

# **The System-Topics Framework and the Structural Arrangement of Systems within and around Personality**

**John D. Mayer**

**University of New Hampshire**

**ABSTRACT** The field of personality psychology possesses rich theories and excellent research, but few good means to communicate them. The system-topics framework is an integratory approach that divides the study of personality into three central topics and their subdivisions: (a) the components of personality, (b) the organization of those components, and (c) the development of those components and their organization over time. The present article describes the system-topics framework and then examines the addition of a potential new topic useful to an improved exposition of the field: the structural arrangement of the component systems in and around personality. A three-dimensional model of these systems is created that can synthesize the many spatial metaphors used in earlier personality theory and research. The reasons for integrating this structural model within the system-topics framework and how such integration can be accomplished are discussed.

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At the beginning of the 20th century, Freud introduced the first modern comprehensive description of personality, psychodynamic theory (Hall & Lindzey, 1978). Additional theories were introduced throughout the next decades of the century, including the behavioral, analytical, humanistic, existential, revised psychodynamic, cognitive-behavioral, and many others. As the theories proliferated, many psychologists divided themselves into groups committed to one theory or another. The psychologists within a group typically employed their own scientific language to further develop the theory that they pursued. As a consequence, each group tended to carry out its own work in partial isolation from the others, and even at times openly dismissed the work of other groups in the field (Hall & Lindzey, 1978, p. 699). By the late 1960s, textbooks and other reviews of personality psychology were often divided into sections where each section addressed a different theory within the field. In such treatments, each theory was typically accepted on its own terms, with little or no attempt to integrate concepts or knowledge across perspectives (Maddi, 1968, pp. 1-2).

By the 1960s and 1970s, many personality psychologists had become concerned over the lack of theoretical integration within the field. It was often said that future research would help solve the problem by discriminating good theories from bad, or by leading to the development of new, unified theories (Hall & Lindzey, 1978, p. 705; Maddi, 1972, pp. 1-2). Since that time, however, research in personality psychology has continued, but with little progress toward any unification of the field. Some psychologists have recently introduced personality handbooks and textbooks that cover research topics in the field (e.g., Derlega, Winstead, & Jones, 1991; Pervin, 1990), but these new reviews often have done no more to promote interchange among areas than the earlier surveys of personality theories. These recent research reviews are organized such that each chapter covers a different research topic, but there is little integration among chapters. In fact, it is not unusual to find chapters such as *The Unconscious*, *Personal Efficacy*, *Personality Stability and Consistency*, *Sex and Gender*, and so on, virtually unordered in such volumes. Moreover, just as the theory-by-theory approaches often slighted research coverage, so the research topic-by-topic approach often slighted theory coverage.

As a consequence, the field of personality psychology today possesses rich theories and excellent research, but few good means to communicate them. Everyone who participates in the field of personality psychology—or who depends on it—is impoverished by this weakness

in its conceptualization. Within personality psychology, theorists are often forced to spend their time translating from one perspective to another (e.g., Dollard & Miller, 1950; Erdelyi, 1985; Westen, 1992). Researchers find it easier to motivate their research with a concept of their own than to link it to such a collection of conflicting theories (Adelson, 1969, p. 217). Personality concepts once thought to be important, such as self-control, self-knowledge, and self-actualization, seem to lack weight due to the fragmentation of their field of origin. Meanwhile, clinical psychologists and psychiatrists, who traditionally depended on personality psychology to inform their work, turn instead to such neighboring fields as psychopharmacology for an understanding of the mind (Kramer, 1993; Wyatt & Livson, 1994).

This problem can be solved by developing coherent, integrated frameworks for describing personality theory and research as a whole. The system-topics framework is an outline for the field that provides such a unification. Based on the idea that personality is a complex but coherent system (Mayer, 1993–94), the major divisions of the framework are termed *system topics* because of their universality in the description of complex systems (Mayer, 1993–94). Three such topics in particular have been identified (e.g., Mayer, 1993–94; Pervin, 1990; Sears, 1950), but until recently were not developed as a general outline of the field (Mayer, 1993–94). The three topics are (a) the components of the system, (b) the organization of those components, and (c) the development of those components and their organization over time. Each system topic is then further divided into subtopics that refer to specific personality theory and research.

A clearer picture of personality is emerging as this more-integrated picture of the field is developed. Earlier work, however, has indicated the potential need for an additional topic to develop a more complete picture of the person (either an introductory or perhaps even a fourth system topic). This topic would deal with personality's position amidst other systems, such as the family or the more general environment. A topic that arranges personality in relation to the world around it—to family and home, community and institutions—is essential to bring the concept of personality to life. A clear depiction of such a structural arrangement of components within and around personality could provide a basis for understanding personality's role in relation to other systems. In the present article, the system-topics framework will first be described and then this additional concept of structural arrangement will be developed and integrated within it.

### The System-Topics Framework to Date

The system-topics approach to personality is a framework rather than a theory in that it focuses on reorganizing what is already known (or believed) about personality rather than on introducing new postulates. Concretely speaking, it is an outline for organizing those topics commonly studied by personality psychologists. As noted earlier, the outline has three central parts at present: (a) personality components, (b) the organization of those components, and (c) the development of those components and their organization over time. Each system topic is then divided into subtopics that best identify specific personality theory and research. Subtopics are divided differently within each topic; main topics may undergo theoretical review to add coherence where it has not existed before. For example, a new theoretical review was necessary for classifying personality components.

#### *The first system topic: Components*

Scientific classification systems for personality's components have largely been neglected within the field. By 1990, personality psychology commonly employed roughly 400 personality components (i.e., in textbooks) without any comprehensive organization for them (Mayer, in press). It was widely suspected that many of these components were similar to one another or even redundant, but they were rarely compared because they originated from different theoretical or research traditions. To remedy this, a *relational classification system* of personality components was developed, so-called in part because the major classes of components are defined in comparison to one another (Mayer, in press). In the relational system, classes of components exist that vary in size, and the larger components are constructed from aggregates of the smaller components or features of those components. The complete classification system employs four interrelated classes and 21 subclasses of components. The four broad classes within this new system are termed *enablers*, *establishments*, *themes*, and *agencies*. New terminology was employed to maintain conceptual clarity within the classification system itself. In a full development of the system, the various divisions can be used to construct a *relational table of personality components* that is roughly analogous to the chemists' periodic table of the elements in that the relational table provides a methodical arrangement of each of the basic parts of personality. In the present, more limited overview,

each of the four classes and examples of these components are depicted briefly; these are also shown in the top part of Table 1.

*Enablers*, the first class of components, perform personality's most basic functions and include attention, short-term memory, anger, and sexual instincts, among many others. These components perform the elementary tasks necessary for the functioning of the personality system. The components are relatively innate and unlearned, present in all normal personalities, and form the building blocks for more complex components. Enablers can be divided into subcategories depending on whether their tasks are primarily related to consciousness, cognition, affect, or motivation.

*Establishments*, the second class, model the self and the surrounding world and include the self-concept, the ethical system, and various types of expert knowledge. Each establishment is learned, modifiable, and makes use of multiple enablers in its operation. For example, the self-concept synthesizes certain thoughts, feelings, and motives produced by various enablers. Some establishments, such as the self-concept, can be found in nearly all personalities, whereas other establishments, such as chess-playing knowledge, are far less common. Establishments are themselves divisible according to those that primarily model the self, the world, or the self-in-the-world.

*Themes*, the third class, can be thought of as internal manifestations of traits, in that they underlie one or more consistent characteristics that emerge from the person, such as extraversion and Machiavellianism. Themes typically emerge from characteristic thematic interactions between enablers and establishments. For example, extraversion may emerge from a need for stimulation (an enabler) which over time has motivated the development of scripts for socializing (establishments). Different personalities vary in the degree to which they possess a given theme; for example, some personalities are high in extraversion, others low, and so on (the same can be said of Machiavellianism). Themes can be classified according to the enabler and establishment they most heavily draw upon, leading to 12 subcategories (4 enablers  $\times$  3 establishments). For example, the theme intelligence can be considered a cognitive-world theme because it involves cognitions of the world; neuroticism, by way of contrast, is an affective-self theme because it involves affective experience of the self.

*Agencies*, the fourth and final category of components, are semi-autonomous divisions of personality that perform a substantial subset of the operations of the whole personality. Examples of agencies in-

**Table 1**  
**A Partial Illustration of the System-Topics Framework**

Main system topic	Possible subdivisions of topics	Specific examples of subdivisions
<b>Components</b>	<b>Enablers</b> Consciousness Cognition Emotion Conation <b>Establishments</b> Models of the self Models of the world Models of the self-in-world <b>Themes</b> Affective self Cognitive world Conative self-in-world Other divisions <b>Agencies</b>	Attention, object of attention Short-term memory, judgment Anger, happiness Achievement, power Self-concept, self-esteem Restaurant script, social norms Interaction episodes, attachment Self-esteem Intelligence Extraversion Dominance, emotionality Id, ego, private personality
<b>Organization</b>	<b>Outside control</b> Biological Environmental <b>Distributed control</b> Enablers Themes Agencies Other divisions <b>Hierarchical control</b> Organismic Central processing	Biological drives, hunger Situationism, obedience Cognition and affect Sets of traits (e.g., the Big Five) Id-ego-superego, conscious-unconscious Cross-class divisions Holistic person Will, ego-/self-control
<b>Development</b>	Stability Cyclical change Normative stages Prescriptive change	Trait theories Mood swings Stage theories Self-actualization

clude the id and the ego, private personality, and the unconscious. Each agency is an organization of enablers, establishments, and themes. The agency may follow its own agenda in partial independence of the remainder of personality (e.g., the id may search for pleasure). As such, agencies lack the whole's complex, integrated qualities. Because agencies are so few in number they are not divided into subclasses.

*The second system topic: Organization*

Organization, the second system topic, is divided by the system-topics framework into three subtopics: organization by (a) outside influence, (b) distributed processes, and (c) hierarchy. Outside influence views personality organization as dictated by such surrounding systems as environmental situations or biological imperatives. An example of outside control would be the pressure people at a football game might feel to stand and cheer when the crowd rises to root their team's touchdown.

Distributed personality organization views personality as dependent on the interaction among its many components. The distribution of personality organization is often viewed as taking place among components of a particular type, such as themes, enablers, or agencies. For example, some trait researchers view personality organization as distributed among the Big Five. Other researchers see personality as emerging from the interactions of cognitive and affective classes of enablers. Freud saw personality as emerging in part from interactions among the id, ego, and superego agencies.

Hierarchical organization views personality as directed by a central regulatory process. This controlling process is most typically viewed as a single powerful component such as conscious self-control. Alternative conceptions exist, however; sometimes the control is considered to be vested within a holistic totality of all individual components. Examples of these types of control are shown in the middle portion of Table 1.

*The third system topic: Development*

The third system topic is that of personality change and development. This topic is divided into a number of complementary perspectives. The first of these is that personality is fairly stable over time. A second perspective is that personality proceeds through predictable cyclic changes, such as through biologically determined rhythms or through socially

entrained cycles such as the weekly cycle. Yet another perspective is a stage-theory approach to personality that views development as occurring across a set of discrete stages such as Erikson's life-cycle stages. And a final perspective examines prescriptive views of personality—i.e., that people should try to attain certain states of development such as self-actualization or other versions of extreme mental health. These perspectives, along with examples, are illustrated in the lower portion of Table 1.

### *Summary*

The system-topics approach employs a rationally designed framework which promises to integrate knowledge that has heretofore been fragmented across various theoretical and research perspectives. Its three topics and their subdivisions (some of which have been described above) potentially appear able to include all or most of what is central to the field. The framework has also motivated additional taxonomies where needed. For example, personality components have been organized within a new relational classification system that places similar components from diverse theoretical perspectives together for the first time so they may be readily compared and contrasted.

### **Motivation for a New Topic**

Despite its considerable strengths as an outline for the field of personality, the system-topics framework remains a work-in-progress. For example, the framework to date has no means for examining the arrangement of components in and around personality. Such an examination of personality's structural arrangement would describe the physical and temporal positions of components in and around personality in relation to one another and to the boundaries of personality. Understanding this structural arrangement can help (a) maintain a consistent language related to the position of personality components among themselves and in relation to neighboring systems, (b) define what is inside versus outside personality, (c) provide the basis for how personality relates to other systems by indicating which systems are close to it and, as a consequence of the first three points, (d) assist with the general exposition of personality and personality-related systems.

Discussing a personality component in any detail necessarily involves reference to its position within such a structural arrangement. As an



example, consider the persona, a mask that people wear in order to enact social roles in the world (Jung, 1945/1953). The persona can be classified as an establishment because most psychologists agree that it is socially learned (although Jung viewed it as partly innate). Within the system-topics framework, the persona, as an establishment, functions at an "upper level" relative to enablers partly because establishments employ enablers to function and partly because establishments are more distant from "lower level" psychoneurological functions than are enablers. Moreover, although the persona is mental and therefore "internal," it is also a social tool that must be expressed "outside" of the person.

Referring to a persona as "upper level," "internal," and expressed "outside" may seem vague and unscientific, or at best, poetic. Yet authorities from virtually all theoretical and research perspectives have employed such spatial descriptions of the system; this suggests that something beyond poetry motivates their usage. For example, James (1892/1920, p. 181) described the conscious self as the innermost part of personality; Freud (1915/1963b, p. 139) discussed consciousness as a higher stage of mental organization; Lewin (1935, 1936) discussed boundaries of personality and the barriers which it encounters; Maslow (1971) spoke of hierarchies of needs; cognitive psychologists discuss the inputs and outputs of personality systems; and Mischel (1968) described the importance of external situations. The fact that such statements are grounded in common scientific concepts will be more fully developed later. Note now, however, that locating a component is neither the same as describing the component in and of itself, nor the same as discussing its functional organization with other systems. A systematization of such spatial metaphors can harness the unique scientific contributions they may provide, as well as prevent such metaphors from proliferating in all directions.

In principle, all theories of personality should describe a more or less common set of systems and boundaries within and around personality. And in fact, the succession of personality theories of the 20th century has grappled with such issues. It will be useful, therefore, to collect those systems and boundaries with which such theories have concerned themselves before further examining the structural arrangement of personality.

### **Systems and Boundaries in and around Personality**

Any proposed structural arrangement of personality and its environs must be evaluated according to whether it can organize those systems and boundaries regularly employed within the field. For that reason the more important systems and boundaries in and around personality are collected in the present section. To do so, working definitions of both systems and boundaries must first be developed. For the present purposes, a system can be considered a collection of parts that because of their collective function can be conceptualized as unitary or whole. Systems that possess a part-whole relation to personality or its function can be said to exist within personality and are sometimes referred to in this article as personality components. Systems that possess a system-to-system (i.e., whole-to-whole) causal relationship to personality can be said to occupy the space surrounding personality. Systems in and around personality are divided from one another by boundaries or boundary zones. Boundaries may be defined as a border or zone marking the limit of one system and/or the transition from one system to another. These boundaries come in many forms, including physical barriers in the form of borders or gradients, temporal barriers, functional barriers, and so forth. A special set of boundaries exists that encircles the personality and divides the internal components from the external systems. Personality's boundaries can be identified initially as those that surround the psychological mind, that is, the boundaries that encompass symbolic processing. Much more will be said concerning personality's boundaries in the ensuing sections. These definitions, however, are sufficient for collecting an initial set of systems and boundaries.

Different theories emphasize somewhat different systems and boundaries in and around personality, but there appear to be a limited number of important boundaries and neighboring structures that are of such importance to personality that they are repeatedly referred to in overviews of the field. For example, most personality textbooks include a section in which the authors list questions that personality theories should address or answer. A preliminary examination of those lists suggested that they frequently identify a limited number of important systems and boundaries within and around personality. For example, Brody (1988, pp. 244–245) presents a three-item list of important aspects of personality that include (a) traits, (b) conscious-unconscious, and (c) person-situation interactionism. For the present purposes, traits

can be considered a class of components within the personality system, conscious-unconscious can be considered to demarcate a boundary within personality, and person-situation interactionism can be considered to take place within a boundary zone between the personality and the environment. Other such lists mention these and several additional systems and boundaries.

To collect examples of systems and boundaries within and around personality, lists were drawn from the latest/last editions of 28 personality textbooks from the past 40 years.<sup>1</sup> These textbooks included coverage of all or most systems within and around personality that historically have been of importance to the field. Summary lists were often placed very visibly within a table or box; I attempted to identify such a list for each textbook. Where there was no list, I selected relevant topics from other areas of the book, such as from section-headings or wherever else such relevant topics were discernable. The 28 textbooks yielded lists containing 145 topics in all, of which 74 were judged by the author as potentially relevant to personality systems or boundaries,<sup>2</sup> using the above definitions. The 74 topics were further reduced by combining them into 23 clusters of similar contents which were then sorted into (a) internal classes of components, (b) internal boundaries, (c) external neighboring systems, and (d) external boundaries or boundary zones. Sorting was done by myself and two graduate students; each of us employed our own definition of where the personality system began and ended. We had interrater agreements between 70% and 83% for placing clusters into categories, compared to 25% by chance alone. The results of the sort are shown in Table 2.

Reading from left to right, Table 2 suggests some of the systems and boundaries that a spatial model of personality must include. Located around personality (Columns 1 and 2) are environmental and bio-

1. The 28 textbooks of personality were selected from a university library, from those identified as particularly good by colleagues, from an Online Computer Library Center (OCLC) examination of books with the title *Personality*, and from desk copies sent by publishers. Textbook titles were entered into the OCLC library catalog system to ensure that the latest edition was employed in all cases.

2. Nonsystem, nonboundary topics were themselves classified into alternative categories, including issues of personality organization (e.g., overall direction of living; Maddi, 1989), personality consistency (e.g., changeability-unchangeability; Hjelle & Ziegler, 1992), and qualities of personality theories (e.g., central metaphor of theory; Mehrabian, 1968), as well as the theory's viewpoints on human character (e.g., good-evil; Peterson, 1992), and a few other miscellaneous topics.

**Table 2**  
**Commonly Mentioned Systems within and around Personality Informally Clustered as to Similarity and Followed by Reference Code**

Systems external to but adjoining personality	Interactions taking place across boundaries	Components within the personality system	Boundaries among personality components
<i>Environmental systems</i>	<i>Environmental-personality boundary interactions</i>	<i>Basic components</i>	<i>Agentic action</i>
Environmentalism (HJZ-4b)	Interaction episodes (MCA-2)	Common structural entities (e.g., goals, ideals, core characteristics; MDI-2)	Agency (MON-1)
Environmental causes (DCP-1')		Learning process (HAL-5)	Control over fate vs. victims of fate (PET-1)
Environmental influences (BUR-1b)	<i>Learning and behavior</i>	Multiplicity of motives (HAL-21)	Free will-determinism (BUR-3; LIS-1; SCS-1)
Events (DCP-6)	Contextual-behavioral relations (MEH-1')	Needs (DCP-3'')	Freedom-determinism (HJZ-1)
Physical environment (FSW-1b)	Contiguity in learning (HAL-4)	Smallest learned units of personality that are organized into types (MDI-6)	<i>Holistic-particularistic</i>
Psychological environment (HAL-16)	Induction of intrapersonal variables (MEH-3'')	Thoughts, feelings, and actions that have regularity in an individual (MDI-7)	Holism-elementalism (HJZ-3)
<i>Social environment</i>	Reward/reinforcement (HAL-3)		Organismic causes (DCP-2')
Group membership determinants (HAL-18)	<i>Situationism</i>	<i>Learned components of personality</i>	Organismic emphasis (HAL-11)
Social (MSC-3b)	Field emphasis (HAL-12)	Interpretive structures (MCA-3)	Personality causes (DCP-4')
Social environment (FSW-1a)	Situations (MSC-2b)	Interpersonal stories (MCA-4)	<i>Conscious-unconscious</i>
<i>General biological characteristics</i>	<i>Interactionism</i>	Roles (DCP-1'')	Conscious-unconscious (BRO-2)
Biology (MSC-3a)	Interaction of core with outside world (MDI-3)	The self (DCP-2'')	Conscious-unconscious determinants (BUR-2)
Constitutionalism (HJZ-4a)	Intrapersonal-behavioral relations (MEH-1')	Self-concept (HAL-17)	Unconscious determinants (HAL-2)
<i>Genetic influences</i>	Intrapersonal/context interactions and behavior (MEH-3')	<i>Dispositions/traits</i>	Unconscious-conscious (PER-4)
Genetic influences (BUR-1a)	Life styles and general orientations that can occur through learning (e.g., typologies; MDI-5)	Dispositions (DCP-4; MSC-2a)	<i>Rational-irrational</i>
Genetic causes (DCP-3')	Person vs. situation (LIS-3)	Traits (BRO-1)	Cognitive vs. emotional (MSC-5)
Heredity (HAL-8)	Person-situation interactionism (BRO-3)	<i>Undifferentiated</i>	Rational-irrational (BYK-2; MSC-6)
<i>Nature</i>	<i>Maintenance of boundary</i>	Entities and components (LEV-2)	Rationality-irrationality (HJZ-2)
Nature (ROS-3a; SCS-2a; PET-6a)	Maintenance of integrity against inside and outside stressors (LEV-3')	<i>Contents vs. functions</i>	<i>Psychotemporal boundaries</i>
<i>Undifferentiated internal and external determinants</i>	Maintenance of intrapersonal variable (MEH-2'')	Contents vs. functions (DCP-1)	Early developmental experience (importance of) (HAL-9)
External (BYK-3b)		Molar units (HAL-14)	Early childhood vs. present emphasis (PET-5)
External causes of behavior (PER-2b)		Processes (DCP-2)	Instances of past, present, and future (PER-6)
Internal (BYK-3a)		States (DCP-5)	Past vs. present (SCS-3)
Internal causes of behavior (PER-2a)			
<i>Nurture</i>	<i>Mind-body</i>		
Nurture (ROS-3b; PET-6b; SCS-2b)	Mind-body (PET-3; ROS-4)		

Note. The reference code is a three-letter code assigned to each book reviewed, followed by a number indicating the item's position as it appeared in the original textbook's list. Prime indicates the reference was included in a secondary list; double prime indicates the reference was included in a tertiary list. BRO = Brody (1988, pp. 244-245); BUR = Burger (1993, pp. 11-13); BYK = Byrne & Kelley (1981, p. 76); CAR = Carver & Scheier (1992, pp. 6-7); DCP = DiCaprio (1974, pp. 9-10; 11-13; 14-16); FSW = Feshbach & Weiner (1991, pp. vi-vii); GEW = Geweitz (1969, pp. 138-139); HAL = Hall & Lindzey (1978, p. 692); HJZ = Hjelle & Ziegler (1992, p. 535); LAM = Lazarus & Monat (1979, pp. 5-15); LEV = Levy (1970, pp. 96-97); LIS = Liebert & Spiegler (1994, pp. 5-8); LOV = Loevinger (1987, pp. 6-7); MDI = Maddi (1989, p. 13); MCA = McAdams (1994, p. v-xv); MCC = McCurdy (1961, p. 18); MEH = Mehrabian (1968, pp. 4; 27-28); MSC = Mischel (1993, p. 570); MON = Monte (1991, pp. 12, 22); PER = Pervin (1993, p. 481); PET = Peterson (1992, pp. 70-71); ROS = Ross (1987, p. 72); RYC = Rychlak (1981, pp. 14-18); SCS = Schultz & Schultz (1994, p. 27); SNG = Singer (1984, pp. vii-xii); STA = Stagner (1974, p. 21); no lists for Fadiman & Frager (1994); Phares (1991).

logical systems, as well as interaction zones including social environments, person-situation interactionism, and so forth. Located internally, or within the personality (Columns 3 and 4), are enablers (basic components), establishments (learned components), and themes (dispositions/traits), as well as a myriad of potential internal boundaries, including agentic-determined, holistic-particularistic, conscious-unconscious, rational-irrational, and past-present.

This collection of systems and boundaries is likely to include those which are most important because it is drawn from 28 textbooks spanning 40 years that emphasize different theoretical perspectives. Although the collection of systems and boundaries is not well organized at present, it sets a standard that any structural arrangement of personality must meet: Any such structural arrangement will need to adequately arrange these systems and boundaries or, failing that, explain why it does not. No textbook or any other source has offered a coherent presentation of these systems. The formal differences between such concepts as person-situation interactionism, past-present boundaries, and the environment suggest the potential obstacles to their integration. Nonetheless, in the next section I will illustrate a way to organize these systems and boundaries, as well as a number of others, into a single, three-dimensional depiction.

### **A Spatial Arrangement of Personality**

A spatial model was developed that can be employed to arrange the systems and boundaries in and around personality. The space of the model is defined by its dimensions, and a number of criteria were established for the selection of an optimal set of those dimensions. First, the number of dimensions should be near three, because of the obvious pictorial possibilities associated with three-dimensional depictions. Second, each dimension must individually distinguish among some of the systems and have incremental utility in relation to the other dimensions in making such distinctions. Third, each dimension chosen should be one that is commonly employed by scientists and philosophers of science to arrange the objects of their study. This requirement ensures that any dimension chosen will have proven utility relative to criticisms or objections that have been leveled against it over time. And fourth, the dimension should span the objects of multiple sciences in order to provide the capacity to connect personality to its neighboring systems.

The final space created was dependent upon three such dimensions.

The first molecular-molar dimension is commonly employed to distinguish topics at various levels of aggregation; for example, the person can be distinguished from an aggregation of people in a social group. The second internal-external dimension is frequently used to position the elements internal to a system in relation to those external to the system independent of their molecular-molar quality, and the third earlier-later development dimension is used to orient objects of study within many sciences on the basis of their temporal development and is independent of the first two. Each of the three dimensions also has associated with it a number of distinguishing characteristics. For example, movement along each dimension takes place according to different rules, and each dimension favors a unique form of boundary between its segments or levels. Each of these three dimensions and its associated characteristics is described in greater detail below. Summaries of the three dimensions appear in Table 3.

#### *The molecular-molar dimension*

*Description.* Auguste Comte, the 19th-century logical positivist, sought to create a ladder of sciences which began at its bottom with the earlier developed sciences of astronomy and physics that dealt with such fundamental phenomena of the universe as gravity, mechanics, electrons, and atoms. This ladder of sciences rose through those that dealt with more complex, composite systems such as physiology and biology, to culminate at its top with sociology. Comte's ladder is commonly viewed as defining a molecular-molar dimension because physics, at the molecular end, studies such subjects as the smallest elements of matter, whereas sociology, at the molar end, studies vast composites of systems (Oldroyd, 1986, p. 171). When Allport (1954) discussed the position of social psychology (including personality) in relation to other sciences, he emphasized almost exclusively its position along the molecular-molar continuum. Had psychology been a discipline at Comte's time, it most likely would have been located between physiology and sociology.<sup>3</sup>

*Movement along the dimension.* The molecular-molar conceptual continuum implies that larger systems of study are made up of smaller ones

3. Most science historians believe that Comte would have placed personality below sociology, but Allport makes an interesting, although ultimately unconvincing, argument that Comte would have placed personality *above* (i.e., more molar than) sociology.

**Table 3**

**Three Major Spatioconceptual Dimensions Defining the Position of the Personality System**

Molecular-molar dimension	Internal-external dimension	Early-later development dimension
<p><i>Description:</i> Proceeds from the smallest and simplest objects of study, through composites of those elements into midlevel systems, to the largest and most complex systems available for study.</p> <p><i>Span:</i> From physics to sociology.</p> <p><i>Dimensional movement:</i> Movement along the dimension is often one of increasing inclusion/incorporation or, in the other direction, decreasing complexity. Thus, psychology incorporates biology; sociology incorporates psychology, and so forth.</p> <p><i>Nature of boundaries:</i> Often gradient-like, but sometimes demarcated by emergent properties as when meaning emerges at the psychological level from the action of neurons at the biological level.</p>	<p><i>Description:</i> Proceeds from the innermost portions of personality to the outermost (with no change in molecularity-molarity). The innermost portion of personality is considered to be the conscious self; the outermost is an unaffected environment at some remove from the individual's behavior.</p> <p><i>Span:</i> From consciousness to the unaffected environment.</p> <p><i>Dimensional movement:</i> Movement along the dimension is one of transformation of energy or state, e.g., when moving inside, physical energy is converted to psychological representation.</p> <p><i>Nature of boundaries:</i> Mechanisms convert one form of energy, matter, or meaning to another. Boundaries are therefore functional and mecha-</p>	<p><i>Description:</i> Proceeds from the earliest developing portions of personality to the most recently developed portions of personality.</p> <p><i>Span:</i> From past to present personality.</p> <p><i>Dimensional movement:</i> Unfolding developmental processes.</p> <p><i>Nature of boundaries:</i> Strata representing transitions from one area, chapter, or stage of development to the next.</p> <p><i>Assigned spatial orientation:</i> Depth, with earlier developed systems in the foreground and later developed systems in the background.</p> <p><i>Arrangement (from earliest to latest):</i>            [[Genetic and early environmental determinants]]            [Consciousness and conative enablers, self-establishments, and</p>
<p><i>Assigned spatial orientation:</i> Vertical, with molecular at the bottom, and molar at the top.</p> <p><i>Arrangement (from largest to smallest):</i>            Biosphere            Culture            Society            Family            [[Person-family interaction zone]]            Organismic personality            [Organismic-particularistic boundary]            Agencies            Themes (extending across enablers and establishments)            Establishments            Enablers            [[Person-biological gradient/interaction zone]]            Psychophysiology            Neurophysiology            Biological systems            Chemicals            Atoms, molecules</p>	<p>nistic, and also include subsidiary mechanisms for controlling passage across them.</p> <p><i>Assigned spatial orientation:</i> Horizontal, with the internal to the left and the external to the right.</p> <p><i>Arrangement (from innermost to outermost):</i>            Soul?            [[Theological-person boundary]]            Free will/agency?            [Free-will-deterministic boundary]            Consciousness            [Conscious-unconscious boundary]            Nonconscious personality components and processes            [[Sensory-motor interaction zone]]            [Person-person, person-animal, person-situation, person-object, person-etc., interaction zone]            Environment unaffected by personality</p>	<p>environment of early infancy and childhood]            [Affective enablers, world establishments and some early childhood environment]            [Cognitive enablers, self-in-world establishments, and later childhood and adulthood environment]            [[Present-future boundary]]</p>

Note. [ ] designates a boundary or boundary zone, [[ ]] designates a boundary or boundary zone commonly supposed to demarcate the personality system.

but not necessarily that the larger systems can be reduced to the smaller ones. Movement along the molecular-molar dimension can be thought of in part as involving a form of incorporation of lower level principles and laws into larger substances, organisms, or organizations. For example, chemical substances and their reactions incorporate and include the laws of physics. Psychological phenomena, too, incorporate biological, chemical, and physical sciences. The statement that more molar systems incorporate more molecular ones does not exclude the presence of alternative transformations across levels of molarity as well (see the internal-external dimension for a discussion of one alternative transformation).

*Boundaries.* The boundaries along the molecular-molar dimension divide systems that are more elemental on one side from those that are composed of larger compounds on the other. Molecular-molar boundaries are in some sense partly conceptual: Physicists speak of hydrogen and oxygen atoms, chemists speak of water, and in both instances identify the same material. In another sense, however, there are emergent properties across such scientific boundaries. The wetness of water exists only at the chemical level. More molar sciences such as biology and psychology often may be viewed as gradually merging from one to the other rather than possessing clear boundaries (cf. Lewin, 1936, p. 117, on boundary gradients and zones). For example, the exact place where biological activity leaves off and psychological (e.g., symbolic) processing takes over is unclear: It may be at the level of neurotransmitters, or in the combined action of several neurons, or in emergent properties of millions of neurons acting together. Within this gradient various interactive processes that connect the two will plausibly exist. Freud's description of an instinct places it within such a boundary zone between psychology and biology:

[A]n "instinct" appears to us as a borderland concept between the mental and the physical, being . . . the mental representative of the stimuli emanating from within the organism and penetrating to the mind. (Freud, 1915/1963a, p. 87)

All this is not to say that sharper discontinuities between levels do not also exist. For example, moving in a molar direction from personality, one arrives at a relatively clear discontinuity between the individual personality and the family as a whole, even admitting that extensive interactions take place between the person and family. A summary of



these points is presented in the first column of Table 3. Also included in that column is an arrangement of sciences along the molecular-molar continuum. The area around personality is presented in more detail, beginning with the person-biological boundary zone and proceeding up through enablers and establishments (themes cross the levels of both enablers and establishments), to agencies and then to an organismic whole. Above that is the person-family interaction zone. Earlier in this article, when the persona establishment was said to be "upper level" in relation to enablers, it was because the persona incorporated cognitive, affective, and motivational enablers within it. The structural relation between the persona establishment and the various enablers it incorporates is therefore described by this molecular-molar continuum.

### *The internal-external dimension*

*Description.* One dimension is not sufficient for arranging all the components of personality. More than one system exists at each level of the molecular-molar continuum, and the multiple systems at a given level must be differentiated from one another as well. Scientific systems which contain centers and outsides are often explicated through the use of internal-external dimensions. Thus, the solar system's inside includes the sun and all the planets and other bodies that orbit that sun; outside the solar system exist vast expanses of space punctuated by other solar and/or celestial systems. Similarly, collections of sensory neurons possess receptive fields with "center" and "surround" areas operating antagonistically to one another. Such an internal-external dimension can also be employed to distinguish personality from those neighboring systems that exist at a similar level of molarity.

Personality's internal-external dimension is defined here to begin at the innermost core of personality, extend to its edge, and then proceed outside the system to interactions with other individual systems of comparable complexity. The innermost core of personality has often been identified with consciousness and the conscious self. James referred to the conscious self as "[t]he very core and nucleus of our self, as we know it, the very sanctuary of our life" (James, 1892, p. 181). Freud (1916-17/1966, pp. 295-296) similarly placed consciousness in the innermost of two rooms representing the mind, although at other times he spoke of consciousness as being "higher," suggesting its emergent quality (Freud, 1915/1963b, p. 139). Because consciousness is not fully understood, its placement within this system at the innermost

mind is plainly provisional.<sup>4</sup> From this innermost, conscious self, the internal-external dimension proceeds through partly nonconscious processes collectively conducted by enablers, establishments, themes, and agencies, until it reaches the sensory-motor boundary with the outside world. Past this boundary, personality enters an interaction zone that contains, in no particular order, other people, animals, machines, situations, possessions, bodies of knowledge, local physical environments, and so forth. Thus, systems along the internal-external dimension remain very roughly at the same molecular-molar level of complexity as personality and as one another. If any transition from the inside to the outside of personality ends at either dramatically smaller or larger systems, then a transition has taken place along the molecular-molar, rather than (or in addition to) the internal-external dimension.

This internal-external dimension is similar in some respects to Maddi's (1989) distinction between the core versus periphery of personality. Maddi argued the core of personality was hidden, whereas the periphery contains "more concrete attributes of personality that are readily observed in behavior" (Maddi, 1989, p. 11), and went on to argue the core versus periphery distinction was common to all theories of personality. But Maddi's version of this internal-external dimension includes additional assumptions that are not relevant to the purely structural conception developed here (i.e., Maddi said the core contained more universal aspects of personality than the periphery).

*Movement along the dimension.* Movement along the internal-external continuum involves the transformation of psychological processes from one form or state to another. This transformation typically involves active processes and/or mechanisms evolutionarily developed for a given purpose. For example, internal objects such as personal intentions that cross the sensory-motor boundary to the outside world must be actively transformed into motor actions. Outside objects that move inside are recorded by sensory mechanisms and transformed into sym-

4. My colleague, Rebecca Warner, makes the interesting alternative case that consciousness could be placed at the sensory-motor boundary because it "sees" the outside as well as the inside. Her argument is supported by one early definition: Consciousness involves knowledge mutually shared by individuals who knew of one another's awareness (Natsoulas, 1986-87). More radically, but also with some justification, Schafer (1992, pp. 24-25) has argued that sometimes psychoanalysts describe consciousness as existing *outside* personality and looking in. As more is learned about consciousness, its placement within such a system should become more secure.

bolic objects for internal processing. Thus transformative processes are different in nature than the incorporative or emergent processes that are more common with molecular-molar boundaries.

*Boundaries.* The boundaries of the internal-external dimension are therefore functional and mechanical in nature because they must carry out various transformations in order to pass information through. Moreover, the internal-external boundaries are often controlled or regulated by auxiliary mechanisms. For example, the sensory-motor boundary can be opened or closed at such locations as the mouth and eyes. The boundary between consciousness and unconsciousness can also be considered an internal-external boundary, and this boundary is often said to be opened by attention or closed by defense mechanisms.

A summary of the characteristics of the internal-external dimension can be seen in Column 2 of Table 3. The dimension starts with the theological or philosophical concepts of soul and/or free will, which James accepted as possible components of personality at the innermost portions of the conscious self. From there, the dimension crosses the agentic-deterministic boundary to the more plainly scientific concept of conscious awareness. The dimension continues through a sensory-motor interaction zone to the outside world. Earlier in this article, the persona was said to be internal but a contributor to "outside" behavior. Jung also viewed the persona as largely unconscious. For both those reasons, the persona would be positioned along this dimension with the mostly unconscious models of the self-in-world (one class of establishments); its outside manifestation would require it to direct internal messages to the sensory-motor boundary concerning outside action.

#### *Early versus later development dimension*

*Description.* The third and final dimension that is useful for locating personality and its systems is psychological development. Rosenblueth (1970) noted that many scientific topics of study, including geology, paleontology, and archeology, can be grouped together on the basis that they involve a historical aspect. Personality possesses what might be termed an early-later development dimension. Within human development certain psychological systems (e.g., motivation, emotion, the self) regularly develop earlier and more completely than do others (e.g., cognition, independent views of the self-in-world). For example, an infant fully possesses the relatively innate, enabler-type motivations such

as hunger and the need for interpersonal contact, but does not possess a fully functional cognitive system. On this dimension, therefore, motivation will precede cognition. A given component's position on the dimension indicates only its point of relative maturity; each component also possesses earlier rudimentary manifestations and later continued development, as well as further integration within the personality system over time. For example, although motivations of the enabler type (e.g., hunger, thirst) appear early, they may continue to develop to some extent, and although cognition appears later it is present in part from infancy.

*Movement along the dimension.* As this developmental process occurs, the person can be seen progressing through a series of selves, each more complex, differentiated, and sophisticated than the last. Earlier selves are often viewed as remaining as part of the more mature personality system. Thus, the mature person is often said to be fixated at an early stage of development (i.e., oral or anal), or, less formally, to possess an inner child. Such earlier developed components fall at the early end of the earlier-later development dimension.

*Boundaries.* Development sometimes involves noncontinuous transitions that create new stages or slices of functioning similar to new chapters added to a book. For example, a latency-age child may employ a way of thinking that is utterly altered upon beginning adolescence. Despite the recent change, the older ways of thinking and being may remain in the personality, and the adolescent may turn back to those old ways when his or her new approach to life demands too much energy or fails for some reason. A boundary can be said to separate the earlier from later developed personality as the newer sets of patterns are added at the end of the older set. The boundaries of development divide the more primitive versions of the motivational, emotional, or other systems from the more mature versions that are added later; they also divide earlier collective functioning from later functioning. This developmental dimension is essentially unrelated to the first two dimensions because it concerns time rather than molarity or internality.

Similar developmental progressions may exist external to the personality, but these will depend on the experience of the individual and are far from invariant. Some crude assignments of position can be made, however, with the understanding that they are modal and will not hold for everyone. For example, child-caretaker interactions can be thought

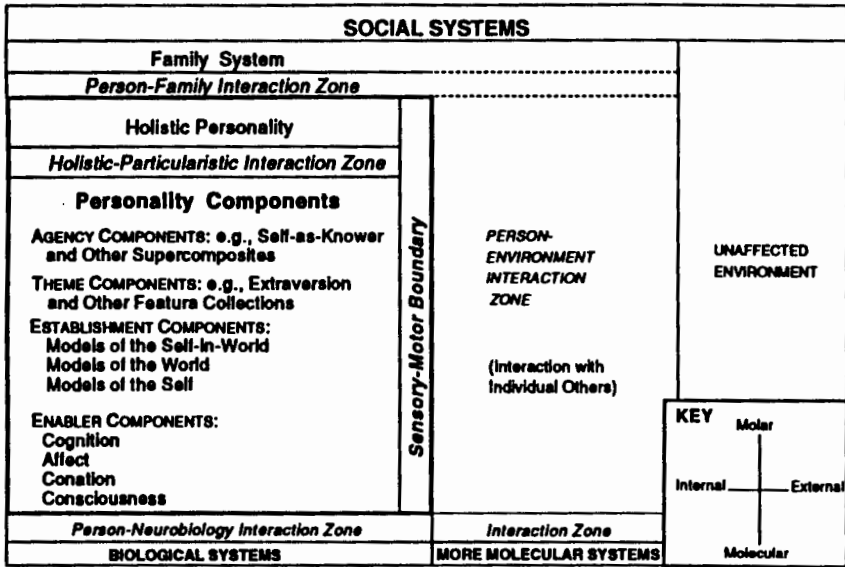
of as occurring early when the child requires protection and nurturance. Interactions with objects similarly begin at the earliest moments of life. Person-situation interactions are present from the beginning, although a certain amount of cognition may be necessary before situations are fully understood as social stimuli. Person-machine interactions also may be said to occur later, since the person must first learn to use various machines.

The characteristics of the developmental dimension are summarized in Column 3 of Table 3. The dimension begins with genetic and past environmental determinants. Within the personality, earlier maturing enablers such as motivation and emotion are placed before later developing systems such as cognition. Similarly, among establishments, development of the self is often thought to occur first, followed by models of the world, which in turn are followed by more integrative models of the self-in-the-world. Although each component is placed according to its time of relative maturity, it is also recognized to be present in rudimentary form before its assigned position and to continue to develop after it. The environmental progression is not depicted for reasons of space.

### *A pictorial summary and test of the three-dimensional model*

Although the three above-mentioned dimensions have received individual attention in the psychological literature, they have never before been treated together. For example, when Allport (1954) described social and personality psychology in the *Handbook of Social Psychology*, he concentrated his discussion on the molecular-molar dimension alone. Portraying these dimensions together in a single diagram would provide an important test of their collective ability to describe the personality system. If the three dimensions fit together, they should produce a picture of personality that can serve as an expository tool for locating both the internal components of personality and its relations to its environs.

A beginning can be made with Figure 1's two-dimensional schematic outline, depicting the molecular-molar and internal-external dimensions of personality. Figure 1's key (lower right) indicates that the molecular-molar dimension runs vertically and the internal-external dimension runs horizontally; a few central landmarks are arranged accordingly. In the middle of the diagram, the sensory-motor boundary divides the internal aspects of personality (left) from the external envi-

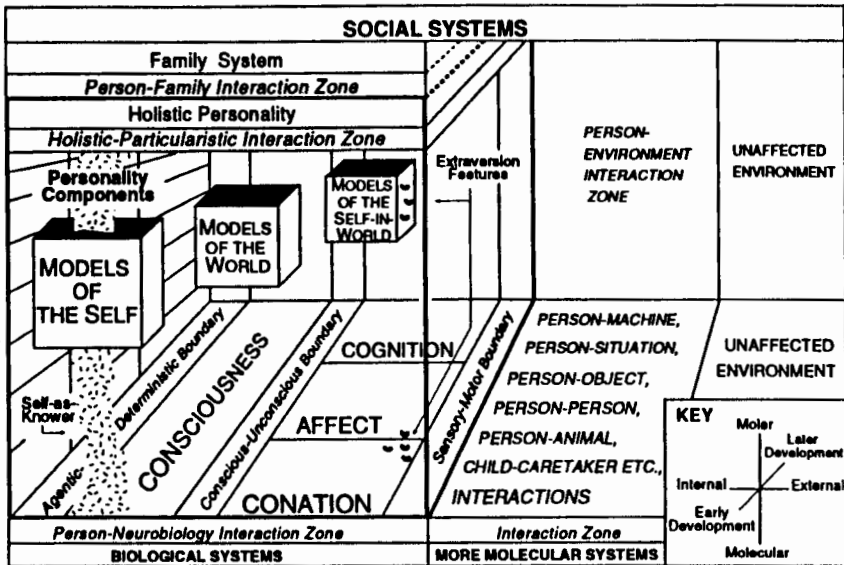


**Figure 1**

**A Schematic Representation of a Few Major Systems in and around Personality in a Two-Dimensional Structural Arrangement**

Note. The key to the figure (lower right) labels the molecular-molar dimension (vertical) and the internal-external dimension (horizontal), according to which personality and its associated systems are arranged. Within the figure itself, the sensory-motor boundary (middle) divides internal personality (left) from the external environment (right). Within the personality box (left) are located the holistic personality (above) and the four major types of personality components (below). Various systems are located around personality, including the more molecular biological systems (below), the more molar social systems (above), and the situational environment (right).

ronment (right). On the personality side, the molecular-molar dimension begins at the bottom with biological systems and moves up through the components of personality, including the enablers, establishments, themes, and agencies, to holistic personality, and then up to the family and social systems. All these systems are located (in this simplified diagram) equally internal to personality. Crossing the sensory-motor boundary to the external environmental zone (right), finds a depiction of the interactions between the personality and other individual people and situations. Even further to the right on that dimension is an environment that is sufficiently removed from personality to be unaffected by it. Figure 1 indicates that the first two dimensions operate coherently together; Figure 2 provides a test of the complete three-dimensional model.



**Figure 2**  
**A More Complete Representation of the Systems in and around Personality in a Three-Dimensional Structural Arrangement**

Note. The key to the figure (lower right) labels the molecular-molar dimension (vertical), the internal-external dimension (horizontal), and the early-later development dimension (depth), according to which personality and its associated systems are arranged. Within the figure itself, the sensory-motor 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, establishments-class components (self, world, self-in-world) are more molar. Also shown is one of many possible themes (extraversion), and one of several possible agencies (self-as-knower). The more molar holistic personality is located above personality's components. Various systems are located around personality, including the more molecular biological systems (below), the more molar social systems (above), and the situational environment (right).

Figure 2 is roughly parallel to Figure 1 except that it employs all three dimensions together rather than two, substitutes pictures for some written material, and includes more of the personality's internal and surrounding systems and boundaries. Figure 2's key (lower right) is similar to that in Figure 1 in that the molecular-molar dimension runs vertically and the internal-external dimension runs horizontally. In addition, however, the third, early-later development dimension runs depthwise. As in Figure 1, the sensory-motor boundary of Figure 2 divides the internal aspects of personality (left) from the external environment (right).

The molecular-molar dimension begins at the bottom with biological systems and moves up through the enablers, establishments, themes, and agencies, to personality as an organismic whole, and then up to the family and social systems. Note that extraversion, the one theme shown (near the self-in-world box) is composed of features drawn from both enablers and establishments; these collections of features in part define themes (Mayer, in press). The one agency shown, James's (1892/1920) self-as-knower, is depicted (very simplistically) as a cloud connecting consciousness and the self to the whole. The internal-external dimension begins at the left with consciousness and the self, and extends through a sensory-motor zone that forms the person-environment boundary, to the environmental interaction zone, and to the unaffected environment. Finally, the early-later development dimension begins in the foreground with earlier developing systems of personality, such as motivation and the self, and extends toward the background where there are later developing systems, such as cognition and models of the self-in-world.

### *Discussion of the three-dimensional structural arrangement*

*Integratory value.* Figure 2 presents an abstract but integrated picture that reflects the more important structural relations of the systems and boundaries in and around personality. The three dimensions arrange essentially all major classes of components and boundaries within and around personality, including those drawn from a survey of 28 textbooks of personality, as well as those systems and boundaries regularly associated with the dimensions themselves. The same dimensions that organize components within the personality organize systems outside the personality. This integratory power of the dimensions stems from their use across a number of sciences, which is one of the reasons they were chosen. The present placement of component classes within the three-dimensional space reflects the historical usage of spatial metaphors within the field. As a consequence, the present arrangement is fairly consistent with past theorizing and contemporary sensibilities. Nonetheless, this particular arrangement is one of several possible alternatives. Certain classes of components, especially consciousness, might be placed differently (see Footnote 4). Moreover, the present diagram is highly general and schematic; it can be altered by positioning individual components rather than broad classes of components.



*Role within the system-topics framework.* Understanding the space and its three dimensions helps make clearer the spatial metaphors used by psychologists in the past to describe personality components. These three dimensions seem to be “givens” or assumptions about the form of the world employed across scientific disciplines: That is, objects vary according to their molarity, externality, and development. This new structural topic appears useful as part of an introduction to personality that relates it to its adjoining systems (and hence, its adjoining scientific fields). The three original system topics (components, organization, development) typically describe considerable personality theory and research. The new structural-arrangement topic, in contrast, does not. This is not to say that research cannot influence the exposition of the topic. For example, the degree to which the persona employs cognition, affect, and motivation will determine in part where the persona is positioned within the model. But although research may change the position of the persona it does not change the space within which it is located. Thus this structural arrangement may be better viewed as an introductory subtopic rather than a full system topic. It is advantageous to discuss the structural arrangement of personality early in any exposition of the system. Once set out, the structural-relations model can clarify such concepts as the meaning of spatial metaphors, personality’s definition, and personality’s interactions with other systems.

## **GENERAL DISCUSSION**

### **The Integration of Spatial Metaphors of the Past**

The establishment of three well-defined structural dimensions within this model allows for clearer translations of spatial metaphors from earlier theories and research into a common model. Authorities in the field have frequently employed spatial metaphors to describe personality and its components, but have often been inconsistent and have not provided an explicit description of the space they were describing. In the present unified model, mention of “lower” and “upper,” “inside” and “outside,” and even “front” and “back” components have clearly defined meanings in relation to one another that make it possible to translate from one theory or research paradigm to another. Moreover, these placements are not arbitrary but have assigned meanings to them. When consciousness is placed to the far left of Figure 2, it

reflects James's and Freud's consideration of consciousness as "innermost." Consciousness might alternatively be placed higher, as Freud sometimes does, and this would instead emphasize its molar, emergent quality. Maslow's hierarchy of needs would form a ladder that rises from the enablers (i.e., consciousness, motivation, affect, and cognition) to the establishments and perhaps continuing up to the organismic whole. Mischel's external situations are found outside personality to the right of the space. Each position is a spatial interpretation of the system or boundary in relation to the three (dimensions of) meanings. Given the surveys of systems and boundaries on which this model was founded, it seems plausible to claim that the most important, recurrent spatial metaphors concerning personality can be displayed within this single system. In this sense, all prior spatial metaphors can be viewed as shorthand descriptions of systems and boundaries with respect to the attributes defined by the three dimensions. For example, to propose a need hierarchy is to say that later needs build on earlier ones along a molecular-molar continuum. More generally, such spatial treatments can be helpful in defining personality as a whole.

### **Structural Arrangement Clarifies the Definition of Personality**

Personality definitions can be interpreted spatially to the extent that such definitions describe what personality is made of and where it is located. Figure 2 (and 1) can be viewed as a spatial interpretation of the definition of personality. For example, most psychologists locate personality within the mind and describe it as composed of "perceptual, cognitive, emotional, and motivational" systems, among many others (Stagner, 1974, p. 13). This definition places personality within the cube on the left-hand side of Figure 2. Although this definition is interesting because it is purely psychological, that same purity of character isolates the system by leaving it unrelated to other systems. Rosenblueth (1970) has noted that

[i]f psychology were defined, as it was originally, as the scientific discipline which studies mental or psychological events or processes that occur in many animal organisms, especially the human, it would occupy, like mathematics, a unique position, since, unlike the other disciplines, it would not be directly concerned with material phenomena. (p. 3)

It is unclear whether psychological events are any more nonmaterial than computer software programs. But it is certainly clear that an examination of personality's outputs to its neighboring systems is worthwhile; relating personality to the outside environment was a *raison d'être* of the present system topic, and personality definitions do frequently link personality to the outside world. For example, Maddi (1989) states:

Personality is a stable set of tendencies and characteristics *that determine* those commonalities and differences in people's psychological behavior (thoughts, feelings, and actions) that have continuity in time and that may not be easily understood as the sole result of the social and biological pressures of the moment. (emphasis mine; p. 8)

Although Maddi separates personality from behavior by stating that it determines behavior, other personality psychologists define personality as itself including the behavioral environment. Singer (1984) has personality straddling the person-environment boundary:

The human personality comprises public actions, gestures, statements, and nonverbal expressions as well as the private motives, wishes, beliefs, attitudes, day and night dreams, and styles of organizing information or experiencing emotion that delineate the unique individuality of each person within a given culture. (p. 6)

The placement of personality in the psychological mind earlier in the article, i.e., in the left-hand side of Figure 2, seems to have been a good starting position given these three definitions of personality; only Singer's definition plainly includes the interpersonal interaction zone. I could not find any definitions that placed personality solely in the right-hand side of the figure. Although H. S. Sullivan and R. D. Laing are interested primarily in the right-hand side of the figure and are sometimes included in personality textbooks, these theorists do not define themselves as personologists. For example, Sullivan (1953) states his view that

psychiatry as a science cannot be concerned with anything which is immutably private; it must be concerned only with the human living which is in, or can be converted into, the public mode. . . . [S]o psychiatry—and its convergent, *social* psychology—seeks to study . . . interpersonal processes occurring in the interpersonal situations. (emphasis mine; p. 20)

Although Sullivan places psychiatry within the right-hand interaction zone, he relates it to social rather than to personality psychology. Nonetheless, all the above definitions can be interpreted pictorially within the present spatial model. Such pictorial interpretations can serve as a valuable expositional supplement to the written definition, clarifying terms such as "inside," "outside," "biological substrata," and so forth.

### **Structural Arrangements Clarify Personality's Interaction with Other Systems**

Once a structural interpretation of personality has been clarified, the spatial model goes on to further clarify aspects of personality's interaction with other systems, especially with the "environment." Both the terms "environment" and "interaction with the environment" are ill-defined in and of themselves. The present three-dimensional structural arrangement suggests there is more than one environment. It further divides the external environment into several parts: a molecular-biological environment, a molar-external environment formed along the molecular-molar dimension, and a lateral-external environment formed along the internal-external dimension. Each of these can be further divided into past and present environments. The molecular-biological environment has to do with the biological resources and constraints that the personality system faces. The molar-external environment has to do with how the person is incorporated into larger groups: families, organizations, society, culture, nations, and so forth. This corresponds in part to the notion of a social environment. The lateral-external environment, in contrast, has to do with how the person interacts with other people, animals, machines, situations, objects, and so on, that are outside the person but that do not always constitute well-defined groups. The lateral-external environment corresponds in part to the more limited notion of person-situation interactions. This differentiation of the nonbiological environments along two different dimensions may be a helpful step toward better classifying the environmental influences on personality.

### **Structural Clarifications Can Help Solve Problems That Have Plagued Systems Approaches to Personality**

Once personality is defined and its environment is located, researchers can address questions that have plagued earlier systems approaches to

the field. A central problem is to clearly distinguish personality from general psychology. For example, if personality is the organization of all psychological systems, with connections to neighboring psychological systems, what is left for all the other psychologists to study? This problem was raised in the *Annual Review* chapters on personality in the 1950s. Sears (1950) had set out a systems model of personality, defining it as an organization of psychological components. Subsequent reviewers noted a slippery slope between a systems perspective on personality and its boundary with general psychology. Jensen (1958, p. 295) wrote, "Personality research increasingly overlaps general psychology," and Blake and Mouton (1959) continued the following year with:

The hoary tradition that treats personality as a distinct area of theory and research was further destroyed in 1957–1958. Although the idea of an inclusive category of personality will continue to have appeal in parlor and poolroom, the same is not so true in systematic psychology. As an independent, isolated compartment, personality is on its way to oblivion. (p. 203)

I believe personality survived the years of 1957–58 because it can be distinguished structurally from general psychology since it operates at a higher level of molarity. The perceptual psychologist studies perception, the cognitive psychologist studies cognition, the motivational psychologist studies motivation (and so on), the general psychologist studies perhaps two such components at a time, and the personality psychologist studies all components. Whereas the first types of psychologists study their chosen systems as discrete entities or pairs of entities, the personality psychologist examines such systems as they operate collectively. For example, the cognitive psychologist studies cognitions' mechanisms, substructures, and so forth. The general psychologist occupies a middle ground in typically examining interactions across two psychological systems, such as between cognition and motor activity or intelligence and family size. The personality psychologist, in contrast, is primarily or ultimately interested in the collective interaction of many entities (e.g., including perception, cognition, affect) as parts of a larger whole. Thus, personality psychologists have their fingers in everyone else's pie—and vice versa. But a personality psychologist should not be confused with a cognitive or general psychologist simply because he or she studies an entity (i.e., personality) made up of the elements studied by those other psychologists, any more than a chemist should be confused with a physicist simply because chemicals are made

up of atoms. The personality psychologist simply operates at a higher level of molarity.

### **Frameworks Can Reenergize the Field of Personality**

The system-topics framework is a coherent outline that attempts to incorporate information from multiple theoretical and research divisions within the field. The framework was enlarged in the present article to incorporate a structural/spatial interpretation of the personality system and its location. Throughout the 20th century, theories of personality have included spatial statements about the systems in and around personality. Although a cursory examination of such metaphors might suggest that they are vague or poetic, they in fact refer to positions along three dimensions that are regularly employed by scientists and philosophers of science across disciplines. A given spatial metaphor, when understood in the context of these dimensions, is a shorthand means of defining and characterizing aspects of the personality system, be it a personality component, a boundary, or an external system. Once the meaning of this structural arrangement is recognized, a spatial interpretation of the personality system is possible. Such pictorial representations are especially useful because of their ability to simultaneously depict the whole and its parts in relation to one another. Figure 2 presented one possible partial pictorial interpretation of personality within the three-dimensional spatial model developed here. The bottom of the personality system reflects largely biologically determined systems (enablers); the floating cubes of the self, world, and self-in-world reflect much that is learned (establishments). Themes such as extraversion are composed of features drawn from both enablers and establishments, and agencies such as James's (1892/1920) self-as-knower connect multiple parts that place the system in motion. Spatial interpretations such as those developed here allow one to grasp the major parts of personality and their interconnectedness at a glance. If some parts of personality are more biologically determined (e.g., enablers), others are more learned (e.g., establishments). The framework thereby balances biological determinism against learning. If a particular personality component may be influenced by the outside environment, internal causal agencies, such as the ego, may also exist that can respond to such outside influences. These internal agencies help explain concepts such as self-control, self-knowledge, and self-actualization,

which otherwise seem mysterious fragments of outmoded theories or isolated research reports. Such a spatial model can provide personality psychologists with a single coherent orientation, permitting them to compare all the various personality concepts and providing a picture of what is most important to study.

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