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## AUTHOR'S RESPONSE

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### The Systems Framework: Reception, Improvement, and Implementation

**John D. Mayer**

*Department of Psychology  
University of New Hampshire*

In the target article, I described a systems framework for organizing the academic field of personality psychology. It integrates much of the discipline's contents in a rational and progressive exposition. I concluded: "We personality psychologists ... have earned a coherent scientific overview of what we have accomplished. ... The systems approach ... can provide a uniquely cohesive and unified framework for the field. ... If the framework succeeds the field may be the better for it."

How did the commentators respond? Four of the commentators said some generally positive things about the systems framework and then advocated alternative frameworks; the other four expressed openness to the framework and requested further development of one or another of its areas.

In this response, I first examine the alternative frameworks described in the commentaries. Most of them involved question-motivated treatments of the discipline. I show how question-based approaches, as presently conceived, suffer from many of the same difficulties as theory-by-theory approaches. I further demonstrate that the best features of such question-based alternatives can be integrated within the systems framework.

In the next part of the response, I consider the commentators' critique of the systems framework. Their comments concerned the framework's assumptions, its four topics, and the specific treatments of those topics. As I examine each area, I clarify and improve the framework where possible. The aim of this section is to overcome uncertainties about the framework's details, and to encourage those who have begun experimenting with the framework to continue to do so.

In the final part of the response, I write about the potential influence of the system. Many of the commentators expressed doubts about the framework's ultimate influence on the field. At the same time, new textbooks, new theories, and new research are emerging that are

very close to the ideas developed here. It is plain that a new generation (fifth, by my count) of fieldwide framework is emerging. I argue that this systems framework helps define a portion of that new generation of frameworks and discuss how such a defining influence is useful to the field.

#### What Alternatives to the Systems Framework Were Suggested?

One of my assumptions in undertaking this project was that our current frameworks are inadequate to the job of organizing the field. Four commentators suggested alternative frameworks for studying personality. Three of these involved using a questions-oriented approach to reorganize the historical theories of the field. For example, Funder believes the question, "How are individuals different from one another?" is answered by trait theory; similarly, the question, "How does behavior change?" is answered by behavioral approaches, and the question, "How do people perceive, think, and plan?" is answered by social learning theory. Funder believes:

When an author or instructor simply grinds through the theorists or topics in a kind of mindless "if it's Tuesday this must be Jung" manner then students fail to understand how it all fits together. But if it can be reiterated that there is a certain number of basic things we all want to know, ... then this familiar organization can become much more coherent.

Hogan describes a very similar alternative when he writes, "I adopted a 'history of ideas' approach to defining the content of personality psychology." Hogan asks, for example, "How [do unconscious] ideas, emotions, and impulses ... influence our behavior, and how do they become unconscious in the first place?" and "How [is it that] personality develops ... and changes over time[?]" In contrast to both Funder and Hogan,

McAdams advocates his own framework, which divides a central question ("What do we know when we know a person?") into three subsidiary questions, for instance, "What kind of identity ... [is the person] articulating in life?"

Each commentator's set of questions is thought provoking, deep, and broad, and they are better than the standard theories approaches alone. Nonetheless, so long as such approaches preserve historical theories in isolation from each other, they will foster disciplinary fragmentation by employing duplicative terminology (e.g., psychodynamic "templates" and social-cognitive "schemata"), false oppositions (e.g., humanistic vs. gestalt theory), and difficulties in integrating research. If one were to integrate the various theories a different concern arises: What questions are really central to the field?

Hogan notes that the questions he employs have emerged from the intellectual history of the discipline. My claim for the systems framework is that it should readily reintegrate such questions in a contemporary representation—and it can do so. Table 1 sorts the questions according to the four system topics of identification, components, organization, and development. For example, the question "[how does the] personality develop?" is placed in the developmental topic.<sup>1</sup> This organizes the questions and indicates what questions might be missing (I have added a few). The integration of questions also strengthens the framework insofar as one agrees that using questions "provides a more feasible way to introduce newcomers to our field, and to convince nonpsychologists that what we do is interesting and important" (Funder).

A final alternative, proposed by McCrae, is to employ his own Five-Factor theory as an integrative framework for the discipline. I view the systems framework and McCrae's Five-Factor theory as complementary approaches to organizing and integrating the field. The systems framework is an approach based on the collection, classification, and communication of concepts as they now exist in the field. Five-Factor theory, by contrast, is a specific theory that intends to move our understanding of personality forward through targeted research. As McCrae notes, the general assumptions of the framework and the theory are consistent. In addition, some of their specifics overlap as well. The systems framework may prove more useful to field-wide organization simply because it is relatively more inclusive.

A thoughtful consideration of the alternative frameworks, therefore, returns us to a serious consideration of the systems framework. Most of the commentators expressed some openness to the systems approach, but requested further clarification of its concepts. In the next section, I attempt to justify their openness and overcome their reservations by making clarifications and improvements to the system.

## Improving the Systems Framework

### Revisiting Assumptions Underlying the Systems Framework

#### The Meaning of "Systems"

The term *systems* raised some concern among commentators. Craik notes that some systems concepts are acceptable to most scientists at this point in the century. For example, most scientists agree that a system's parts are best understood in relation to each other and the whole. Other aspects of systems theory are more controversial. In the target article, I already disassociated this framework from General Systems Theory. Craik (implicitly) asks me to clarify whether I am committed to controversial systems concepts such as emergentism—the idea that certain qualities of systems at molar (higher) levels are independent of qualities at lower levels. Similarly, he asks me to clarify my commitment to equipotentiality, multidetermination, and so forth. The framework requires no such beliefs of those who use it. What is most centrally necessary is simply agreement that (a) personality can be considered a system and (b) scientific systems can be related to one another according to various continua (e.g., molecular–molar, internal–external). Table 2 elaborates these points a bit more. Consider McAdams' remark that: "When it comes right down to it, I am not sure I would characterize personality as a "system" at all, Hall and Lindzey (1957) notwithstanding. Personality seems *made up of* systems, perhaps loosely integrated systems."

The acknowledgment that personality is made up of "loosely integrated systems" is sufficient for employing this framework. The term system, in fact, may seem nearly superfluous, but as Craik observes, "it is the system notion that promises an integration rather than a mere listing of concepts." For example, the progression of topics from identification, to parts, to their organization, is a systems-based idea.

In addition to some clarification of the "systems" concept, clarification of the term *framework* may also be in order.

<sup>1</sup>I divided one question, "How are people different?" into parts to accommodate it.

**Table 1.** *Alignment of Central Disciplinary Questions Within the Systems Framework*

Identification	Components	Organization	Development
What is personality and its study? (added question)	How are motivations used to explain personality? (modified from Hogan)	How [do] ideas, emotions, and impulses of which we are consciously aware influence [us]? (Hogan)	[How does the] personality develop ... over time? (Hogan)
What are the central questions of personality psychology? (added question)	How does the self operate? (modified from Hogan)	How do individuals differ in their personality organization? (modified from Funder)	[What is a] vision, model, or definition of maturity—an account of mental health? (Hogan)
What methods and procedures do personality psychologists typically employ? (added question)	How do individuals differ in their parts (modified from Funder)	How do people perceive, think, and plan? (Funder)	How do individuals vary in their development? (modified from Funder)
What data do personality psychologists typically employ? (added question)	What kind of identity is [the individual] ... articulating in life? (McAdams)	How do people experience reality? (Funder)	How does behavior change? (Funder)
What do we know when we know a person? (McAdams)	Where [does the individual stand] ... on a series of dispositional traits that speak to general tendencies in behavior across situations and over time? (McAdams)	Why is it so difficult to understand even ourselves? Which leads to: What is going on in the unconscious, hidden part of the mind (Funder)  How is ... [the person] confronting and adapting to ... tasks and concerns that are contextualized in time, place, and/or role? (McAdams)	

**Table 2.** *Commitments to Systems Theory (or Theories) Necessary to Employ the Systems Framework*

The following statements reflect the systems assumptions necessary to employ the systems framework.

Part 1. The use of the term *systems* in the systems framework means only that:

- (a) It makes sense to talk about the personality system as a group of elements (or smaller systems) that function together in some minimal sense.
- (b) There is a recognition among scientists that systems exist in relation to one another along dimensions such as the molecular-molar, internal-external, organic-artificial, and earlier-later (i.e., time).
- (c) Systems approaches are recognized to use certain standard expositions of their subject (e.g., an understanding of parts and their organization) and these standard means of exposition are drawn on and developed for this framework.

Part 2. The use of the term *systems* in the systems framework does not imply any commitment whatsoever to any of the following:

- (a) Emergentism, equipotentiality, or other specific systems concepts (see previous discussion).
- (b) General Systems Theory or any variant of it.
- (c) Any control theories such as cybernetics or its more modern versions.
- (d) Any other theory of systems.

Part 3. An individual who adheres to a specific systems theory (say, General Systems Theory) could still use this framework, as could an individual who adheres to any other theory such as the psychodynamic, trait, cognitive, or evolutionary.

### The Meaning of "Framework"

The term framework in the systems framework specifically designates an outline for an academic field. A single model of an academic discipline can and should include competing and even contradictory concepts that exist in the field itself. Others use the term framework somewhat differently. For example, Ford and his col-

leagues' "Living Systems Framework"<sup>2</sup> is intended to integrate competing theories into a single theoretical

<sup>2</sup>Emmons asked me to compare the systems framework to Ford's Living Systems Framework, which I do here. He also suggested that I compare the framework to Powell and Royce's (1981) Multifactor-System theory. At least a few comments are possible on the latter in this note. First, the Powell and Royce systems approach is a theory of individual differences rather than a framework for the field. As

model of personality itself. A single model of personality is less likely to include contradictory ideas, and must make considerable theoretical commitments. For example, Ford's framework was developed "by wedding together ... component minitheories and supporting evidence within a common framework representing human functioning ... in terms of a self-organizing, self-constructing adaptive control system" (Ford, 1994, p. 190). In contrast, the systems framework presented here concedes that personality might be quite loosely organized in many respects, and focuses on recording explanations of its function rather than on imposing a particular perspective. Similarly, the systems framework includes all commonly discussed parts of personality, whereas Ford focuses more narrowly on components dealing with directive, regulatory, and control cognitions (Ford, 1994, p. 197). It is true, however, that the systems framework develops certain disciplinewise models that do resemble a model of the person (e.g., Figure 3 of the target article). Such models are intended as generic, inclusive models rather than more focused ones. The existence of such models, however, may render the distinctions among various meanings of framework a matter of emphasis.

### Revisiting the Overall Framework and Its Four System Topics

Having revisited the theoretical assumptions underlying the systems framework, as well as the use of the terms system and framework, it is now possible to consider the commentaries on the framework's substance. At its broadest level, the systems framework consists of four topics: (a) identification, (b) components, (c) organization, and (d) development. The commentators were in agreement that the four system topics form a viable top-level outline. Funder appreciated their "analytic rigor and clever organization." Tennen and Affleck note that "Its four topics ... capture previous organizational schemes ... but elaborate and organize these topics in innovative and heuristic ways." McCrae writes, "The most basic aspects of the systems framework (identification, components, organization, and development) refer to topics that should be addressed in

reviews and textbooks ... they are familiar and straightforward conceptual categories." Singer noted their fairness and inclusiveness. McAdams, although less impressed, implicitly acknowledged their viability by stating: "Is the framework obvious? In places, yes ... [including the four major topics] ... Mayer dresses it all up with systems language, but the basic idea is virtually common sense." Craik compared the four topics to others employed in our discipline's history and noted that the framework "usefully returns textbook design to the kind of sensible and comprehensive format employed ... [in] pioneering textbooks." His only reservation was that they deemphasize the problem of the observer. Funder also noted that there could be some difficulty in making the topics accessible. One way to improve their accessibility is to use questions to introduce them, as is now done in Table 1 of this response.

Finding an overall framework structure that is acceptable to these important members of the field is an important measure of the framework's success—and reflects its capacity to capture the central underpinnings of our discipline. Although the overall framework was acceptable, certain specific aspects of the framework raised greater concerns.

### Revisiting the Specific Topics and Their Subframeworks

The system framework's four overall topics are arranged in a progressive exposition, such that each new topic is dependent on the preceding ones. In addition, each topic possesses its own framework that can be used to organize the material relevant to it.

#### Revisiting the Identification Topic

The first topic, identification, generated little problem among the commentators. The joining of molecular-molar, internal-external, organismic-constructed, and time dimensions were acceptable or at least, garnered acquiescence. Singer, however, asked that criteria be specified for deciding on a component's position along the molecular-molar dimension. The most central criteria are as follows.

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such, its scope is much narrower than that of the systems framework. In addition, Powell and Royce made a number of restrictive assumptions that are necessary and appropriate to a personality theory, but would be too restrictive for a fieldwide framework. These include that the parts of personality are arranged in a strictly hierarchical fashion. Although I view the Powell and Royce theory as a theory, it is a theory that is comprehensive in its scope, and thought provoking in many ways. Moreover, it has much to say about personality organization.

Scientific disciplines employ the molecular-molar dimension to order their objects of study. Molar systems, relative to molecular ones, "contain," or "are constructed from" or "are composed of" or "emerge from" (or, less distinctly, "recruit" or "call upon") more molecular systems. Thus, a social group contains individual personalities;

consequently social groups are molar relative to personality. Similarly, mental operations are composed of many neurological reactions; consequently, mental operations are molar relative to neurological reactions.

In the absence of a clear hierarchy of inclusion or containment, molar systems, relative to molecular ones, involve more variables of equivalent size, and more interactions among variables, as opposed to fewer variables and interactions. Thus, autobiographical memory is molar relative to a (nonautobiographical) memory of a single concept because the autobiographical memory contains more subsidiary variables. Similarly, moods are molar relative to a single emotional reaction because they involve more systems and last longer (cf. Litman & Rosen, 1950).

A more in-depth consideration of this dimension and its application to enablers, establishments, themes, and agencies, is found in Table 3 of this response.

Singer also noted that the molecular–molar and organismic–constructed dimensions overlapped to some degree and he desired some clarification about how the two dimensions distinguish components. The organismic–constructed dimension is useful because it distinguishes components that are closely associated with our biology (e.g., knowing how to get dressed) and hence relatively common across history and cultures, from components that are roughly equivalent in molarity, but are more artificial and specific to a particular time and culture (e.g., knowing how to use an automatic teller machine). The constructed side of the dimension tracks how our increasingly complex society adds increasingly artificial information to our personalities (how to channel surf, shop on the Internet, or identify carry-on

**Table 3.** *An In-Depth Consideration of the Molecular–Molar Dimension of the Systems Framework*

#### General Definition and Description

The molecular–molar dimension is used as one method of ordering objects of scientific study. Molar systems, relative to molecular ones, “contain,” “are constructed from,” “are composed of,” or “emerge” (or, less distinctly, “recruit” or “call upon”) more molecular systems. Thus, a social group contains individual personalities; consequently, social groups are molar relative to personality. Similarly, mental operations are composed of many neurological reactions; consequently, mental operations are molar relative to neurological reactions. Many entities do not have simple “containing” or “constructed-of” relations with each other. Thus, entities often exist on several roughly parallel molecular–molar continua. Consider the nonpsychological comparison of a house and a heating furnace. A house is more molar than the doors, windows, and walls, and appliances that make it up (and those parts, in turn, can be divided into their own parts). Similarly, a furnace is more complex than the burner, fans, valves, and fuel that make it up. Houses and furnaces seem roughly similar in their degree of molarity. For example, both are composed of units that can in turn be subdivided and are far from the level of simple elements and compounds. Moreover, both can be parts of larger organizations (e.g., housing developments, steel plants). In deciding whether a house is more molar than a furnace, one can rely in part on the fact that a house includes a furnace more often than the other way around. Sometimes, however, houses exist without furnaces and furnaces exist without houses. In deciding whether a house is more molar than a furnace, it is useful to employ a secondary means of comparison: In the absence of a clear hierarchy of inclusion or containment, molar systems, relative to molecular ones, involve more variables and interactions among variables (at roughly the same molecular–molar level) as opposed to fewer variables and interactions (cf. Litman & Rosen, 1950). According to this criterion, houses are typically more molar than furnaces, but it is possible in principle to have a furnace that is more molar than a house (e.g., a large furnace that is part of a steel plant).

#### Application of the Molecular–Molar Dimension to Enablers, Establishments, Themes, and Agencies

The enablers, establishments, themes, and agencies of the systems framework all possess different function and form—and are defined chiefly according to that function and form (see Table 2, target article). They contain only portions of one another and therefore their placement along the molecular–molar dimension is approximate and may vary also according to individual instances of each class (much as do the house and furnace in the preceding example). Other things being equal, establishments are more molar than enablers because they “contain” and/or “call on” portions of enabler functions. Themes are called more molar than either enablers or establishments because they contain portions of enablers and/or establishments. The arrangement of enablers, establishments, themes, and agencies along a molecular–molar continuum provides an approximation of their position. Although it provides only an approximation of the interrelation of the component classes, it more definitively places those component classes in relation to other objects of scientific study such as the brain, society, and the solar system.

#### A Final Note on the Application of the Molecular–Molar and Other Dimensions

The molecular–molar dimension in the identification topic (as well as the other dimensions) pertains to objects of study as opposed to methods of study. For example, an internal component at the psychological level such as autobiographical memory is always internal and at the psychological level regardless of how it is studied. Studying autobiographical memory across cultures does not raise autobiographical memory to the social level. It is correct to say that one is using a more molar cross-cultural method to study the component, but the component itself remains at the psychological level. Components that exist at the social or cultural level, by comparison, would be groups of people, ethnic groups, cultures, and the like.

luggage). The constructed side of the dimension may also be useful for identifying the personality components of people who are particularly influenced by their generation's cultural movements, such as the 1960s hippie or the 1990s slacker.

Once again, my reading of the commentators is that the identification topic represents another step forward in our discipline. To obtain agreement or acquiescence to a major foundation of the framework (because these dimensions are used again and again) suggests to me that the framework successfully uncovers implicit assumptions of the field and makes them explicit.

### Revisiting the Components Topic

Recall that the components topic employs a "relational classification system," to organize roughly 400 personality parts into four broad classes (enablers, establishments, themes, and agencies), and further into subclasses. I discussed the component framework somewhat briefly in the target article, and urged readers to examine its longer exposition (Mayer, 1995). In retrospect, my own omission of some critical information from that longer article may have encouraged some misunderstandings that I will correct here.

**The number and clarity of categories.** Probably the most important concern about the relational classification system is whether the number of categories in the system seems reasonable to most commentators. In general, it does. Singer writes, "I found the enabler-establishment-theme-agency categories a very helpful elaboration, adding some conceptual organization to the typical drive-trait-motivation distinctions." Hogan adds, "[Mayer] suggests that a competent theory must include a discussion of enablers (working memory), establishments (self-concept), themes (extraversion), and agencies (superego). I have no problem with these requirements." McAdams communicates the historical essence of the four categories when he writes:

One can graft these four concepts onto some very old ideas in personality, in order to convey some of the logic of Mayer's approach. In the still familiar language of midcentury American psychology (think: Hull, Spence, Allport, Cattell, Miller, & Dollard), enablers are like biological drives, establishments are like learned habits, themes are akin to aggregates of [biological drives and/or]<sup>3</sup> related learned habits forming traits, and agencies bear some relation to organizations of traits that make up types or even selves.

He also notes the system's "apparent exhaustiveness."

McAdams wonders, however, whether another category might be necessary to include content-specific modules such as a language processor postulated in cognitive science. Enablers already are subdivided according to motivational, emotional, cognitive, and consciousness subclasses. Therefore, a language processor might fit well within in the category of cognitive enabler (see also Mayer, Chabot, & Carlsmith, 1997).

A similar issue is raised by McCrae, who wonders how the system would classify extraversion defined as "biologically based dispositions and potentials," and excluding the specific skills, styles, or attitudes that emerge from it. Extraversion, defined in that way, could be classified as a theme that draws all its features from enablers (cf. Mayer, 1995, p. 867; Mayer et al., 1997, p. 38). Although McCrae's version of extraversion is close to the biological, it is (drawing on his other writings) a feature collection composed of sensation seeking and positive affect and other qualities that make it theme-like. As McCrae notes, it should be possible to have an enabler-level trait as well. A better example of this than extraversion is *n abasement*, which is an extremely specific neurologically based motive described by Murray.

A narrower concern, raised by Singer, was difficulty in distinguishing establishment components belonging to the self and self-in-world categories. The distinction between the two is discussed in greater detail elsewhere (see Mayer, 1995, Table 5). Briefly, self-establishments include all structures "with primary focus on the self, even though these will of necessity include some information about the self-in-world and the world"—as Singer rightly points out. They also include self-maintenance structures, such as defense mechanisms. Examples include identity, self-esteem, and repression. Self-in-world establishments, on the other hand, primarily focus on "images of the self as involved with other people, situations, or institutions." It may be, as Singer suggests, that certain possible selves components are better positioned among the self-in-world establishments due to their typically social nature.

The relational framework is flexible enough to handle such interesting cases and to communicate expert conceptualizations with some fidelity. The drawback, of course, is that the relational approach's very inclusiveness and flexibility means that it sacrifices some simplicity and definitiveness. There is no reason, however, why presentations of the system to nonexpert audiences cannot include various simplifications. One simplification I have been playing with is introducing the category of themes first and then discussing where the component features of themes come from—that is, from enablers and/or establishments.

<sup>3</sup>I have added the bracketed material to McAdams' passage so as to clarify the definition of theme.

**McAdams' concerns with the relational classification system for personality components.** The most negative criticisms of the components subframework arise in McAdams' commentary, some portions of which were written as satire. It was, regrettably, sometimes difficult to know which criticisms were meant as jokes, and which were meant to be taken seriously. Surely describing the framework as the outcome of (Piagetian) concrete-operational thinking was a joke. More problematically, the commentary's caricatures and exaggerations often diverged from the system's actual contents. For example, McAdams' commentary appears to imply that the framework mistakenly considers the "authoritarian personality, ... individuation, multiple personality disorder [and others]," to be components, but none of the aforementioned are found in the component system (authoritarianism, as opposed to the authoritarian personality, is classified as a theme). The system framework discriminates components from non-components according to a definition that reads (in part):

[Components are] model[s] of a part of personality that can be speculatively said to reside inside the person, i.e., inside the brain or inside the psychological systems supported by the brain. Personality components are often identified according to their dedicated or incidental functions within the systems. They may be mechanisms localized in the brain (e.g., the memory), collections of common features that are abstracted or emergent (e.g., extraversion), mental contents (e.g., expert knowledge), or additive combinations (e.g., ego.). (Mayer, 1995, pp. 828-829)

The aforementioned definition can be used to reliably discriminate components from noncomponents, as indicated in a rater reliability study featured in the original report to which readers were referred for further details (Mayer, 1995).

Another concern expressed by McAdams is that the relational table takes components out of their original context. That is certainly so. It is also true, however, that it preserves the original context through an index citation system to the original source (see Mayer, 1995, Table 1). The framework also recontextualizes the components by placing them in an organized framework in which similar (or identical) components are placed within the same group.

Any comprehensive classification system will contain problematic placements. In fact, there are roughly 19,900 possible one-on-one comparisons in Table 2 alone.<sup>4</sup> McAdams asks several questions about these

classifications. First, "what makes the enablers of consciousness and cognitive scripts more 'biological' and 'basic' (Figure 2) than the establishments of repression and moral anxiety?" To begin with, consciousness is indexed to specific theorists (i.e., Ornstein, 1986; Tart, 1975) who view it to be present from birth and "built in." The relational system does not use generic definitions of components. Rather, each component is tied to a particular textual definition (see Mayer, 1995, Table 1). Similarly, "Scripts (as structures)" are defined in their index definition as near-biological, mental mechanisms (Schunk & Abelson, 1977). In contrast, repression is a higher, learned mechanism of defense (Freud, 1937/1966) and moral anxiety is acquired during the Oedipal stage (Freud, 1926/1959, pp. 71-72, 91-93). It is also worth noting that the relational system does not use a single criterion (e.g., "more biological") to decide if a component is an enabler or establishment. It employs a match-to-prototype procedure to classify components. It asks, "Does 'moral anxiety' most closely resemble the enabler, establishment, theme, or agency prototype?"

McAdams' commentary next asks, "Why is the trait extraversion (classified as a conative self-in-world theme) a broader and more integrative feature of personality than the concept ego identity (which is classified merely as an establishment)?" Themes and establishments differ in their form as well as in their molecular-molar level. Themes are feature collections, whereas establishments are learned mental contents. When entities differ in form, their breadth cannot be compared directly across the molecular-molar continuum. For example, in college administration, the dean's office is "higher" (more molar) than the student body, but the student body is broader.

McCrae, in contrast to McAdams, found the juxtaposition of components useful:

Researchers on specific topics may find the juxtapositions offered by the system stimulating. Perhaps contemporary self-theorists ought to ponder the relevance of such concepts as the *shadow* or the *proprium*. Is there something of value in these ideas that can be recast in modern terms, or ... add to contemporary theorizing about the self?

#### Are there too many components in the system?

Finally, many commentators were concerned that I included too many components in my system. McAdams writes, "we see included not only such venerable concepts as extraversion and the superego but some exotic specimens as well, such as the 'intraego.'" McCrae declares that, "A concept classification system that gives ... [equal] weight to anima/animus and life/death instincts [as to more scientific examples] ...

<sup>4</sup>This is based on an approximate count of 200 components in the table. That would make  $(200 \times 199)/2$ , or 19,900 one-to-one comparisons.

is out of touch with the science of personality psychology." The difficulty with these comments occurs when commentators want to include or exclude something different. For example, McCrae's willingness to banish life or death instincts suggests he might also wish to banish McAdams' "venerable superego."

For the sake of argument, let us say we chose three criteria that components must possess for inclusion in the system: (a) a good definition, (b) a good operationalization (where possible), and (c) a successful deployment in academic research of some type. A lenient application of those three criteria would be unlikely to screen out much from the table (and would we dare apply a strict criterion, given our present state of knowledge?). Perhaps a few exotic specimens such as intraego would have to go, but there are Jungians who believe they are conducting research on archetypes—and do we know enough to contradict them? Why is cutting the number so important?

I believe the implementation of this framework can take many forms. One of these is for theorists or researchers to create new versions of the relational table based on their own inclusion criteria and see what they fashion. To my mind, the central element of a relational table is that it follow the general formula of crossing enabler categories with establishment categories to get theme categories. That is what keeps the components in relation with each other.

To assist people in better exploring this version of the components model, a hypertext model of the components (combining both the relational table and Figure 3) is available on the World Wide Web, along with a representation of this entire framework ([http://princeton.edu/personality\\_framework](http://princeton.edu/personality_framework); [http://unh.edu/personality\\_framework](http://unh.edu/personality_framework); Mayer & Carlsmith, 1998). The hypertext version provides the potential to click on a component and be directly connected to its indexed definition (although this is not yet fully implemented), as well as other advantages.

### **Revisiting the Organization and Development Topics**

Only passing comments were directed to the organization and development topics. Singer successfully applies them to his work on autobiographical memory. Tennen and Affleck remark that including such topics may help "researchers move beyond examining univariate, nomothetic relations in everyday research and toward testing their process-oriented theories." And McCrae notes parenthetically that "Mayer's atlas of transactional dynamics might be useful in fleshing out [dynamic processes]." Tennen and Affleck also re-

quested more development of those subtopics to parallel expositions of the components section. This is something I will need to address in the future. To date, however, these subtopics of the framework appeared acceptable as portrayed.

### **The Systems Framework and the New (Fifth) Generation of Personality Frameworks**

#### **Prognostications About the Framework's Influence**

My reading of the commentaries is that there is widespread acceptance of the overall tenets of the systems frameworks, and somewhat narrower, but still solid acceptance of its details. In marked contrast to this were the commentators' negative prognostications as to the framework's influence. Funder "doubts that Mayer's scheme is a feasible way to organize textbooks or to communicate with nonpsychologists about why personality psychology matters." And McCrae "doubt[ed] ... that the framework will have the widespread influence its author envisions." Singer does "not think that the framework has achieved sufficient definitional clarity to be adopted as a paradigm for the entire field of personality nor would it serve as the most practical outline for a student entering the field of personality research." Finally, Tennen and Affleck "believe that the framework will have to be developed further before it achieves its goal of influencing how personality is studied."

In this response, I clarified and revised the system in response to the commentators' criticisms. I cannot know whether these improvements will influence the commentators' attitudes positively but I hope they do so. Certainly, the give-and-take of this issue of *Psychological Inquiry* has enabled me to deliver the clearest possible presentation of the framework at this time. Predicting the future is a notoriously iffy business, and Craik, for one, is willing to wait. He writes, "In time, we will learn whether ... [the] enterprise has signaled merely a culmination of a particular tradition of textbook content or ... a revival of systems thinking in personality." In the meantime, the following developments make me optimistic for the framework's future.

#### **The New Generation of Framework**

New frameworks seem to arise in our field every 20 or 30 years. I believe we are now witnessing the emergence of such a new generation of frameworks. To

recapitulate from the target article, the first generation of personality frameworks arose at the beginning of the 20th century and included individual theories of psychology such as Freud's and Jung's that hoped to organize all of psychology. The second generation of frameworks arose in the 1930s and identified personality as a new subdiscipline of psychology. Those frameworks of the 1930s, by Allport and Murray, were not quite general, but were better than what had come before. A third more impartial generation of frameworks arose in the post-World War II period of the 1950s. The framework that prevailed was a theory-by-theory approach initiated by Hall and Lindzey, but a secondary, research topic-by-topic approach remained in favor among the research community. The fourth generation of frameworks evolved in the 1970s. This big-perspective approach used perspectives (e.g., the psychodynamic, humanistic, etc.) to group theorists with empirical research related to them. That brings us to the new, fifth generation of frameworks. What will these new frameworks look like? And why should we implement them?

#### **Why Implement a New Framework and What Is Involved?**

It should be no surprise by now that I believe this systems framework will be a central member of this new generation of frameworks. This is not to discount the possibility that secondary frameworks—perhaps question-motivated approaches, or a more general version of McCrae's Five-Factor theory, or McAdam's contemporary framework—will also emerge. Some family of new frameworks, however, is emerging, and I believe they can and will be implemented. There are several reasons to implement a new framework: to provide a better basis for learning, to provide a better basis for theorizing (and thus researching), and more broadly, to refresh our perspectives on the field. Exactly how a framework is implemented is quite mysterious in some ways, and in other ways, quite definite and concrete.

The mysterious part of implementing a framework is a consequence of its indefinite yet pervasive influence. Metaphorically speaking, a framework is a theater, but not a play. To ask what the framework is good for is like asking what theaters are good for. They set the stage, provide context, and allow for action. The framework sets the stage for theory. As McCrae puts it, the systems framework, "could be valuable to those who are attempting to devise an integrative theory of personality—an enterprise on which an increasing number of psychologists are once again beginning to venture." And Singer writes, more personally: "I found

that application of ... [the system framework] to my own research endeavors challenged me to think more deeply and precisely. ... It highlighted for me that my research choices always reflect my preference for certain levels of organizational complexity." Contrasted with such important but indefinite contributions are the far more concrete and definite contributions of defining and describing a change in an academic discipline's character.

#### **A Movement Coalescing Within the Field of Personality Psychology**

Personality psychology has been going through a process of (re)discovering its common assumptions and ideas. Movements in a discipline have greater impact when they are identified, justified, and labeled; I believe the systems framework does that for the growing convergence of the discipline. A few of the clearest examples of this movement toward convergence may be the following.

There exist new textbooks now coming onto the market that are systems oriented. Pervin's (1996) new textbook, *The Science of Personality*, uses a systems organization divided into three broad parts including (a) the units of personality, (b) the major topics in personality research (which includes work on personality organization), and (c) the development of personality. Another textbook recently published by Cloninger (1996) uses a "three Ds" approach to personality: description (which includes description of personality's parts), dynamics (organization), and development. Another systems-oriented textbook by Lester (1995) reorganizes the traditional theories book in a systems fashion: into theories primarily addressing parts (i.e., wishes, motivation, cognition) and theories addressing the whole (organization). By themselves, these various books and others like them could be viewed as rather idiosyncratic. The framework, however, clarifies how they form a class of new systems-framework textbooks. There is considerable power in recognizing this new class of books because their relative strengths and weaknesses can then be appreciated.

Emmons is correct to point out that there also are a variety of systems theories that are emerging. They include Ford's living systems approach, Royce and Powell's work, and perhaps McCrae's Five-Factor theory, Singer's autobiographical approach, and Tennen and Affleck's approach to coping. Craik sees a potential conjunction between evolutionary and systems theories to which this framework might contribute. At present, these theories are somewhat disconnected from one another. Once again, let us identify them as a new class

of theories employing a (more or less) common systems approach.

As a framework defines a new perspective, it can elucidate the significance of individual contributions in the field and show how they relate to each other. Such contributions, be they textbooks such as Cloninger's or Pervin's, theories such as McCrae's Five-Factor theory, Singer's autobiographical work, or Tennen and Afleck's work on coping, are thereby shown to constitute more rational, unified, development of the field. A new framework should provide some recognition to developing theories and research and make us excited about them. New movements can use some advocacy concerning their value, lest we forget the importance of the work we do.

### Conclusion

The debate concerning our current frameworks continues in this issue of *Psychological Inquiry*. At one point, Funder argues for maintaining the theory-by-theory approaches to the field, writing:

Each of the approaches just listed [traits, behaviorism, social learning, phenomenology, psychoanalysis] originally was introduced—and sometimes still is touted—as the all-inclusive approach to personality. However—and call me a postmodernist if you must—each has embedded within it a distinct set of assumptions and research methods that make these approaches difficult if not impossible to assimilate into each other.

McCrae, however, says, "personality psychology, at least as represented in most textbooks, is still mired in its past." And Emmons is concerned with present approaches to the personality course:

Personally, I am disappointed at how few of our talented undergraduates apply to graduate school in personality psychology, relative to other specializations within psychology. Given its popularity at the undergraduate level, why is there this discrepancy? Perhaps it has something to do with how the field is portrayed—personality courses and personality texts do not really match what the field of personality is about. Perhaps we are just not getting students excited about what it is we do.

The presentations here have provided an expert's-eye view of the system framework. I offered excitement—to the expert—in the form of the framework's definition and integration. Addressing experts is crucial: They best evaluate a framework's conceptual fidelity to a field, its internal consistency, and its suitability

for theory and research. Once that fidelity has been established adequately, a different sort of presentation is necessary for those newly approaching the field. It must be simplified and presented in a more appealing and engaging way.

The framework's excitement for those newly approaching the field will be different than the expert's excitement. I believe those approaching the field assume they will encounter the sort of integration and definition a simplified version of this framework can provide. They are sorely disappointed when they discover that personality courses using today's outlines provide no such integration. The system framework's appeal to that newer, fresher, audience will depend on whether its presentation sparks people's imagination, teaches to their concerns, and reveals to them the secrets of our discipline in a manageable yet challenging fashion. Whatever framework we turn to next, it must be acceptable to the expert and engaging to the newcomer if our field is to grow.

### Notes

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John (Jack) D. Mayer, Department of Psychology, 10 Library Way, University of New Hampshire, Durham, NH 03824-3567.

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