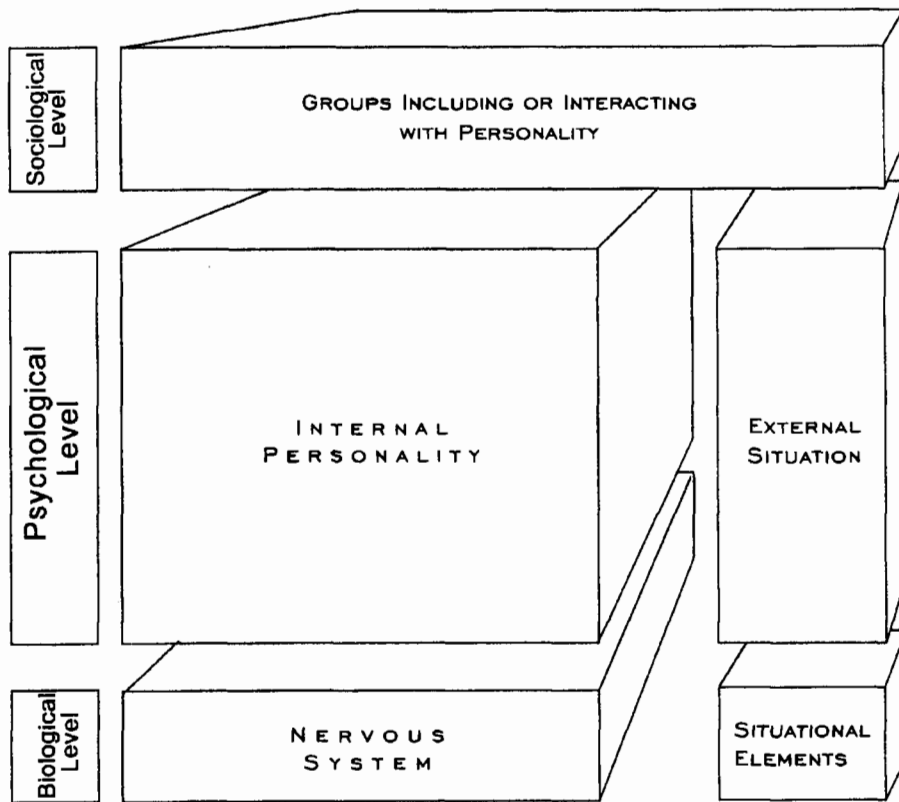
**Implications for classification of data.** The identification of the personality system amidst its neighbors establishes a method of organizing data for the field. Referring to Figure 1, three major systems surrounding internal personality (left), are the biological (bottom left), the situational (middle right), and the incorporative (top). Data can then be classified according both to the system from whence it comes and the system to which it pertains. Self-report data are so-called because they originate from the internal personality, and can be divided into several types according to the system they describe. For example, *self-report* personality data (e.g., mood reports) are data that originate from internal personality and pertain to it as well. Self-report *act frequency* data and/or *biodata*, by contrast, are data that originate from internal personality but pertain to a person's actions amidst the external situation (middle right). Self-report demographics pertain to the incorporative domain (top). Data that originate from outside the self can be divided similarly. For example, observer data originate from the situational environment and can describe internal personality (e.g., clinical case reports), its situational manifestation (e.g., behavioral observations), and activities within incorporative groups (e.g., school records; see Mayer, 1997b, for a more detailed treatment).

**Concluding observations.** Often a great deal can be understood about a system just from knowing where it exists. Figure 1 clarifies that there exist three different external environments around internal personality: a biological one (at bottom), an incorporative environment (on top), and a situational one (to the right).<sup>6</sup> Personality occupies a strategic location and must act accordingly. The personality system must meet its bio-

<sup>5</sup>At a more sophisticated level, it helps to think of several parallel molecular–molar paths. Thus, organic chemicals could be organized into living cells, or into nonliving organic compounds. Similarly, families could be organized into nations, or into ethnic groups, or both simultaneously.

<sup>6</sup>Although it may seem unusual to divide the social environment into incorporative and interactional portions, Sears (1951) and others consider it an important distinction. For example, Sears observed a world of difference between "a piling up of parallel monadic sequences" in the situational environment, and the "interdependence of each on the other" (p. 480) in the incorporative environment.





**Figure 1.** A structural representation of personality and its neighboring systems. Personality and its neighboring systems are arranged in three dimensions. The molecular-molar dimension runs vertically with the molecular nervous system beneath personality and the molar social groups above it. The internal-external dimension runs horizontally with the internal personality to the left and the external situation to the right, and the organismic-constructed dimension (to be elaborated later in the article) runs depth wise with organismic elements in front, and constructed elements in back.

logical needs, act effectively from situation to situation, and fit into its larger social environments. To do so, personality possesses many parts that communicate its biological needs, that represent the external situation and cope with it, and that navigate its social affiliations. These parts are examined next.

### Second System Topic: Personality Components

**The problem of personality components.** Once the personality system has been identified, it is necessary to examine its parts. Not too long ago, Sanford (1970) noted that, "disagreement about the nature of [personality's] elements has been marked throughout the history of personality psychology, and it shows no signs of ending soon" (p. 20). In fact, the absence of a decent personality framework has led to near anarchy in studying its parts. Psychodynamic theorists divide personality into the id, ego, and superego, whereas trait

psychologists divide it into extraversion, Machiavellianism, and the like. Such segregation by theory invites the continuous rediscovery and relabeling of the same parts. Hogan (1994) argued that, "what we see in *JPSA* [*Journal of Personality and Social Psychology*] is people reinventing the wheel" (p. 8).<sup>7</sup> No framework, systems or otherwise, can succeed without a single, coherent taxonomy for personality's parts.

### The relational system of personality components.

An early advance of the systems framework was the creation of a new, integratory classification system for all personality components. This relational classification of personality components divides components into four broad classes that can be arranged along the

<sup>7</sup>For example, the conflicts between the actual and ideal self studied today were also discussed by Dewey (1887/1967) in the late 19th century. The modern reports include important empirical advances over the past work but repeat the earlier theory (see footnote 10).

molecular–molar continuum (Mayer, 1995a).<sup>8</sup> The types begin with the most molecular *enablers* such as short-term memory, that carry out the most basic functions of personality, and extend upward to the most molar *agencies*, such as the ego, which represent large subdivisions of personality. There further exist two intermediate types termed *establishments* and *themes*.

The first component type, enablers, are mechanisms close to the biological level that carry out the basic functions of personality. These enablers support psychological functioning of the conscious, cognitive, affective, or conative type and are subclassified accordingly. For example, conscious enablers include attention and the phenomenal field, cognitive enablers include short- and long-term memory (but not their contents), affective enablers include joy and other unlearned emotional responses, and conative enablers include drives such as hunger or sensation seeking. A further description of enablers can be found in Table 2 (column 1). Empirically, the conative enablers (i.e., motivational urges) are closest to the neurological level and typically are studied through the methods of behavioral genetics and comparative psychology. Cognitive enablers are more complex; for example, working memory, when compared to long-term memory, appears to possess different mechanisms that can be teased apart with experimental methods.

The second component type, establishments, are so-called because they are established through learning. These are content-focused structures that represent a given area of knowledge needed by the personality to conduct its affairs. Establishments typically represent information about the self, the world, or the self-in-world, and the components are subclassified accordingly. Thus, a self-establishment might be a person's self-concept (e.g., being a quiet person), a world establishment might be expert knowledge of chess, and a self-in-world establishment might be one's own special rules for playing chess against a superior opponent. Establishments are molar relative to enablers and integrate the contribution of enablers in their content. For example, self-concept depends for its representation on both cognitive enablers (e.g., thinking "I am 5 feet, 8 inches tall") and affective enablers (e.g., feeling "People like me"). A further description of establishments can be found in Table 2 (column 2). Establishments often interact with one another, as when, for example, a person uses a model of her own emotional reactions to guess how someone else is feeling. Such interactions lend themselves to experimental or quasi-experimental studies. Established contents also consist of correlated

facts that can be organized through multivariate correlational techniques such as factor analysis.

The third component type, themes, are collections of features from enablers and establishments that are programmatically related and that typically express a need, ability, or externally identified characteristic of the personality. Themes can be subclassified according to the enabler and establishment from which they draw the most features. For example, self-esteem combines affective features (e.g., a happy disposition) with the features of the self (e.g., the self-concept), and so would be classified as an affective-self theme. A second example would be extraversion, which combines an urge for stimulation (a conative enabler) with such models as how to host a party (a self-in-world establishment), and so could be classified as a conative self-in-world theme. Further examples of themes can be found in Table 2 (column 3). Themes are typically measured through multivariate techniques such as factor analysis, which sort features according to their intercorrelations.

The fourth component type, agencies, are additive superstructures combining the three component types previously mentioned. Agencies are the most molar of components because they integrate large numbers of the rest. A given agency performs many of the operations of personality as a whole but lacks one or more of personality's central features and hence lacks the integrated quality of the whole. Examples of agencies are the id, the ego, the unconscious, or the private personality. Because agencies are few in number they are not further subdivided (see Table 2, column 4). Agencies may be found in most but not all the perspectives of personality. The diffuse nature of agencies makes them difficult to study empirically and they are most often discussed as conceptual rather than empirical entities.

The four component types can be arranged in a relational table of personality components that powerfully illustrates the interorganization of the four classes discussed earlier.<sup>9</sup> The relational table, shown in Figure 2, is divided into four quadrants corresponding to the enablers (bottom right), establishments (top left), themes (top right), and agencies (bottom left). Each quadrant is subdivided into the aforementioned subclasses of the given type. For example, the enabler quadrant (bottom right) is divided into consciousness, cognition, affect, and conative boxes. Inside each sub-

<sup>8</sup>This advance owes considerable debt to the pioneering classificatory works of Mendelsohn (1755/1971), and more recently, works by Averill (1992) and Buss and Finn (1987).

<sup>9</sup>The relational table is revised somewhat from its original form (Mayer, 1995a). The present version emphasizes personality components as structures; many personality component processes have been dropped, because these can now be placed within the transactional dynamic tables (to be developed shortly). In addition, one agency was added (intraego; Perls, 1969, pp. 18–19). References for all other components can be found in Table 1 of Mayer (1995a).

Table 2. *Characteristics of the Major Component Prototypes*

	Enabler	Establishment	Theme	Agency
Function	Performs basic psychological function necessary to the operation of more complex aspects of personality.	Models complex aspects of the internal or external world, as well as monitoring and sometimes suppressing (e.g., with defenses) inconsistencies within such representations.	Expresses one or more characteristics of the organism that satisfy needs consistent with multiple, related personality features; such expressions may sometimes evolve secondarily or incidentally.	Performs a nearly complete set of the functions of personality itself, but in partial independence of the whole, and lacking its complex, integrated qualities; generally excludes some important function(s) of the whole (e.g., rationality, sociability, or consciousness).
Structure and content	Mechanistic structure stores and makes use of contents without itself including the content. Employs multiple smaller enablers or neurological components in performing its task.	Content-determined structure is organized by representations and the connections among them. To produce a representation, will commonly integrate the work of multiple enablers (e.g., cognition and affect).	Featural structure includes elements from both enablers and establishments. Features may become related through internal interactions, as when insecurities create self-consciousness. Alternatively, features may be related solely by outside criteria.	Additive structure combines multiple enablers, establishments, and themes, which operate concurrently with one another.
Location and boundaries	Lower level, extending from a lower boundary at or near the psychoneurological level upward to end at the lower boundary of the psychological establishments.	Upper level, extending from its interactions with enablers up to interactions with larger systems external to personality such as family and cultural systems.	Features are widely distributed across levels, among both enablers and establishments.	Cross-level, spanning from at or near the neurological level to interactions with outside systems such as family and cultural systems. Agencies span multiple groups of larger enablers, establishments, and (unrelated) themes. A few agencies should plausibly cover all or most of personality in healthy individuals (e.g., id/ego/superego; private/public personality).
Developmental consistency	Often operates from birth or is developed early without (much) learning. Performs the same function in much the same way throughout the life span.	May change its basic contents (and organization) during developmental stages of growth, as well as through substantial learning or educational experiences (e.g., from novice to expert knowledge).	Possesses aspects that are both fixed (enablers) and that change (establishments).	Will vary depending on the classes of components that make it up.
Universality	Universally present in normal personality, although there may be individual differences in its quality or level of functioning.	Larger establishments (e.g., self-concept) are present in most normal adult personalities, albeit with individual differences in content (and organization). Smaller ones may or may not be present.	Varies considerably from person to person and is often compared to similar themes in other people along a personality dimension. The theme's position in the continuum represents its degree of content (e.g., of sociability).	Most are universally present in normal personality; there also may exist abnormal agencies that are less universal (e.g., character neurosis).
Subclassifications	According to the basic functions it carries out: consciousness, cognition, affect, and conation	According to the objects it models: self, world, and self-in-world.	enabler-establishment pair (e.g., conscious-self, cognitive-world, etc.). Affectothymia, extraversion.	None
Examples	Working memory, happy mood experience.	Self-concept, repression.		Superego; private personality.

**ESTABLISHMENTS**

<p><b>WORLD: WORLD MODELS:</b> anticipated consequences, causal attributions, expert knowledge, (generalized) expectancy, internal frame of reference, personal constructs, problem-focused coping, psychological situation <b>PERSON MODELS:</b> anima/animus, archetype, implicit personality theory, oedipal/electra complex, personality prototypes, respondent behavior, significant other schemata</p>
<p><b>SELF-IN-WORLD: COMPLEX STRUCTURES:</b> style of life, ethical/moral structure, conscience, fem./masc. clock, self-obj. introject <b>ATTACHED COMPLEXES/ROLES:</b> face, gender identity, identification, Jonah complex, overcompensation, persona, role playing <b>ATTACHED MOTIVATIONS:</b> conditioned response, inferiority/superiority, complex, learned helplessness, life themes, need: -potential, -value, -for identity/ rootedness/etc., personal -projects, -strivings, secondary drive, self-efficacy <b>ATTACHED EMOTIONS:</b> conditioned emotional reaction, developmental characteristics (trust-mistrust, etc.), habit, moral/neurotic anxiety, penis/womb envy, reinforcement value, secondary appraisal, sentiment</p>
<p><b>SELF:</b> proprium, self (as known), self system, self: -concept, -esteem, -identity, -image, -integrity, -schema <b>EXTENSIONS:</b> self: -extension, -objectification, -regulation, -reinforcement <b>SELF-CONSCIOUSNESS:</b> current concerns, peak experience, daydreaming <b>IDENTITY:</b> ego identity, identity, life-story identity, meta-need, scripts/nuclear scenes, <b>POSSIBLE SELVES:</b> actual, ideal, ought, ego-ideal, possible selves, self-shadow/ego <b>COPING AND DEFENSE:</b> emotion-focused coping, defense mechanisms (e.g., denial, projection, repression, suppress.), fixation, openness to experience/defensiveness, perceptual-defense/distortion, subception</p>

**THEMES**

<p><b>CONSCIOUS WORLD:</b> flow, mitwelt</p>	<p><b>COGNITIVE WORLD:</b> creativity, field dependence/field independence, freedom of movement, intelligence, locus of control</p>	<p><b>AFFECTIVE WORLD:</b> empathy (as trait), gemeinschaftsgefühl</p>	<p><b>CONATIVE WORLD:</b> authoritarianism, curiosity, interest, social interest</p>
<p><b>CONSCIOUS SELF-IN-WORLD:</b> public self-consciousness, shyness, umwelt</p>	<p><b>COGNITIVE SELF-IN-WORLD:</b> openness/closedness, pedantry, social intelligence, shrewdness</p>	<p><b>AFFECTIVE SELF-IN-WORLD:</b> friendliness/hostility, tough-mindedness/tender-mindedness, suspiciousness, well-being</p>	<p><b>CONATIVE SELF-IN-WORLD:</b> acquiescence, conscientiousness, dominance, extraversion/introversion, machiavellianism, masculinity/femininity/androgyny, n. achievement/affiliation/power, narcissism, social desirability,</p>
<p><b>CONSCIOUS SELF:</b> absorption, depersonalization, eigenwelt, private self-consciousness, self-monitoring</p>	<p><b>COGNITIVE SELF:</b> intrinsic intellectuality, personal intelligence, self-awareness</p>	<p><b>AFFECTIVE SELF:</b> affectothymia, ego-strength, guilt-proneness, pleasant/unpleasantness, arousal/calm, neuroticism/stability, self-esteem, surgency</p>	<p><b>CONATIVE SELF:</b> propiote striving, sensation-seeking</p>

**KEY:**  
**ENABLERS:** Basic level mechanisms close to the biological level.  
**ESTABLISHMENTS:** Content-focussed components that are learned and serve as representational models.  
**THEMES:** Thematically operating feature collections drawn from enablers and establishments.  
**AGENCIES:** Supercomposites of components that represent complex personality operations but without the integrated quality of the whole.

**AGENCIES:** Id, Ego, Superego, Intraego, Totalitarian Ego, Self (as Knower), Collective/Personal Unconscious. Also: Preconscious, Unconscious Proper, Character Neurosis.

<p><b>CONSCIOUSNESS:</b> consciousness, attention, experiential field, stream of consciousness, substantial/transitive resting place</p>	<p><b>COGNITION:</b> MENTAL MODELS: mental models, dreamwork, imaginal/verbal processes, primary/secondary process, LONG-TERM MEMORY STRUCTURES: long-term memory, episodic/semantic memory, prototypes, schema, scripts (as structures) SHORT-TERM MEMORY PROCESSES: short-term memory, working memory, activation PERCEPTION: feature detectors, pattern recognition</p>	<p><b>AFFECT:</b> EMOTIONAL EXPERIENCE: basic emotional experience (e.g., joy, acceptance, fear, surprise, etc.). AROUSAL: tiredness, energy, affect precursor processes: primary appraisal, MOTOR CONCOMITANTS: postural, vocal, facial expressive mechanism .</p>	<p><b>CONATION:</b> BASIC MOTIVATIONS: physiological/ safety/love/esteem/self-actualization needs, will to power BASIC BEHAVIORS: emitted, instinctive, operant, behavior, unconditioned response, primary drives, motor reproduction processes, STRUCTURED MENTAL ENERGY: cathexis, canalization, libido, erg. life/death instincts</p>
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**AGENCIES**

**ENABLERS**

**Figure 2.** A relational table of personality components (after Mayer, 1995a). The four broad types of components (enablers, establishments, themes, and agencies) are arranged around the four corners of the figure. Summary definitions of each component type can be found in the box marked "key" (left-most column, second box up). Theme boxes are positioned so that each is in the column of the enabler and row of the establishment to which it is most related. Within a box, the enabler and establishment components have been grouped into subcategories (in small caps), and appear in order from largest (top) to smallest (bottom).

type are individual examples of those components. For example, the cognitive enabler box contains such components as working memory and long-term memory. The establishments (upper left) are divided similarly into the self, self-in-world, and world boxes. The themes (upper right) are divided into their 12 subtypes, with each of the subtypes positioned above the enabler and to the right of the establishment from which it draws the most features. For example, the affective self-in-world box is located above affective enablers and to the right of the self-in-world establishments. Finally, the agency box (bottom left) contains sample components

such as the id and ego. The components portrayed were drawn from 400 commonly discussed personality components classified according to the system (Mayer, 1995a). Many components fit their types nearly exactly; and those with a less-than-perfect fit can still be placed meaningfully within the system.

This classification and arrangement of personality components provides a comprehensive, pan-theoretical conception of the area. Note that the four types of components are differentiated in part according to what they do. This focus on what components do represents a functional perspective. It therefore makes sense to

introduce the concept of functionality in this section. This follows the introduction of the structure concept in the identification topic; there, structure had characterized the dimensions that locate personality (e.g., molecular–molar; internal–external).

#### **Comments concerning individual differences.**

Components account for the simplest individual differences in personality. These individual differences arise from the heightened function of an individual component or of several unrelated components. For example, a strong extraversion component will differentiate the extraverted personality from other personalities. Component-based differences can also arise from unrelated (uncorrelated) combinations of components such as high extraversion and high conscientiousness. Thus, component-based individual differences are conceptualized as simple formations of unrelated characteristics. They can be contrasted with dynamic and developmental individual differences, which are discussed later on and involve a higher level of organization.

#### **General comments on the parts of personality.**

The relational table of personality components is the most comprehensive and highly organized classification system for personality parts developed within the field. Personality parts formerly segregated by theoretical area are integrated and arranged together so that like is with like. These parts provide a picture of the raw material from which a functioning personality is organized.

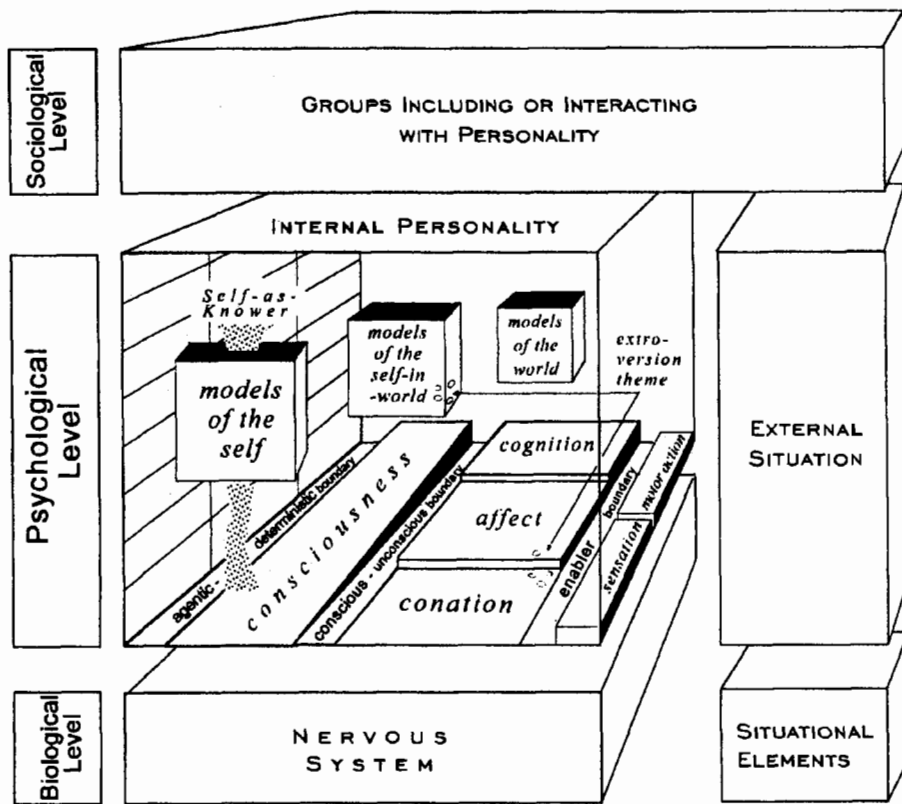
### **Third System Topic: Personality Organization**

**The structural organization of personality and its components.** The organization of personality can be divided for study into structural and dynamic approaches. Personality's structural organization concerns relations among the parts that are relatively static and unchanging. Personality's dynamic organization concerns relations that are interactive and changing. Earlier in this article, Figure 1 portrayed personality amidst its neighboring systems: the biological (bottom), situational (right), and incorporative (top) environments. This was a structural arrangement of personality amidst its neighboring systems, because it emphasized unchanging, static relations. This structural organization of personality can now be advanced by filling in personality's parts.

Figure 3 positions personality as in the earlier Figure 1. The formerly empty internal personality, however, is filled in according to one possible arrangement. The floor of the box consists of the enabler classes of consciousness, cognition, affect, and motivation, described in the previous section. These enabler classes

are placed beneath the other components because of their molecular nature. Consciousness is often considered to be the innermost part of the mind and it is placed to the far left accordingly (Mayer, 1995b). (The parts of personality are conscious to the extent that they communicate with or incorporate consciousness in their operation.) Establishments (models of the self, world, and self-in-world) are molar relative to enablers and are positioned above them. Among establishments, the self-models are placed internal relative to the world models. Themes draw features from both enablers and establishments. A single conative self-in-world theme, extraversion, is depicted toward the middle rear of the diagram. (The diagram is insufficiently large to depict all 12 theme classes.) The extraversion theme consists of features (bean-shaped icons) drawn mostly from conative enablers (bottom) and models of the self-in-world (to the left). Finally, the self-as-knower agency (James, 1892/1920, pp. 195–200) is depicted as a metaphorical cloud within which consciousness and the self are synthesized and act on the rest of the system. All parts of personality and all neighboring systems are viewed as interconnected. Interconnecting lines are not shown, however, so as to keep the figure as simple as possible. This is only one possible way to arrange personality's parts. For example, although I have placed consciousness relatively close to biological substrates, it could also have been placed higher up to emphasize that it is an emergent property of the mind. Other parts could have been moved as well to emphasize alternative theoretical perspectives on them.

**A transactional classification system for dynamics.** The aforementioned structural depiction represents a higher level of integration of personality's parts and their surrounding systems than has been possible before. Still, it describes only the static portion of personality's organization. Much that is important about personality organization is its dynamics—the actions and reactions among personality's parts, and between those parts and their neighboring systems. The framework approach to dynamics arranges them in a transactional classification system according to the components they connect. Consider the dynamic that a negative self-concept puts one at risk for depression (Kuiper & Derry, 1982). This dynamic connects models of the self (i.e., the negative self-concept) to the emotions (i.e., depression). A slightly more complex dynamic that connects the self to the emotions is that discrepancies between the actual and ideal selves will bring about sadness (Higgins, 1987, p. 322). Yet another dynamic of this class is that discrepancies between the actual and ideal selves elicit humility in the healthy individual (Freud, 1923/1960, p. 27). Note that plainly



**Figure 3.** A structural arrangement of personality components (revised from Mayer, 1995b). Personality and its neighboring systems are arranged in a three-dimensional space. The vertical dimension represents the molecular (bottom) or molar (top) aspect of a system. The horizontal dimension represents the internal (left) or external (right) aspect of the system, and the depth-wise dimension represents the organismic (front) or constructed (back) aspect of the system. The sensorimotor boundary (middle) divides internal personality (left) from the external environment (right). Inside personality (left) are depicted representatives of the four major types of personality components. Enabler-class components (consciousness, cognition, affect, and conation) are most molecular. Establishment-class components (self, self-in-world, and world) are more molar. Also shown is one of the many possible themes (extraversion), and one of several possible agencies (self-as-knower). Various systems are located around personality, including the more molecular biological systems (bottom), the more molar social systems (top), and the situational environment (right). All parts of personality and all neighboring systems are viewed as interconnected. Interconnecting lines are not shown, however, so as to keep the figure as uncluttered as possible.

similar dynamics from the cognitive, social-cognitive, and psychodynamic perspectives have been grouped together in this example on the basis that each connects self-models to emotion.<sup>10</sup> In fact, classifying dynamics according to the components they connect can integrate

concepts from across the major theoretical and research areas of personality psychology.

A first illustration of how internal personality dynamics can be arranged within a transactional table is shown in Table 3.<sup>11</sup> Table 3 has the component classes

<sup>10</sup>Two other examples include one from the functionalist psychologist and educator John Dewey. In a passage entitled "The Actual and Ideal Self," Dewey (1887/1967) discussed how a person forms models of an "actually realized self" and a more universally idealized self. Dewey proposed that a discrepancy between the actual and ideal self, "must lead to final disintegration ... unhappiness" (p. 254). Also, Rogers (1951, pp. 510-513) distinguished between a self that accurately symbolizes the person and a false self. According to Rogers, as the discrepancy between the real and false self increased, so would psychological tension.

<sup>11</sup>Personality dynamics for this and later tables were drawn from among the most frequently cited (by textbooks) major works representing a variety of theoretical and research perspectives including the behavioral (Dollard & Miller, 1950; Skinner, 1971), cognitive (Bower, 1981; Kelly, 1955), dispositional/trait (Allport, 1937; Cattell, 1965; McClelland, 1961; Murray, 1938), humanistic/existential (Csikszentmihalyi, 1990; Maslow, 1968; Rogers, 1951), psychodynamic (A. Freud, 1966; Freud, 1933/1964; Horney, 1939/1966), neo-analytic (Erikson, 1950; Kohut, 1977), social cognitive (Higgins, 1987), and social learning perspectives (Bandura, 1989; Dollard & Miller, 1950). Each dynamic was summarized in a sentence or two.

of establishments down the side and enablers across the top. Each of the table's resulting cells represent the intersections among the component types. Within a specific cell, the sample dynamic connects one intersecting component class to the other. For example, the cell at the intersection of the self-establishments and the affective enablers contains Higgins' aforementioned dynamic connecting actual-ideal self discrepancies and sadness.

Only a small number of the dynamics internal to personality are listed in Table 3. The transactional table could be expanded or contracted as needed. For example, the table might add interactions of enablers among themselves, and between agencies and themes. A dynamic connecting an agency to a theme is Kohut's dynamic that, "The *self* can be strengthened as individuals generate creative new *talents*" (Kohut, 1977, pp. 36-37). A table containing all the parts and their interrelations would need to be laid out in atlas form, with global tables analogous to

world maps that are lower in resolution (i.e., contain a few broad dynamics), and detailed tables analogous to city maps that are high resolution (i.e., contain many dynamics). Still other transactional tables would show personality's parts and their dynamic connection to the whole system. Such a table would include Carl Rogers' (1951) connection between establishments and the whole: that experiences are "symbolized, ignored, denied, or distorted" (p. 503), depending on their relation to the organism, and Cattell's (1965) formulation that, "Personality types emerge because certain *groups of traits* are 'functionally fit' when they occur in combination" (p. 262).

Perhaps the most interesting of all dynamics are those that connect the internal personality to the outside environment, because these dynamics most directly shape our external lives. Table 4 lists the four classes of personality components on the left side and shows examples of their dynamic relations to the situational and incorporative environments. For example, a dy-

**Table 3.** *A Transactional Table of Personality Dynamics: Enablers and Establishments*

	Conscious Enablers	Cognitive Enablers	Affective Enablers	Conative Enablers
World establishments	Models of the world may attract our attention where they can refute or replace painful ideas that are about to become conscious (S. Freud, 1920/1966, p. 293).	A person imagines future events by creating models for them based on past events. This requires the use of the facilities of basic memory and reasoning (Kelly, 1955, p. 54).	Objects in the world are modeled according to the individual's personal feelings about them (in the introvert) or consensual feelings about them (in the extrovert), according to the feeling function (Jung, 1921/1971, chap. 10)	Judgments about the world will be relatively passive and acceptant when needs are met (Maslow, 1968, p. 97).
Self-in-world establishments	Models of our activities that endow them with authentic meaning allow the structured, organized, flow of consciousness (Csikszentmihalyi, 1990, p. 36).	Social roles are chosen and developed depending on the individual's intellectual search for ideological meaning in the world and the individual's aptitudes and endowments (Erikson, 1963, pp. 261-263).	A model of others as insufficiently approving and responsive, characterized by anxious/avoidant attachment, may result in part from proneness to distressful emotions (Hazan & Shaver, 1994, pp. 6-7).	Roles incorporating fixed smiles, arrogance, and contempt; may develop out of habitual and widespread need to defend oneself against others (A. Freud, 1966, p. 33).
Self establishments	Our self-model often falls short of our ideals. Consequently, we often seek to avoid consciousness of the self (Duvall, Wickland, & Fine, 1971).	Accurate, intelligent, models of the self emerge from the process of continued introspection into one's own psychological processes (Gardner, 1993, pp. 250-251).	Discrepancies between the actual and ideal self will bring about sadness (Higgins, 1987, p. 322).	Learned motives function independently of more basic motivations, even though these learned motives may have developed originally so as to satisfy basic motives (e.g., the need for sex and reproduction; Allport, 1937, pp. 194-197).

Table 4. *A Transactional Table of Personality Dynamics: Internal and External Systems*

	External, Interactive Environment	External, Social Incorporative Environment
Agencies	<p>A person's ego will withdraw from realities (e.g., activities, fields of inquiry, etc.) that involve pain, or a lack of any pleasure; if this process of withdrawal proceeds unusually far, the scope of the autonomous functioning will become increasingly constricted (A. Freud, 1966, pp. 102-103).</p> <p>The self determines the environment as well as being determined by it (Bandura, 1989, p. 1182).</p>	<p>People's ego growth proceeds according to a series of critical steps—characterized as turning points or moments of important decisions. Society is constituted so as to encourage that development (Erikson, 1950, p. 270).</p> <p>Early on, the healthy self develops by recognizing its own feelings being empathically mirrored in the (internal representations) of parents' behaviors (Kohut, 1977, pp. 75, 76, 81).</p>
Themes	<p>A person's characteristic traits can initiate behaviors; if a person is extraverted a simple cue to talk will release their behavior; in addition, traits may motivate the seeking out of such cues (Allport, 1937, p. 321).</p>	<p>Cultural influences such as religion will lead to beliefs that foster strong motives such as the need for achievement (McClelland, 1961, p. 49).</p> <p>A particular motive in an individual (when repeated within a sufficient number of similar individuals) can lead to a change in society such as increased economic growth (McClelland, 1961, p. 391).</p>
Establishments	<p>Some environmental learning causes false valuing of experiences in the sense that it does not necessarily correspond to the organisms real perception or best interests (Rogers, 1951, pp. 503-507).</p> <p>Personal structures are developed, constructed, and organized so as to predict future events (Kelly, 1955, pp. 46-49).</p>	<p>There exist specific learned constellations of attitudes and beliefs such as "patriotism" or those common to a religious denomination, that are acquired through culturally sanctioned and planned activities (e.g., school setting or religious setting; Cattell, 1965, pp. 168-169).</p> <p>The culture teaches women to value love, devotion, and emotional skills because for centuries the family was her primary sphere of work (Horney, 1939/1966, pp. 114-115).</p>
Enablers	<p>An organism's behavior is selected, shaped, and maintained by the environment (Skinner, 1971, p. 19).</p>	<p>People possess a number of central strengths or qualities that may assist them in dealing with the social world; but each such strength will require a specific social experience to bring it to fulfillment (Erikson, 1950, p. 271).</p>

Note. Personality dynamics are arranged according to the particular parts of personality (left) they connect to the particular external environment (top). The external environments are divided between the interactive environment (top, left), and incorporative environment (top, right).

dynamic connecting an agency to a situation is that, "A person's ego will withdraw from those realities (e.g., activities, fields of inquiry, etc.) that involve pain or a lack of any pleasure; if this process of withdrawal proceeds unusually far, the scope of the ego will become increasingly constricted" (A. Freud, 1966, pp. 102-103). Elsewhere, one can find themes connected to incorporative systems, as in the idea that, "A particular motive in an individual (when repeated within a sufficient number of similar individuals) can lead to a change in society such as increased economic growth" (McClelland, 1961, p. 391).

**Individual differences in personality organization.** Organizational-based individual differences are defined chiefly by their causal dynamics rather than by their components. Consider a personality

that undergoes a sudden religious conversion. The personality now will be influenced according to the new religion's teaching. The personality's individual components do not change much at the exact time of conversion. After the conversion, of course, certain components (e.g., models of the world) may gradually come into compliance with the new religious teachings, but this is secondary to the shift in dynamic control brought about by the conversion (e.g., James, 1901-1902/1990, Lecture IX). Conversion is an extreme case and most organizational types are formed by dynamics that gradually shape the components of the system over time. For example, a personality that repetitively defends against threatening information will in the course of doing so strengthen its component defense mechanisms. Individual differences due to organization are complex and sophisticated, and yield important personality types.



#### Fourth System Topic: Development

**The centrality of personality development.** A sense of the living person is nowhere as strong as in the development topic. The topic brings personality components and their organization to life by showing how they grow to form a complex person.<sup>12</sup> Development can be viewed in the short term as taking place according to cycles, shifts, or momentary environmental interactions. Such short-term reactivity may best be discussed in the earlier system topics of components and organization. For example, mood swings may be better conceptualized as a dynamic, although they also operate as a long-term developmental process.

The development topic is particularly suited to discussing long-term life span development according to growth curves, stages, or hierarchies. Personality development can be divided into intrapsychic and interpersonal portions, and timelines can be developed for each.<sup>13</sup> A particularly important class of such timelines concerns the transition from relatively early enabler-based functioning to learned, establishment-based functioning. Consider cognition. During childhood, cognitive enablers help establish a logic of physical movement, images, and then language (Piaget & Inhelder, 1969, pp. 13, 51). Increasingly sophisticated (establishment) models develop of the self, the self-in-world, and the world at large. The child's ability at abstract thinking increases and reaches its height in adolescence (Wechsler, 1958, p. 135). Throughout adulthood, increased learning coupled with introspection and open-mindedness leads to meaning making around the nature of human existence (Maciel, Heckhausen, & Baltes, 1994, pp. 78, 90). Tracing such progression from cognitive enablers to learning about people and their world, from affective enablers to learning about emotions, and so forth, can present a new and more integrated picture of personality development. Such a developmental chart, in which four such timelines (corresponding to the four enabler classes) are side by side can be found in Table 5. These make clear the common developmental themes that

may occur with healthy growth across the four enabler modalities.<sup>14,15</sup>

As intrapsychic change occurs, so will interpersonal change. An interpersonal chart of development also can be developed. The relevant life span development can be divided into skills and activities that primarily concern situations and those that concern incorporation. A group of theories are ordered and interrelated in this way in Table 6 (e.g., Erikson, 1950; Levinson, Darrow, Klein, Levinson, & McKee, 1978; Loevinger, 1987).

**Individual differences in development.** Individual differences in development occur when a subset of personality components and dynamics develop more or less quickly than the rest of personality. For example, Freud's anal personality describes an adult personality containing a subset of immature components still seeking anal gratification (Pollak, 1979). Another example of a developmental type is Marcia's (1966) foreclosed individual who makes a dynamic attachment to an identity before adequately exploring his or her interests and abilities. Some developmental types may describe particularly advanced growth—as in Maslow's self-actualized person, who has ascended a hierarchy of needs from the most elemental to the most fully human. These

<sup>14</sup>The timelines were filled in with those personality theorists who were repeatedly covered in the developmental and personality development textbooks mentioned in the text. A few works appeared with almost universal consistency. These included Erikson's psychosocial development, Piaget's cognitive development, Freud's psychosexual development, and Levinson's adult development. Beyond this there was less consistency and I selected additional individual works that seemed most to contribute to the charts I was constructing, under the following constraints. Works were selected that (a) were included in at least one personality or development textbook, (b) plainly applied to one of the areas represented by the core timelines being constructed, (c) plainly differentiated among personality at different periods of time, and (d) plainly provided unique additions to the timelines either by covering developmental epochs not already covered or by covering specific areas of development not already covered. In addition, I attempted to use between two and four individuals to complete a given timeline.

Once the individuals were selected the timelines were divided into four parts: (a) beginnings (often associated with infancy and childhood), (b) middle growth (often associated with childhood), (c) beginnings of full function (often associated with young adulthood), and (d) peak performance (often associated with middle-to-late adulthood and maturity). This division into time periods provides a better ability to compare one developmental progression with another. Although it reduces the detail of many of the developmental works, it is nonetheless consistent with the generally large-scale overview provided by the framework.

<sup>15</sup>These timelines are not the only intrapsychic timelines possible. To them might be added moral development (Kohlberg, Levine, & Hewer, 1983), gender development (Gilligan, 1982; Guttman, 1987), and more generally self-development (Hart, 1988).

<sup>12</sup>It is notable, however, that for many years the *Annual Review of Psychology* alternated personality coverage between Sears' topics of structure and dynamics and dispensed with development (Butler et al., 1960, p. v-vi).

<sup>13</sup>Personality development belongs not only to the field of personality but also to the field of developmental psychology. Developmental psychology has much to teach about personality and how it grows. The following remarks are based on a number of leading developmental textbooks (among them, Berk, 1993; Berndt, 1992; Cole & Cole, 1993; Papalia & Olds, 1990; Perlmutter & Hall, 1992) and related research handbooks in personality (e.g., Heatherton & Weinberger, 1994; Mussen & Hetherington, 1983).

Table 5. Sketch of a Progressive Table of Intrapsychic Personality Development

Vector	Consciousness	Cognition	Affect	Constation
Beginning characterization (e.g., early childhood). Enablers are dominant.	The child's consciousness is completely connected to the world before becoming self-conscious (Csikszentmihalyi, 1990, p. 229). The scope of consciousness is limited (S. Freud, 1920/1966, p. 435).	There is a logic of (physical) movement—an ordering and assembling that constitute a substructure for the future operations of thought (Piaget & Inhelder, 1969, p. 13). Intellectual abilities rise steadily (Wechsler, 1958, p. 135).	Feelings are experienced initially as external (e.g., in facial expressions). They gradually are perceived as more internal and connected to specific organs (e.g., heart, stomach; Nannis, 1988, p. 36). The individual discriminates internal pain and pleasure (Gardner, 1993, p. 239).	Physiological needs are first of all met so as to assist adequate personal functioning (Maslow, 1943, p. 372). A number of nonconscious, implicit motives also arise based on those physiological needs and early experience (McClelland, Koestner, & Weinberger, 1989, p. 697).
Early-middle characterization (e.g., later childhood). Establishments emerge.	Consciousness must be directed as life complexity increases, and entropy (boredom, anxiety) enters (Csikszentmihalyi, 1990, p. 229). Consciousness will become blocked by primitive mechanisms of defense such as isolation and undoing (A. Freud, 1966, p. 50).	The individual operates with representational symbols such as language and mental images. He or she engages in concrete reasoning, centered on a known reality (Piaget & Inhelder, 1969, p. 51). Intellectual abilities continue to rise (Wechsler, 1958, p. 135).	Feelings are recognized as internal processes and the person exerts some degree of control over feelings (Nannis, 1988, p. 38). The individual emerges as a recognizable locus of activity, and introspection begins (Gardner, 1993, p. 248).	Early social experiences of this time promote elaboration of the various nonconscious motives (McClelland et al., 1989, p. 699). There exists a strong need for a safe, orderly, predictable world (Maslow, 1943, p. 377).
Late-middle characterization (young to middle adulthood). Establishments are more fully developed.	Conscious decisions must cope with increasingly contradictory thoughts and goals (Csikszentmihalyi, 1990, p. 229). Consciousness becomes more open with the development of more flexible, complex defenses (e.g., repression; A. Freud, 1966, p. 52).	Formal operations—those involving abstract reasoning, theorizing, and the like arise (Piaget & Inhelder, 1969, p. 131). The individual's abstract thinking ability reaches its height in many regards (Wechsler, 1958, p. 135).	Individuals coordinate their own and others view of themselves to understand how different feelings may emerge from the same situations (Nannis, 1988, p. 40). The individual's social sensitivity increases (Gardner, 1993, p. 249).	Organized thought creates self-attributed motives (McClelland et al., 1989, p. 698). Having met physiological and safety needs, the person hungers for love and affiliation with others as well as for a stable, high evaluation of themselves (Maslow, 1943, pp. 380-381).
Optimal end-state characterization (optimal function in middle or later adulthood). Establishments and themes based on them are emphasized.	Consciousness reaches a flow state through harmony based on reason and choice (Csikszentmihalyi, 1990, p. 230). Both instinct and social values are consciously accepted (A. Freud, 1966, p. 52); the conscious now contains what was formerly unconscious (S. Freud, 1920/1966, p. 435).	Peak functioning occurs in areas of professional experience, social intelligence, and wisdom. Introspection and open-mindedness lead to comprehension of the nature of human existence (Maslow, Heckhausen, & Baltes, 1994, pp. 78, 90).	Sophisticated understanding of feelings, including that they may include multiple causes, responses, and controls (Nannis, 1988, p. 41). The individual is able to read intentions and desires internally and/or in other people and to symbolize them in systems of aesthetic, moral, or religious thought (Gardner, 1983, p. 239).	Early motives persist and the individual develops new, socially acceptable motives that represent the unconscious ones in new ways (McClelland et al., 1989, p. 700). Finally, there emerges a need and desire for self-fulfillment—to be that which one can be and to become more and more what one is (Maslow, 1943, p. 382).

Table 6. Sketch of A Progressive Table of Interpersonal Development In the Interactional and Incorporative Spheres

Vector	Situational (Interactional) Environment	Incorporative (Social) Environment
Beginning characterization (e.g., early childhood). Enablers are dominant.	<p>The infant and young child must be able to feed, sleep, manage his or her bowels, and, as the musculature matures, hold and let go. Over time, such acts are accompanied by feelings of trust and autonomy (Erikson, 1963, pp. 247-256). The ego is impulsive and preoccupied by bodily feelings (Loevinger, 1987, p. 226).</p>	<p>The infant's social achievements involve forming trust in the parents, including being able to let them out of sight and return with confidence. As the child matures he or she must sense a firmness protecting against lack of structure (Erikson, 1963, pp. 247-256). The individual is dependent on others and egocentric (Loevinger, 1987, p. 226).</p>
Early middle characterization (e.g., later childhood). Establishments emerge.	<p>The individual is able to undertake and plan a task for the sake of being active and employing self-will. The individual's exuberant imagination is tamed and harnessed to the laws of impersonal things (Erikson, 1963, pp. 257-261). The person moves from an opportunistic attitude to one in which he or she has respect for rules, and an awareness that exceptions are sometimes allowable. The individual is preoccupied by controlling trouble, appearances, and adjusting to feelings (Loevinger, 1987, p. 226).</p>	<p>The individual strives to have her productions reaffirmed and fit within the adult order of things. The child learns from individuals with more specialized skills and careers who provide the child with preparation and education (Erikson, 1963, pp. 257-261). The individual moves, during this time, from being manipulative and wary of others to being cooperative and loyal, as well as helpful and self aware (Loevinger, 1987, p. 226).</p>
Late-middle characterization (young to middle adulthood). Establishments are more fully developed.	<p>At first, the growing youth, faced both with puberty and growing adult tasks concerned with appearances and attempts to connect with roles and skills (Erikson, 1963, pp. 261-266). The person employs self-evaluated standards and engages in self-criticism where necessary. Such individuals recognize and attempt to fulfill their motives, traits, and achievements; they stress individuality and seek roles (Loevinger, 1987, p. 226). It is a time to build for the future, both personally and professionally, as time passes; however, the individual becomes more self-reflective (Gould, 1975). Later, the person develops the capacity for commitment even in the face of sacrifice. The individual develops the abilities to both love and work (Erikson, 1963, pp. 261-266). In men, a midlife transition may occur that involves a crisis requiring rebalancing the life (Levinson, Darrow, Klein, Levinson, &amp; McKee, 1978).</p>	<p>There is an escape from parental dominance as well as a sense of independence from friends as greater self-reliance develops (Gould, 1975). The youth joins groups that test his or her loyalty, identification or overidentification, and fidelity. After developing a sense of self, or identity, the individual is then interested in moving on to fuse that identity with the identity of another, in intense, committed relationships (Erikson, 1963, pp. 261-266). In women especially, continuing development at that stage (and earlier and later stages) may emphasize recognition of the importance of relationships. Although identity and autonomy develop, they exist within the context of such relationships (Gilligan, 1982). The person is able to engage with others at an intense level, recognizing a mutuality of responsibility to one another (Loevinger, 1987, p. 226).</p>
Optimal end-state characterization (optimal function in middle or later adulthood). Establishments and themes based on them are emphasized.	<p>The person is able to cope with conflict in such a way as to attain self-fulfillment and an enhanced sense of identity (Loevinger, 1987, p. 226). "Human" experiences of sharing and feeling seem more important (Gould, 1975). The person develops an interest and concern in bringing up the next generation through their own productivity and creativity. The individual develops a post-egotistic love of humanity. This sense of love creates a spiritual sense of world order that makes both living and dying seem worthwhile (Erikson, 1963, pp. 267-268).</p>	<p>The individual recognizes, first, her or his interdependence with others, and within that context can cherish her or his own individuality as well as that of others (Loevinger, 1987, p. 226). The individual learns to be a follower of image bearers in religion, politics, and more generally in the arts and sciences. The person, now as a member of groups is invested with the power of teacher and in turn begins to educate, guide, and promote the next generation (Erikson, 1987, pp. 267-268).</p>

developmental descriptions are rich and evocative and provide thought-provoking ideas concerning a person's possible future development.

### Prescriptions for Personality

The previously mentioned four topics provide a scientific organization of personality studies. There exist, however, evaluative and moral concerns that, although outside of science, are inseparable from our work as scientists. Personality psychologists willingly philosophize as to good or bad personality in their scientific work. The system framework can also classify personality evaluations according to the area those evaluations pertain to—biological, internal personality, situational, or incorporative (as in Figure 1). For example, evaluations of internal personality often promote high intelligence over low intelligence, pleasant moods over unpleasant moods, strong egos over weak ones (Block & Block, 1980), and self-actualized states over deficit-based neediness (Maslow, 1968). Alternately, evaluations of personality's biology promote good health over bad health; evaluations of personality's situational environment promote good behavior over bad behavior; and, evaluations of personality's incorporative environment promote good citizenship over unpatriotic behavior, and altruism over selfishness.

At the local level, what is good or bad seems relatively clear. Intelligence is better if it is higher, emotions are better if they are positive, biological bases are better when they are healthier, and so forth. As we take a broader view, however, more complex issues arise. Higher intelligence is generally good—but not necessarily in the personality of a psychopath. Even a genuinely good politician might be better off with less intelligence if it makes it easier to stay in touch with the average person's thinking. Pleasant emotions are highly desirable—but shifting, alternating moods may enhance a person's creativity (Mayer & Salovey, 1997). Looking across systems, one must balance the individual's needs with those of society, and so on. From this perspective, everything is connected in sometimes unstable patterns, and the optimal relations are extremely uncertain. Consequently, some systems theorists may conclude that they can never evaluate anything, whereas other systems theorists may conclude that they know the truth from intuitive methods that violate the rules of rational process. It is the art of the systems philosopher to navigate cautiously between misplaced nihilism, on the one hand, and misplaced certainty, on the other, toward an evolved understanding of what is good and bad. The framework cannot guarantee safe

passage, but it provides some anchor to evaluation, I think, and may encourage some legitimate progress.

### General Discussion

The system framework just described is among the few intentionally developed, comprehensive outlines for the field of personality psychology. It readily communicates the field both to those within it and to those outside the field who are interested in its progress. This discussion reviews how the framework can be employed to facilitate work in the field—and to strengthen the field itself. The discussion begins by examining the framework's contribution to day-to-day work in teaching and research. It then proceeds by degrees to larger questions concerning how the field might change if this approach were adopted.

#### It Can Serve to Outline Textbooks

For the system framework to work it must organize the field for expositions in both educational and research settings. This entire article is, in a sense, a demonstration of its educational approach: The four topics of the framework and their subtopics are essentially equivalent to the headings of a course outline. One defines the system by identifying and locating it, describes its components type by type, examines its dynamics, and discusses its development. One might well conclude with evaluating personality as to its potential for good or bad. I have discussed these educational contributions elsewhere in greater detail. Moreover, some texts are very close to employing the framework already (e.g., McAdams, 1994; Pervin, 1996). The value added by the present framework is the provision of an overall justified, rational structure that such pioneering textbooks can exploit.

#### It Can Facilitate Everyday Research

The framework can also facilitate everyday research: It is of particular use to multivariate research owing to the ease with which related concepts can be identified using the system. It is a truism that multivariate statistical techniques require good theorizing by the researcher in order to employ them properly. Hayduk (1987) stated, "one literally cannot do good ... modeling without being a good theorist" (p. 31). Hayduk and other statistically oriented writers, however, say little about how to become a good theorist. Part of the reason is that there has been no agreed-on framework for

organizing multiple variables and dynamics to start with. The system framework provides a systematic overview of the variables that a theorist should consider in research. Thus, it is a reference tool for researchers to employ as they conceptualize their empirical work.

For example, consider the concept of identity. It is often described vaguely as "self-esteem" or "self-schema." Defining identity more clearly can begin with an examination of the relational table of personality components. There, in the self-establishment box, are numerous identity-related concepts that can be used to clarify one's usage of the concept, including ego-identity, life-story identity, scripts, and so forth. By collectively considering these concepts, and their location in the personality system, it is possible to develop a richer description such as the following:

Identity refers to a person's multifaceted concept of who he or she is. Identity includes an experiential sense of oneself that resides in consciousness and in working memory, as well as an ability to reflect back on oneself, heightening one's self-consciousness. Identity involves considerable knowledge of, feelings about, and motivations toward the self, including self-images, possible selves, scripts, life stories, and other related concepts. Finally, identity may be characterized by particular themes such as self-awareness, ego-strength, or confidence. (Mayer, 1995a, p. 868)

In addition to definitional improvements, the researcher examining a given component can employ the relational table to identify similar components with which there may be concerns regarding discriminant and convergent validity. Using the example of identity again, life-story identity might be compared and contrasted with scripts. Such approaches naturally also lend themselves to research reviewing.

### It Can Serve to Outline Research Reviews

Although the framework is plainly applicable to teaching and research, its ability to organize research reviews raises some concerns. A central precursor to this framework, Sears' "three-topic" framework (structure, dynamics, and development), was judged inadequate to organize *Annual Review of Psychology* chapters on personality after an intermittent 15-year trial. The present framework is more carefully defined, and worked out in greater detail than Sears' (which was criticized for its lack of clarity)—but, can it work better than Sears' approach? To examine how the framework could work for research reviews, I conducted a minireview of 28 articles drawn from four preeminent person-

ality journals. Using journal issues from a mid-decade month (March 1995),<sup>16</sup> I was able to divide articles into component, organizational, and developmental groups with minimal difficulty. Component articles (a) identified new or relatively new components (e.g., preference for solitude, social decentering, and the sociometer), (b) defined subparts of a component (e.g., schema-based parts of negative self-views; alternative models of gender), or (c) examined dimensions of components (e.g., dimensions of adult attachment). Organizational articles (a) studied well-established components in relation to one another (e.g., shyness and emotionality), (b) emphasized the relation between a component and an external behavior (e.g., authoritarianism's influence on organ donation; narcissism's interpersonal correlates), or (c) dealt more purely with organization (e.g., congruence and coherence in personality organization). Developmental studies (a) examined alterations in personality due to state changes (e.g., changes in health), (b) used a longitudinal design (e.g., mood over a month, volunteerism over the semester), or (c) defined its investigation by age group (e.g., loneliness in adolescence).<sup>17</sup>

This sorting process was probably easier than the standard research-area division because the systems' categories are predetermined. A research area approach (which remains of use in many circumstances) would have required an initial identification of important areas of the field (with its concomitant problems of subjectivity) before sorting articles. Problems of borderline classification will exist in both approaches. The systems approach has the advantage of focusing the review on new components and dynamics, as an *Annual Review of Psychology* approach should do. For example, my minireview helped raise the question of what we gain if we employ a new component of decentering, or from studying the dynamics of organ donation. Although I was able to classify, and hence include, all articles, a true *Annual Review of Psychology* chapter is much more difficult to construct. The sheer mass

<sup>16</sup> Issues were used of the *Journal of Personality*, *Journal of Research in Personality*, *Journal of Personality and Social Psychology*: *Personality Processes and Individual Differences*, and seven articles oriented toward personality (as opposed to social) psychology from the *Personality and Social Psychology Bulletin*.

<sup>17</sup> One trick that I used was to begin by sorting out the developmental articles because those were the easiest to identify, and then sorting the remaining articles as to whether the primary components studied were enablers, establishments, themes, or agencies, or if it referred to the whole personality. I could then compare within each component category which components were relatively new and being studied in and of themselves and which were relatively old and being studied for their dynamic influences. Preliminary sorting of the aforementioned could be done fairly well on the basis of the article's title and abstract although no doubt some reclassifications would be necessary after examining the text of the article itself.

of research today requires perhaps reviewing just one topic (e.g., components)—or even a part of it—in a given year, and another topic (e.g., organization) the next. Sears' topics were initially rotated over years. The advantage here is that the topics are differently and better defined than in Sears' original system, and specific criteria have been proposed for sorting articles.

These pragmatic applications seem promising. Before proceeding to more powerful contributions of the framework, however, it is worth considering some of the potential concerns raised by its use.

### Concerns Over the Systems Framework

This article was intended to make explicit certain implicit assumptions of the field, and by so doing, to reorganize and integrate the field. One could argue that any system-related assumptions I "made explicit" may reflect my own point of view as much as the status of the field. Plainly, I had more than one occasion to judge and select topics (e.g., organization) and subtopics (e.g., structural vs. dynamic organization) according to my view of their relative importance. Moreover, I may have integrated too much. From a postmodern perspective, personality is a collection of research areas, each with its own embedded methods, and any integration is a potentially fictional imposition. According to this view, trait psychology is simply different than other areas such as psychodynamic or humanistic psychology, and they should not be integrated.

There are some reassuring counterarguments to the aforementioned concerns. In regard to my own shaping of the material, I have made every attempt to render the systems framework as a framework rather than a theory. Many of the central portions of the framework are based on extensive reviews of the field (found in other articles on the framework). Each review is verified by checking and rechecking it against the contents of current textbooks and research reports. It is impossible for an observer not to shape material, of course, but I have intentionally omitted consideration of my own research work in these articles, except in trivial instances where I have illustrated a point with knowledge of my specialty. Winter and Stewart (1995) noted that I tend to define personality as existing "within the skin." That is indeed my tendency but it is not integral to the framework.

As relates to the postmodern problem, I would argue that abstracting common concepts from a variety of perspectives provides important gains in clarity and communication. Generalization is a powerful tool across the spectrum of human sciences, although the

flavor of the specific entity is admittedly deemphasized. For instance, in nutrition it makes sense to talk of one's "fruit intake," even though fruits are far from all the same. Returning to personality, it makes sense to talk about themes even though themes are far from all the same, and similarly with enablers and establishments. I worry that it is too easy to resign oneself to a field forever fragmented. That, too, can stifle real advances in understanding.

If the systems framework integration is reasonably accurate, it should help us to better and more profoundly understand our own field. In the next sections I address some of these understandings. Although until now I have tried to be balanced in the presentation of the framework, from here onward I argue freely for my own interpretation of the framework's implications, recognizing that other interpretations may be equally valid.

### More Powerful Models of Personality

**Rediscovering personality and its life space.** The idea that personality is a coherent system embedded among biopsychology, situations, and incorporative groups may seem fairly obvious, but I believe that it has become blurred over the past few decades. As radical behaviorism increased its influence between the 1940s through the 1960s, it glorified the external, observable aspects of psychology and dismissed the rest. Many textbooks redefined psychology as the study of behavior, rather than of the mind. As a matter of academic survival (I suspect), certain personality concepts were redefined rather misleadingly to appear more external than they were. For example, psychological tests were said to "sample behavior." This is as misleading as saying that a glass thermometer samples the behavior of mercury. The purpose of a thermometer is to measure temperature, not mercury. The purpose of (many) personality scales is to measure internal processes, not behavior. Such scales record how the self conceives of its own urges, feelings, thoughts, and consciousness. Clarifying that personality processes do take place internally permits us to relate them to legitimately important extrasystem criteria in health, situations, and group memberships.

One of the central endeavors in personality psychology must be to correlate measures of the internal personality system (e.g., preferences, mood, thoughts) with measures of the *life space*—defined as the biological, situational, and incorporative areas surrounding the personality system (Mayer, Carlsmith, & Chabot, in press). The internal personality is measured through traditional personality items such as "Are you generally full of energy?" and "Does your mood go up and

down?" The life space can be measured through direct observation. It can also be measured by self-report, however, with items of the type termed *biodata*, *L-data*, and *act frequency measures*. Sample life space items include: "What is your cholesterol level?" (biological), "How many pairs of shoes do you own?" (situational), and "For how many years (if any) have you been married?" (incorporative). That is, they tend to be readily observable, discrete, and externally verifiable. We could far better relate personality to the life space if we understood more about the factors of such life space items. Such items could potentially be employed to construct maps of a person's external existence. These maps would offer new criteria for personality psychologists to correlate with internal characteristics (e.g., self-esteem).

There already exist a number of studies that relate important internal personality characteristics to health, to situations, and to group memberships. (Internal) optimism predicts (external) health, (internal) intelligence predicts (external) occupational prestige, (internal) sensation seeking predicts (external) membership in a drug culture, and so on. As personality is better understood, further internal-environment interactions will become elucidated. At present, each of these relations is often considered in isolation from the others. If we are to study the whole system we must take a more holistic perspective on these influences.

**Toward a bolder, more molar, personality psychology.** A systems perspective encourages us to step back and consider larger personality dynamics and how they influence carrying out a life. Such a broader perspective might be termed *macropersonomic* to describe that part of our discipline that is analogous to, say, the macroeconomic. Macropersonomic models would concern the most molar dynamics of personality. Macropersonomics are essentially already being employed whenever general variables of personality—gs—are examined, such as general intelligence, or pleasant-unpleasant mood. Although such broad variables can be rightly criticized for representing only the outlines of personality, when we look at the whole personality it is plain enough that we will need models at such a level of general dynamics. For example, it is true that general intelligence averages together an individual's complex pattern of abilities, washing out his or her unique pattern. At the level of the whole personality, however, there may be dozens of such broad variables such as general intelligence. These broader dimensions, including general intelligence, general mood, general motivation, general self-models, and the like, need to be dealt with and modeled as a set. This is not to deny the importance of, say, a person's individual profile of

intellectual abilities or mood states. It is just that more fine-grained analyses often can be organized in the context of molar, holistic perspectives. The framework's integrated overview of personality provides a new basis on which to begin modeling personality's most global dynamics. Such modeling may end up being very useful to personality prediction.

**Integration through computer models and a cautionary note on complexity.** We also need better approaches to synthesizing the relations among our most important variables. The information about personality and the life space that we gather needs to be stored in more powerful, more systematic ways than in piecemeal journal articles. One powerful means of storing the critical information about personality is in computer models. Just as econometric models tell us about the economy, so personometric models could tell us about personality. If related fields are any guide, computer models of personality should become an important adjunct to our field (Mayer, 1995a); we have already made some beginnings in that direction (e.g., Anderson & Bower, 1979; Loehlin, 1968; Schank & Abelson, 1977; Weizenbaum, 1965).

When a researcher considers studying a multivariate system, as just described, a certain degree of disappointment may be inescapable due to its indeterminacies. Mischel (1968) criticized psychoanalytic dynamics on the basis that they poorly predicted personality's overt behavior (pp. 6-8, 121-128), but he remained optimistic for the future, writing, "the dynamics of behavior involve intricate relations [but] ... Experimental research will undoubtedly provide increasing understanding of ... [their] mechanisms and processes" (pp. 300-301).

Although experimentation has enriched our knowledge, problems of indeterminacy are unavoidable at present, regardless of the framework employed. We know that such indeterminacy makes definite prediction very difficult (Elliot & Kiel, 1996; Saperstein, 1996). Even if we know a person has latent hostility, how will it manifest itself: in dreams? free associations? humor? Meehl (1970) drew a parallel to evolution, where there is no means by which "to predict that such an organism as the rhinoceros will have been evolved, or that we should find fossil trilobites" (p. 408). Although indeterminacy must be tolerated within any framework, statistical prediction is still possible within such indeterminate systems. Epstein (1979) importantly reminded us that our predictive power comes particularly from our capacity to aggregate instances of behavior. Such aggregation can involve variables across time, or combining variables into larger more general and predictive variables.

**Evaluations of personality.** Finally, extrascientific judgments concerning the goodness or badness of a personality seem inevitable in our field. The framework presented here guides us toward more sophisticated value judgments about personality. It reminds us that personality is a system and its elements must be evaluated in interaction with one another. High self-esteem may seem perfectly wonderful in itself, but in some personalities it can lead to evil behavior (Baumeister, 1997); similarly, unthinking optimism may seem of value, but may result in low emotional intelligence (Mayer & Salovey, 1997). Systems combine many attributes and it is often best to evaluate those attributes as a system.

### Conclusion

This systems framework fills a need in the discipline of personality psychology: to integrate, organize, and communicate the field's knowledge. The framework divides the knowledge of personality into central topics that are in turn subdivided such that there exists systematic coverage of all the field. Many features of the topics can be depicted in three-dimensional pictures. Because the framework organizes the field more highly than before it will enable us to communicate about it more effectively than before.

We personality psychologists have earned such a framework. We have relinquished the dominant theories of the early 20th century despite their literary beauty and clinical utility because we knew they were premature. We have sought more powerful scientific approaches. We have toiled in empirical areas to discover what we could from such investigation. Some of us have migrated to other areas and labored to understand the influence of cognition, or affect, or genetics, on personality. We have returned home with richer methods. We have survived the ice age of the situationist critique (Westen, 1995), and kept faith in our field through the nihilism of deconstructionism. We have earned a coherent scientific overview of what we have accomplished. I see the systems approach as providing one such integrated overview at this time. It is not necessary to give up the theoretical perspective or research topics frameworks, which will continue to serve gracefully for specialized purposes. The systems approach, however, can provide a uniquely cohesive and unified framework for the field. I believe that individuals in neighboring fields will welcome its integration. Social scientists will appreciate the clear identification and description of the system; clinicians will find it suitably sophisticated to guide their work. Let us employ such a framework as we carry out some of the

central work in our field. If the framework succeeds, our academic discipline may be the better for it.

### Notes

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### References

- Adler, A. (1927). *Understanding human nature* (W. B. Wolfe, Trans.). New York: Greenberg.
- Allport, G. (1937). *Personality: A psychological interpretation*. New York: Holt.
- Anastasi, A., & Foley, J. F., Jr. (1949). *Differential psychology*. New York: Macmillan.
- Anderson, J. R., & Bower, G. H. (1979). *Human associative memory*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Angyal, A. (1941). *Foundations for a science of personality*. New York: Commonwealth Fund.
- Ashley, D., & Orenstein, D. M. (1995). *Sociological theory: Classical statements* (3rd ed.) Boston: Allyn & Bacon.
- Averill, J. R. (1992). The structural bases of emotional behavior: A metatheoretical analysis. *Review of Personality and Social Psychology, 13*, 1-24.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist, 44*, 1175-1184.
- Baumeister, R. F. (1997). *Evil: Inside human cruelty and violence*. New York: Freeman.
- Berk, L. E. (1993). *Infants, children, and adolescents*. Boston: Allyn & Bacon.
- Berndt, T. J. (1992). *Child development*. New York: Harcourt Brace Jovanovich.



- Block, J., & Block, J. H. (1980). The role of ego-control and ego resiliency in the organization of behavior. In W. A. Collins (Ed.), *The Minnesota symposium on child psychology* (Vol. 13, pp. 33–101). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Bower, G. H. (1981). Mood and memory. *American Psychologist*, *36*, 129–148.
- Buss, A. H., & Finn, S. E. (1987). Classification of personality traits. *Journal of Personality and Social Psychology*, *52*, 432–444.
- Buss, D. M. (1984). Evolutionary biology and personality psychology: Toward a conception of human nature and individual differences. *American Psychologist*, *39*, 1135–1147.
- Butler, J. M., Humphreys, L. G., Harris, D. B., McNemar, Q., Hunt, J. M., Schlosberg, H., & Farnsworth, P. R. (1960). Preface. *Annual Review of Psychology*, *11*, v–vi.
- Campbell, N. A. (1996). *Biology* (4th ed.). Menlo Park, CA: Benjamin/Cummings.
- Carlson, R. (1984). What's social about social psychology? Where's the person in personality research? *Journal of Personality and Social Psychology*, *47*, 1304–1309.
- Cattell, R. B. (1965). *The scientific analysis of personality*. Chicago: Aldine.
- Child, I. L. (1954). Personality. *Annual Review of Psychology*, *5*, 149–170.
- Cole, M., & Cole, S. R. (1993). *The development of children*. New York: Freeman.
- Costa, P. T., & Widiger, T. A. (1994). *Personality disorders and the five-factor model of personality*. Washington, DC: American Psychological Association.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: HarperCollins.
- Derlega, V. J., Winstead, B. A., & Jones, W. H. (1991). *Personality: Contemporary theory and research*. Chicago: Nelson-Hall.
- Dewey, J. (1967). Psychology. In *John Dewey: The early works, 1882–1898, Vol 2: 1887*. Carbondale: Southern Illinois University Press. (Original work published 1887)
- Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology*, *50*, 116–123.
- Dollard, J., & Miller, N. (1950). *Personality and psychotherapy*. New York: McGraw-Hill.
- Duvall, S., Wicklund, R. A., & Fine, R. L. (1971). Avoidance of objective self-awareness under conditions of high and low intra-self discrepancy. In S. Duvall & R. A. Wicklund (Eds.), *A theory of self-awareness* (pp. 16–21). New York: Academic.
- Elliot, L. D., & Kiel, B. (1996). Introduction. In L. D. Kiel & B. Elliot (Eds.), *Chaos theory in the social sciences* (pp. 1–15). Ann Arbor: The University of Michigan Press.
- Emmons, R. A. (1989). The big three, the big four, or the big five? *Contemporary Psychology*, *34*, 644–646.
- Epstein, S. (1979). The stability of behavior: I. On predicting most of the people much of the time. *Journal of Personality and Social Psychology*, *37*, 1097–1126.
- Erikson, E. H. (1950). *Childhood and society*. New York: Norton.
- Erikson, E. H. (1963). *Childhood and society* (2nd ed.) New York: Norton.
- Freud, A. (1966). *The ego and the mechanisms of defense*. New York: International Universities Press.
- Freud, S. (1960). *The ego and the id* (J. Strachey, Ed.). New York: Norton. (Original work published 1923)
- Freud, S. (1964). *New introductory lectures on psychoanalysis* (J. Strachey, Ed.). New York: Norton. (Original work published 1933)
- Freud, S. (1966). *Introductory lectures on psychoanalysis* (J. Strachey, Ed.). New York: Norton. (Original work published 1920)
- Gardner, H. (1993). *Frames of mind: The theory of multiple intelligences*. New York: HarperCollins.
- Gilligan, C. (1982). *In a different voice*. Cambridge, MA: Harvard University Press.
- Gould, J. L., & Keeton, W. T. (1996). *Biological science* (6th ed.) New York: Norton.
- Gould, R. L. (1975). Adult life stages: Growth toward self-tolerance. *Psychology Today*, *8*, 74–78.
- Guttman, D. (1987). *Reclaimed powers*. New York: Basic Books.
- Hall, C. S., & Lindzey, G. (1957). *Theories of personality*. New York: Wiley.
- Hall, C. S., & Lindzey, G. (1978). *Theories of personality* (3rd ed.). New York: Wiley.
- Hart, D. (1988). The adolescent self-concept in social context. In D. K. Lapsley & F. C. Power (Eds.), *Self, ego, and identity: Integrative approaches* (pp. 71–79). New York: Springer-Verlag.
- Hayduk, L. A. (1987). *Structural equation modeling with LISREL*. Baltimore: Johns Hopkins University Press.
- Hazan, C., & Shaver, P. R. (1994). Attachment as an organizational framework for research on close relationships. *Psychological Inquiry*, *5*, 1–22.
- Heatherington, T. F., & Weinberger, J. L. (Eds.). (1994). *Can personality change?* Washington, DC: American Psychological Association.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Bulletin*, *94*, 319–340.
- Hogan, R. (1994). Heritage has value. *Dialogue: Newsletter of the Society for Personality and Social Psychology*, *9*, 8.
- Holtzman, W. H. (1965). Personality structure. *Annual Review of Psychology*, *15*, 119–151.
- Horney, K. (1966). *New ways in psychoanalysis*. New York: Norton. (Original work published 1939)
- James, W. (1890). *Principles of psychology*. New York: Henry Holt.
- James, W. (1920). *Principles of psychology: Briefer course*. New York: Henry Holt. (Original work published 1892)
- James, W. (1990). *The varieties of religious experience*. New York: Vintage Books/The Library of America. (Original work published 1901–1902)
- Jensen, A. R. (1958). Personality. *Annual Review of Psychology*, *9*, 295–317.
- Jung, C. G. (1956). On the psychology of the unconscious. In H. Read, M. Fordham, & G. Adler (Eds.), *Two essays on analytical psychology* (pp. 17–130). Cleveland, OH: World.
- Jung, C. G. (1971). *Psychological Types [Bollingen Series XX; The collected works of C. G. Jung, Volume 6]* [H.G. Baynes, Trans; R. F. C. Hull, Revision Editor]. Princeton, NJ: Princeton University Press. (Original work published 1921)
- Kelly, G. A. (1955). *The psychology of personal constructs* (Vol. 1). New York: Norton.
- Kenrick, D. T., & Dantchik, A. (1983). Interactionism, idiographics, and the social psychological invasion of personality. *Journal of Personality*, *51*, 286–307.
- Klein, G. S., Linton Barr, H., & Wolitzky, D. L. (1967). Personality. *Annual Review of Psychology*, *17*, 467–560.
- Kohlberg, L., Levine, C., & Hewer, A. (1983). *Moral stages: A current formulation and a response to critics*. Basel, Switzerland: Karger.
- Kohut, H. (1977). *Restoration of the self*. New York: International Universities Press.
- Kramer, P. D. (1993). *Listening to Prozac*. New York: Viking.
- Kuhn, T. S. (1962). *The structure of scientific revolutions*. Chicago: University of Chicago Press.
- Kuiper, N. A., & Derry, P. A. (1982). Depressed and nondepressed content self-reference in mild depressives. *Journal of Personality*, *50*, 67–79.
- Levinson, D. J., Darrow, C. N., Klein, E. B., Levinson, M. H., & McKee, B. (1978). *The seasons of a man's life*. New York: Knopf.

- Levy, L. H. (1970). *Conceptions of personality: Theories and research*. New York: Random House.
- Loehlin, J. C. (1968). *Computer models of personality*. New York: Random House.
- Loevinger, J. (1987). *Paradigms of personality*. New York: Freeman.
- Maciel, A. G., Heckhausen, J., & Baltes, P. B. (1994). A life-span perspective on the interface between personality and intelligence. In R. J. Sternberg & P. Ruzgis (Eds.), *Personality and intelligence* (pp. 61–103). New York: Cambridge University Press.
- Maddi, S. (1989). *Personality theories: A comparative analysis* (5th ed.) Chicago: Dorsey.
- Maddi, S. (1993). The continuing relevance of personality theory. In K. H. Craik, R. Hogan, & R. N. Wolfe (Eds.), *Fifty years of personality psychology* (pp. 85–101). New York: Plenum.
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, 3, 551–558.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50, 370–396.
- Maslow, A. H. (1968). *Toward a psychology of being* (2nd ed.). New York: Van Nostrand Reinhold.
- Mayer, J. D. (1993–1994). A system-topics framework for the study of personality. *Imagination, Cognition, and Personality*, 13, 99–123.
- Mayer, J. D. (1994). A system-topics alternative. *Dialogue: Society for Personality and Social Psychology*, 9, 7.
- Mayer, J. D. (1995a). A framework for the classification of personality components. *Journal of Personality*, 63, 819–877.
- Mayer, J. D. (1995b). The system-topics framework and the structural arrangement of systems within and around personality. *Journal of Personality*, 63, 459–493.
- Mayer, J. D. (1996). How do we know a person in contemporary frameworks for personality? *Psychological Inquiry*, 7, 350–353.
- Mayer, J. D. (1997a). *Personality formations: Analysis and classification of individual differences in personality*. Manuscript submitted for publication.
- Mayer, J. D. (1997b). *A relational classification system for data in personality psychology*. Manuscript submitted for publication.
- Mayer, J. D., Carlsmith, K. M., & Chabot, H. F. (in press). Describing the person's external environment: Conceptualizing and measuring the Life Space. *Journal of Research in Personality*.
- Mayer, J. D., Chabot, H. F., & Carlsmith, K. M. (1997). Conation, affect, and cognition. In G. Mathews (Ed.), *Cognitive science perspectives on personality and emotion* (pp. 31–63). Amsterdam: Elsevier.
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence* (pp. 3–31). New York: Basic Books.
- McAdams, D. P. (1990). *The person: An introduction to personality psychology*. New York: Harcourt Brace Jovanovich.
- McAdams, D. P. (1994). *The person: An introduction to personality psychology* (2nd ed.). New York: Harcourt Brace Jovanovich.
- McAdams, D. P. (1996). Personality, modernity, and the storied self: A contemporary framework for studying persons. *Psychological Inquiry*, 7, 295–321.
- McClelland, D. C. (1961). *The achieving society*. New York: Van Nostrand.
- McClelland, D. C., Koestner, R., & Weinberger, J. (1989). How do self-attributed and implicit motives differ? *Psychological Review*, 96, 690–702.
- McCrae, R. R. (1996). Integrating the levels of personality. *Psychological Inquiry*, 7, 353–356.
- McCrae, R. R., & Costa, P. T. (1997). Personality trait structure as a human universal. *American Psychologist*, 52, 509–516.
- Meehl, P. E. (1970). Some methodological reflections on the difficulties of psychoanalytic research. In M. Radner & S. Winokur (Eds.), *Minnesota studies in the philosophy of science* (Vol. IV, pp. 403–417). Minneapolis: University of Minnesota Press.
- Mendelssohn, M. (1971). *Moses Mendelssohn: Gesammelte Schriften Jubiläumsausgabe (Band 1: Schriften zur Philosophie und Ästhetik)*. Stuttgart, Germany: Friedrich Frommann Verlag (Gunther Holzboog). (Original work published 1755)
- Messick, S. (1961). Personality structure. *Annual Review of Psychology*, 12, 93–128.
- Mischel, W. (1968). *Personality and assessment*. New York: Wiley.
- Murchison, C. (Ed.). (1930). *Psychologies of 1930*. Worcester, MA: Clark University Press.
- Murray, H. A. (1938). *Explorations in personality*. New York: Oxford University Press.
- Mussen, P. H., & Hetherington, E. M. (Eds.). (1983). *Handbook of child psychology: Vol. 4. Socialization, personality, and social development*. New York: Wiley.
- Nannis, E. D. (1988). Cognitive-developmental differences in emotional understanding. In E. D. Nannis & P. A. Cowan (Eds.), *Developmental psychopathology and its treatment* (pp. 31–49). San Francisco: Jossey-Bass.
- Nuttin, J. (1955). Personality. *Annual Review of Psychology*, 6, 161–186.
- Oldroyd, D. (1986). *The arch of knowledge*. New York: Methuen.
- Ouellette, S. C. (1996). Building a useful personality psychology. *Psychological Inquiry*, 7, 357–360.
- Papalia, D. E., & Olds, S. W. (1990). *A child's world*. New York: McGraw-Hill.
- Perlmutter, M., & Hall, E. (1992). *Adult development and aging*. New York: Wiley.
- Perls, F. S. (1969). *Gestalt therapy verbatim*. New York: Bantam.
- Pervin, L. A. (1990). *Handbook of personality: Theory and research*. New York: Guilford.
- Pervin, L. A. (1996). *The science of personality*. New York: Wiley.
- Piaget, J., & Inhelder, B. (1969). *The psychology of the child* (H. Weaver, Trans.). New York: Basic Books.
- Pollak, J. M. (1979). Obsessive-compulsive personality: A review. *Psychological Bulletin*, 86, 225–241.
- Rapaport, D. (1960). The structure of psychoanalytic theory: A systematizing attempt (Monograph 6). *Psychological Issues*, 2, 1–158.
- Rogers, C. R. (1951). *Client-centered therapy*. Boston: Houghton Mifflin.
- Rosenberg, S., & Gara, M. A. (1983). Contemporary perspectives and future directions of personality and social psychology. *Journal of Personality and Social Psychology*, 45, 56–73.
- Sanford, N. (1963). Personality: Its place in psychology. In S. Koch (Ed.), *Psychology: A study of a science* (Vol. 5, pp. 488–592). New York: McGraw-Hill.
- Sanford, N. (1970). *Issues in personality psychology*. San Francisco: Jossey-Bass.
- Saperstein, A. M. (1996). The prediction of unpredictability: Applications of the new paradigm of chaos in dynamical systems to the old problem of the stability of a system of hostile nations. In L. D. Kiel & E. Elliot (Eds.), *Chaos theory in the social sciences* (pp. 139–164). Ann Arbor: University of Michigan Press.
- Schank, R. C., & Abelson, R. P. (1977). *Scripts, plans, goals, and understanding*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Sears, R. R. (1950). Personality. *Annual Review of Psychology*, 1, 105–118.
- Sears, R. R. (1951). A theoretical framework for personality and social behavior. *American Psychologist*, 6, 476–483.
- Singer, J. A. (1996). To integrate or not to integrate: A dilemma for modern personality theory. *Psychological Inquiry*, 7, 367–371.

- Skinner, B. F. (1971). *Beyond freedom and dignity*. New York: Knopf.
- Smelser, N. J. (1994). *Sociology*. Cambridge, MA: Blackwell.
- Smelser, N. J., & Smelser, W. T. (1963). Introduction: Analyzing personality and social systems. In N. J. Smelser & W. T. Smelser (Eds.), *Personality and social systems* (pp. 1-21). New York: Wiley.
- Solomon, E. P., Berg, L. R., Martin, D. W., & Villee, C. (1996). *Biology* (4th ed.). Fort Worth, TX: Saunders College.
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York: Norton.
- Turner, J. H. (1994). *Sociology: Concepts and uses*. New York: McGraw-Hill.
- Von Bertalanffy, L. (1975). An organismic conception. In E. Taschdjian (Ed.), *Ludwig von Bertalanffy: Perspectives on General Systems Theory* (pp. 97-102). New York: George Braziller. (Original work published 1937)
- Wechsler, D. (1958). *The measurement and appraisal of adult intelligence*. Baltimore: Williams & Wilkins.
- Weizenbaum, J. (1965). ELIZA—A computer program for the study of natural language communication between man and machine. *Communication of the Association for Computer Machinery*, 9, 36-45.
- Westen, D. (1995). A clinical-empirical model of personality: Life after the Mischellian ice age and the NEO-lithic era. *Journal of Personality*, 63, 495-524.
- Wheeler, R. J. (1994). Applying theories. *Dialogue: The Newsletter of the Society for Personality and Social Psychology*, 9, 8-9.
- Winter, D. G., & Stewart, A. J. (1995). Commentary: Tending the garden of personality. *Journal of Personality*, 63, 711-727.
- Wundt, W. M. (1897). *Outlines of psychology* (C. H. Judd, Trans). New York: G. E. Stechert. (Imprint: St. Clair Shores, MI: Scholarly Press, 1969)
- Wyatt, R. C., & Livson, N. (1994). The not so great divide? Psychologists and psychiatrists take stands on the medical and psychosocial models of medical illness. *Professional Psychology: Research and Practice*, 25, 120-131.
- Zimbardo, P. G., & Gerrig, R. J. (1996). *Psychology and life* (14th ed.). New York: HarperCollins.