
How Does Psychotherapy Influence Personality?

A Theoretical Integration

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A given type of psychotherapy (e.g., psychodynamic) is associated with a set of specific change techniques (e.g., interpreting defenses, identifying relationship themes). Different change techniques can be conceived of as influencing different parts of personality (e.g., interpreting defense increases conscious awareness). An integrated model of personality is presented. Then, change techniques from different theoretical perspectives are assigned by judges to areas of personality the techniques are believed to influence. The results suggest that specific change techniques can be reliably sorted into the areas of personality. Thinking across theoretical perspectives leads to important new opportunities for assessment, therapy outcome research, and communication with patients concerning personality change. © 2004 Wiley Periodicals, Inc. *J Clin Psychol* 60: 1291–1315, 2004.

Keywords: psychotherapy integration; psychotherapeutic techniques; personality change; change techniques

The journalist Paul Solotaroff experienced harrowing panic attacks as a young man: Tingling feet and hands, sweats, heart palpitations, and shortness of breath that were made more terrifying by a pre-existing asthmatic condition he feared might suffocate him. Haunted at day by fears of panic attacks, he found it difficult to sleep at night as well. After 11 years of self-described psychic imprisonment, he got “out of jail” by taking the anti-anxiety drug Anafranil. After his dramatic improvement, however, Solotaroff desired further change. He wanted to find out who he was now that his panic attacks were over; he wanted to create a new identity. He next entered group therapy, which increased his confidence, allowed his journalistic skills to flourish, and helped him to begin a satisfying marriage. (Solotaroff, 1999, p. 23–25)

A number of people helped strengthen this article. A discussion of the Systems Framework for Personality Psychology, which underlies many of the ideas in this article, led to a stronger case for the ideas presented here. In particular, Marc Brackett, Lewis Goldberg, Zorana Ivcevic, and Jefferson Singer all commented on the model for connecting personality with other systems. This led me to clarify the model in its presentation here. In addition, the visual presentations of the structural models of personality presented in Figures 1 through 3 were greatly enhanced by the comments of Sherry Palmer, of UNH Photographic Services. The article further benefited from the comments of Zorana Ivcevic, who identified several problematic issues in earlier drafts and made useful recommendations for addressing them. Robert Eckstein was instrumental in recruiting clinically trained judges for the demonstration study regarding change techniques. I would like to extend my considerable thanks to them all.

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Solotaroff's account provides an example of how different interventions can alter personality in different ways. In this case, psychopharmacological treatment alleviated his anxiety, whereas group therapy helped him clarify his identity.

A psychotherapeutic approach such as psychodynamic therapy can be conceived of as utilizing a set of change techniques. Each such technique may exert a distinct action on an individual's personality. In this context, a change technique can be defined *as a specific, discrete, and time-limited act, which may involve providing information, directing behavior, or otherwise exerting influence, and which is aimed at modifying an aspect of an individual's personality and its expression*. Although change techniques can be interpreted broadly so as to include drug interventions, religious teachings, or even legal injunctions, the focus here will be on techniques of psychotherapy.

Psychotherapy often acts in a broad and general way, through common factors—factors that most or all therapies employ such as creating a therapeutic relationship and establishing an expectation of psychological benefit (Frank & Frank, 1991; Messer, 2001; Nathan, Stuart, & Dolan, 2000; Smith & Glass, 1977). Psychotherapies are also compared with one another according to how well they work. For example, a psychodynamically-inspired therapy may be compared with a cognitive-behaviorally-inspired one in the treatment of depression. Such comparisons reveal that therapies also possess specific, detectable effects (Lambert, 1992; Nathan & Gorman, 1998; Nathan et al., 2000; Smith & Glass, 1977). Such research reflects the view that a given psychotherapy is a coherent and unified expression of a corresponding theory. For example, it views cognitive-behavior therapy—and the specific change techniques that make it up—as emerging coherently from the theoretical statements of that perspective. The question of whether the different change techniques of a given psychotherapy might bring about different kinds of personality change has rarely been addressed.

It is possible, however, that change techniques within a given psychotherapy may be quite different from one another as to their effects, and that change techniques across psychotherapies may be more alike than they seem at first glance (e.g., Malik, Beutler, & Alimohamed, 2003). For example, a specific psychodynamic technique may be intended to change the same area of personality as a specific cognitive technique, even though the theories that give rise to them are otherwise different. Understanding the specific change techniques in psychotherapy may require de-emphasizing theoretical orientations, and a willingness to approach both psychotherapy and the personality system itself using an integrated perspective.

Understanding change techniques and other psychological phenomena apart from their theoretical origins is part of a broader movement for integration across psychological theories and topics of studies. These integrations have been forthcoming not only in psychotherapy research (Arkowitz, 1992; Beutler & Clarkin, 1990; Norcross & Beutler, 2000; Smith, 1999; Wachtel, 1982, 1997), but also in personality psychology (Mayer, 1993–1994, 1998, 2001; McAdams, 1996) and in psychology more generally (Henriques, 2004; Sternberg & Grigorenko, 2001). Such integrations make possible the idea of studying change techniques based on their specific impact on personality.

In the second section of this article, "The Problem and Its Significance," I outline the theoretical perspective-by-perspective approach employed in the teaching of psychotherapy, as well as in teaching personality psychology; consideration is given to why the study of change techniques can be facilitated by a more integrative framework and why such studies might matter. In the third section, "The Systems Framework Approach," an integrated overview of the discipline of personality psychology is described. The systems framework allows for a structural division of personality into broad functions such as "self-guidance," and "social acting." In the following section, "Organizing Types of

Change,” a description is given of how 52 change techniques were sampled from different theoretical modalities and how they were connected to the areas of personality they might change. The idea here is that by collecting change techniques from across theories and resorting them, possible types of change can be better understood, their classes enumerated, and the rationale for why they do or do not work elaborated. Such comparisons may help explain why therapies are similar to or different from one another (e.g., Chwalisz, 2001; Malik et al., 2003). In the Discussion section I examine the strengths and limitations of this approach, its research consequences, and its potential applications. For example, outcome measures that assess specific areas of personality as opposed to general measures such as symptom relief and general adjustment may be called for (e.g., Messer, 2001, p. 10–11). Finally, connecting specific change processes to the areas of personality they influence could allow therapists to better communicate with their patients about what they are doing.

The Problem and Its Significance

To connect specific therapeutic techniques to the areas of personality they influence requires employing an integrated framework that is different from the customary ways that clinical psychology is usually taught and discussed. Like other disciplines, clinical psychology is typically taught with the assistance of a field-wide framework. Such a framework is an outline that a discipline employs to communicate its knowledge. Clinical psychology is most often taught according to a theoretical perspective-by-perspective framework. That is, authors of clinical psychology textbooks typically describe a sequence of theoretical perspectives, beginning with psychodynamic approaches, including the psychotherapies of Freud, Jung, and others. They then proceed to detail a second theoretical perspective, such as the behavioral, that covers therapies such as systematic desensitization and contingency control. From there, the author(s) proceed, perhaps, to the humanistic perspective, with its person-centered and existential therapies, and then continues through other theories. If the book is integrative, the author(s) might begin or end with a chapter or two on the common factors that exist across therapies, and eclectic or integrative approaches to psychotherapy (e.g., Day, 2004; Ivey, D’Andrea, Ivey, & Simek-Morgan, 2002; Prochaska & Norcross, 2003; Scharf, 2004).

It is worth noting that this perspective-by-perspective field-wide framework is very similar to that commonly employed in the field of personality psychology. In that discipline as well, textbook authors commonly proceed through most of the same theoretical perspectives, in much the same order: Freudian, Neo-analytic, Behavioral, Humanistic, etc. (see Emmons, 1989; Mayer, 1998, for reviews). The subject matter of these textbooks focuses on the psychological theories themselves, and the empirical predictions and the findings they generate (e.g., Burger, 2000; Carver & Scheier, 2000; Funder, 2001; Hall & Lindzey, 1978; Larsen & Buss, 2002). The content differs from that in psychotherapy books by its de-emphasis of the practice of psychotherapy.

The counseling and clinical psychology framework has worked well in presenting the theories of the field in an accurate and careful fashion. The framework highlights such issues as the theoretical bases for psychotherapies, whether the psychotherapies work, and which theoretically-based therapies work best. Contemporary research suggests that about 45% of the variance of therapy outcomes is due to general factors of the therapeutic relationship (Lambert, 1992). By contrast, about 15% of the differences among therapeutic outcomes is due to specific theoretical approaches, although recent analyses sometimes put the specific effects lower still (Ahn & Wampold, 2001; Lambert, 1992). The remaining variance is due to client and chance factors (Krupnick et al., 1996). The

theory-by-theory approach, however, has not done as well in examining change at the level of specific techniques; nor does it analyze how therapy works in the context of a general model of personality.

Recall that, in the introduction, change techniques were defined as *a specific, discrete, and time-limited act, which may involve providing information, directing behavior, or otherwise exerting influence, and which is aimed at modifying an aspect of a patient's personality and its expression*. Change techniques are interesting because each possesses a discrete character, definition, and rationale that can often be expressed apart from any theoretical orientation. They are a part of virtually every psychotherapy, and some techniques appear across—and indeed migrate across—therapies. For example, the empty-chair technique of Moreno's psychodrama of the 1920s was later employed in gestalt therapy (Wulf, 1998). Change techniques can be thought of as building blocks of psychotherapy.

Yet little is understood about individual change techniques themselves. The question of whether all of personality or a part of it is changed—and by which techniques—is important to informing therapy outcome research and yet not much research addresses it. Generally speaking, many criteria employed in clinical research concern symptom relief and general adjustment. One exception has been in the examination of whether psychiatric disorders influence specific areas of personality or the whole system—about which there is some controversy (e.g., Clark, Vittengl, & Kraft, 2003; Oltmanns, Melley, & Turkheimer, 2002). The more commonly employed measures of therapy outcome, however, measure general adjustment and cannot indicate which parts of personality have been altered, if any. Indeed, if more attention were paid to which parts of personality change with therapy, more change might be discerned relative to what has already been found (Chwalisz, 2001). So, an important way to sort the various kinds of personality change techniques depends on matching them to the areas of personality they most directly affect. This process, in turn, requires a pan-theoretical, generic model of personality.

The Systems Framework Approach

The Integrationist Impulse

One needs an integrated view to effectively discuss what parts of personality change and what stay the same and to attract research effort to the question. If some researchers divide the personality system in a psychodynamic way, into the Id, Ego, and Superego (Freud, 1923/1960), whereas others divide personality in a humanistic way, into the Real Self versus the False Self (Rogers, 1951, pp. 526–527), and others employ other divisions, research becomes fragmented and difficult to interpret.

There is a means to organize personality that provides an alternative to such theory-by-theory perspectives (Mayer, 1993–1994). Such an approach begins with a view of personality as a unified system. It has evolved from Wilhelm Wundt's original view of personality psychology as the discipline that would explain the collective action of the individual subsystems of psychology; it is similar as well to Allport's conception of personality as involving "... the dynamic organization within the individual of those psychophysical systems that determine his unique adjustments to his environment" (Allport, 1937, p. 48; Wundt, 1897, pp. 25–26). Once personality is conceived of as an organized system in this way, the focus shifts to topics that are appropriate to describing it. Beginning with Robert Sears in his mid-20th century *Annual Review of Psychology* article, and proceeding to the present, personality psychologists have sought to integrate the field according to a rational set of topics rather than by competing theoretical perspectives (Pervin, 2003; Sears, 1950).

The systems framework for personality employed here divides the study of personality into four topics: (a) What personality is, (b) what its major parts are, (c) how those parts are organized, and (d) how personality develops. The present model provides an advantage over earlier similar integrations in that each of its topics has been carefully defined and has a carefully worked out expository approach associated with it (Mayer, 1993–1994, 1995a, 1995b, 1998, 2003, in press). In short, such outlines are coming of age.

Situating Personality and Dividing It Into Areas

The systems framework depicts a generic model of personality that clinical change techniques can be associated with. The generic model is most readily grasped in the system framework's third topic, "personality organization," which follows on the introduction to the field (first topic) and the study of personality's individual parts (second topic). Personality organization itself is subdivided into structural and dynamic aspects. Structural organization involves two aspects. The first concerns the position of personality amid its neighboring systems, according to a connective structural model. The second concerns dividing the personality system itself into the relatively long-term, stable areas that reflect its operation. These two structural models will be introduced in the next section. Then, the change processes of psychotherapy, which are hypothesized to bring about dynamic alterations in the areas of personality, will be examined.

The Structural Model of Personality: The Connective Overview

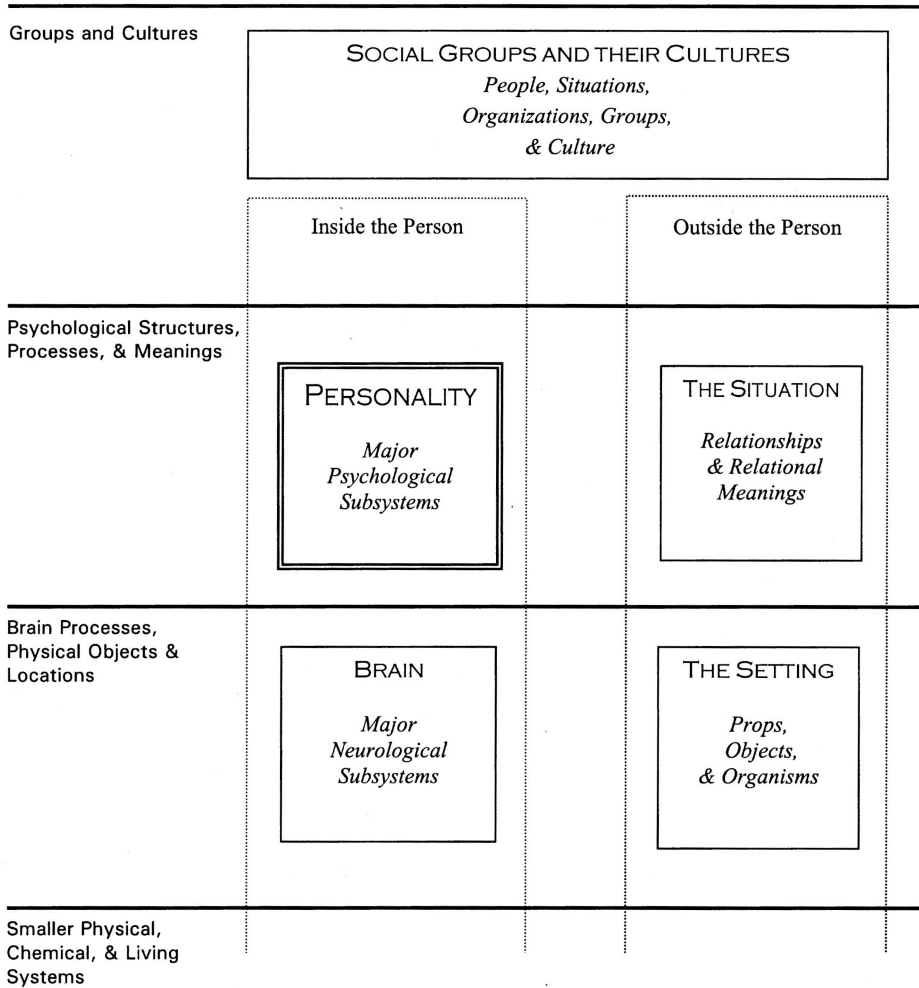
One structural view of personality concerns how personality connects to its neighboring systems of scientific study. Scientists commonly use several conceptual dimensions to distinguish among the topics they study. Among the most important of these is the molecular-molar dimension or dimensions (Henriques, 2003). The molecular-molar dimension separates smaller systems of interest from larger ones. For example, at its extremes, this dimension describes subatomic particles toward one end, and the entire universe as a system toward the other.

In the case of personality, however, we are interested in a specific portion of the molecular-molar dimension. This spans several levels, illustrated by the horizontal lines of Figure 1, from the level of smaller physical, chemical, and living things, to the level of brain processes and psychologically significant objects and locations, to that of psychological structures, and meaningful relationships, to the level of groups and cultures. Personality itself is positioned "Inside the Person," or "within the skin," in this model. Various psychological subsystems—motives, emotions, knowledge, and the self—combine together to form personality. These areas are represented in the central, "Inside the Person," column of Figure 1. Where a number of people and their personalities operate in groups, the study of groups and cultures applies, as represented toward the top of Figure 1.

There exist, actually, multiple, intertwined molecular-molar dimensions that ascend in a generally parallel pattern. For example, one can follow the dimension from the brain through personality, to groups and cultures, as is depicted in the central "Inside the Person" column of Figure 1. It is also possible, however, to follow a strand from physical props and objects, such as chairs, desks, telephones, at a lower level, to psychologically meaningful situations at the level of personality, to finally arrive at the same groups and cultures in which both personality and such situations, too, are embedded. This second strand of the continuum is shown in the "Outside the Person" column of Figure 1, to the right.

PERSONALITY AND ITS NEIGHBORING SYSTEMS

MOLAR



MOLECULAR

Figure 1. Personality amid its surrounding systems. The horizontal lines represent levels of the molecular-molar continuum (see text). The “inside the person” box shows personality and its emergence from major psychological subsystems and from the brain. The “outside the person” box shows the psychological situation and the setting from which it emerges. Both personality and the situation are incorporated within larger social systems (shown above them).

Regarding this second strand of the molecular-molar continuum, social psychologists often draw an analogy between the drama of the individual’s social interactions, on the one hand, and the theater, on the other (Brissett & Edgley, 1990). The props and scenery form the social elements (the stage), and the actors upon it and the script combine to represent a situation (the dramatic scene). “The situation,” as described here, is anchored

at the same level as personality, because personality interacts most directly with the meanings and actions that occur at the level of a perceived ongoing drama. Finally, the audience, theater troupe, stagehands, and business managers make up the incorporative world (the theater).

Personality processes take place within the person at a psychological level. Personality is expressed when its intentions are transmitted across communication channels such as language, movement, and facial expressions, to the outside world. The dichotomy between personality, in the center, and the situation in which it is expressed, to the right, corresponds to the distinction between private and public personality, and between covert and overt mental behavior (Henriques, this issue; Singer, 1984, 1987).

Utility and Generality of the Integrated Model

The relative generality of this picture of personality can be appreciated by comparing it to several more specific theoretical perspectives, as well as to other integrations. It is consistent with Freud's proposition that the individual must compromise biological needs to obtain social satisfactions (Freud, 1930/1961). It is consistent with Lewin's notion that psychological behavior (B) is a function of the person in the psychological environment, or $B = f(PE)$ (Lewin, 1935, p. 79), and similar but more elaborate equations denoting a person's expectations of rewards and his or her likelihood to behave in particular way (Rotter, 1954, p. 108). This connective model has proven useful for relating the individual to his or her external life style or life space (Brackett & Mayer, 2004; Mayer, Carlsmith, & Chabot, 1998), and also has provided a new more organized approach to classifying data in personality psychology and related fields (Mayer, 2004b). Finally, it is consistent with general integrations of psychology such as Henriques' unified theoretical formulation (Henriques, this issue).

A Note on Implications of the Model for Personality Change

The connective model draws a broad distinction between the inside and outside of the person that can be used to divide sources of change as well. Outside change sources include one's spouse, one's boss, or one's therapist. Change that starts from the inside may involve one's will, or self-control, or goal setting. The therapeutic alliance often involves an agreement by the therapist to help guide the client in changing. That is, the responsibility for change is shared by the internal person (e.g., the conscious executive), in collaboration with the external guidance provided by the therapist. The shift from external to internal control is often viewed as enhancing motivation, and as moving forward a person's stage of change (Prochaska & Norcross, 2001; Ryan & Deci, 2000).

The target of change can be similarly divided according to whether it is external or internal to personality. Regarding the surrounding environment first, one can change one's underlying biology by eating well, or exercising. Or, one can change the situation by altering the props, such as one's clothes or by buying a new car. Or, one can change the situation altogether by leaving home to visit a relative, or making a phone call, or going to the supermarket. Finally, one can change groups by joining a different book club, transferring to a different college, getting married, or changing nationalities.

With or without psychotherapy, people are quite ready to change their outside worlds, judging by the statistics on the number of moves, divorces, and job changes people undertake in developed nations (Kreider & Fields, 2002). Many people are likely to try changing jobs a few times if they are unhappy at work. Similarly, many people try to

change partners if they are unhappy in a relationship. Changing one's job or relationship in young adulthood may involve relatively few costs. Such external changes themselves serve as natural experiments that vary the environment but keep one's personality more-or-less constant. If a person observes him or herself reacting in a similarly problematic fashion in job after job, or with partner after partner, his or her own personality may become identified as an issue.

Other pressures that promote inward change may simultaneously come to bear. As one's activities and skills become more specialized and fitted to context, the general emphasis may shift away from change to preserving what one has achieved (Carstensen, 1998; Hill & Miller, 1981; Kanfer & Ackerman, in press). Moreover, changing careers or getting divorced and remarried later in life can be far more costly than in youth, and only some people will have the resources to allow for it. Preserving external gains may therefore require changes in specific areas of one's personality: Reducing anxiety, or improving social skills.

The Structural Model of Personality: Elaborating the Internal World

Personality, as defined in the systems framework, is *the organized, developing, mental system within the individual. The mental system is composed of such major psychological systems as consciousness and attention, the self system, models of the world, the emotion system, and the like* (cf., Mayer, 2004a, p. 12). Those major subsystems along with others are depicted in Figure 2. Right away the problem with dividing such a system becomes clear: Functions overlap, interpenetrate, and are multiply connected. Where is one to draw the lines? It is certainly possible to divide any complex system—such as a person's psychological system—in multiple valid ways. And yet, laying out some organization is important to grasping the system and organizing its areas.

The division of personality employed here is called *The Systems Set*, and divides personality into four areas. Approximations of the divisions are represented in Figure 2 by the dashed lines. The areas were formed such that, as a group they were: (a) as distinct as possible, (b) collectively covered the personality system well, (c) corresponded to areas of brain function, and (d) conveyed through their functions a dynamic sense of what personality does (Mayer, 2001). The four parts of the system are called the *energy lattice*, *knowledge works*, *social actor*, and *conscious executive*. The choice of dividing lines among them was also influenced by earlier successful divisions of the mind.

The first structure, the energy lattice, includes the motivational and emotional systems (Fig. 2, lower left). It directs the individual's motivations into appropriate activities. It represents the functions responsible for channeling motives and guiding emotions, and guiding the organism's energies according to its needs. Examples of similar functional groupings include Freud's Id, a combination of the motivation and emotion areas of the trilogy-of-mind, Murray's motives, and similar entities (Freud, 1923/1960; Mayer, Chabot, & Carlsmith, 1997; Murray, 1938).

The second structure, the knowledge works (Fig. 2, center), represents the function responsible for mental representations of both the self and the real world, and the use of those representations to guide the individual. It also involves various intelligences and imagination. Examples of similar, functional groups include the "reality-process" of Freud's Ego, cognition (in the trilogy-of-mind), Kelly's personal construct systems, and James' self-as-known (as opposed to the self-as-knower) (Freud, 1923/1960; James, 1892/1920; Kelly, 1955; Mayer et al., 1997).

The third structure, the social actor, represents the expression of personality in a socially adaptive and adept fashion. It includes social skills, role knowledge, and emotionally pre-

PERSONALITY AND ITS PSYCHOLOGICAL SUBSYSTEMS

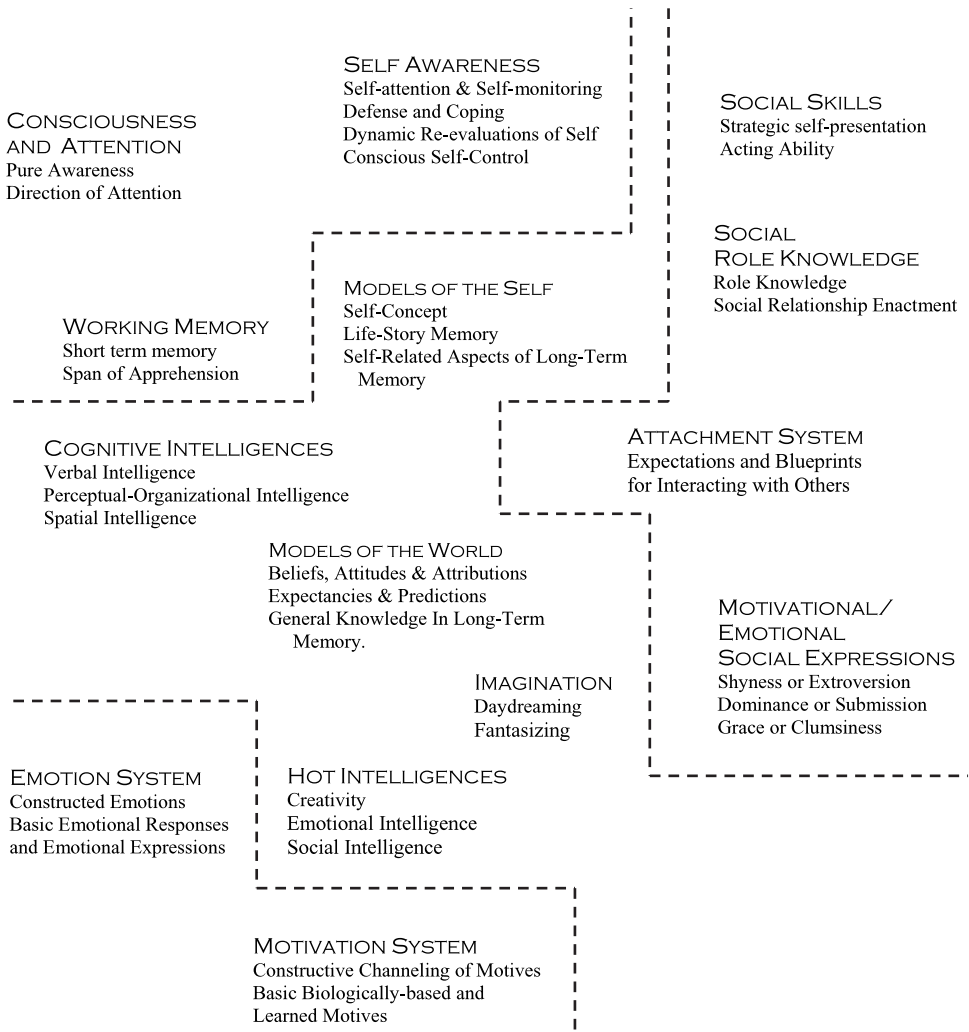


Figure 2. Personality and some of the major psychological subsystems it organizes. Each subsystem performs a unique set of psychological functions necessary for human existence. These functions are integrated across psychological subsystems in the sense that they blend into one another and often operate in parallel with one another.

ferred expressions (Fig. 2, right). Earlier structures roughly corresponding to this function include Singer's public personality, role playing in Hogan's socioanalytic theory, the social psychologists' "social behavior" (as part of "cognition, affect, and social behavior"), Jung's persona, and the like (Hogan, 1982; Jung, 1953/1945; Singer, 1987).

The fourth structure, the conscious executive, represents the function of executive supervision over the rest of the parts. It includes consciousness and attention, self-awareness, and working memory (Fig. 2, upper left). Earlier structures roughly corresponding to this function include James' self-as-knower (as opposed to the self-as-known), Freud's observing Ego, Jung's conscious Ego, and the like (Glickauf-Hughes,

Wells, & Chance, 1996; James, 1892/1920; Jung, 1953/1945). In this system, the unconscious consists of those extensive areas to which the conscious executive has impeded access, or no access at all.

The four areas of personality interact dynamically. The system's activities begin with the energy lattice, which provides direction to the system to get what it needs. Those directions are sometimes directly expressed by the social actor. The social actor, however, is also guided by the knowledge works and the conscious executive, which serve to guide or restrain its social acts—sometimes thwarting the energy lattice's needs in the process. The knowledge works provides the human center of the system, capable of knowledge, wisdom, and creativity in understanding the self, the world, and how to act in relation to them. Finally, the conscious executive monitors and guides the other structures in an attempt to facilitate their working together.

The systems set appears to meet the criteria for a good structural division and has proven useful in organizing traits according to the four areas of personality it demarcates (Mayer, 2001, 2003). Its capacity to organize parts of personality distinctly and comprehensively suggest that it is one of several possible relatively optimized divisions of personality. Psychotherapeutic change techniques can be connected to this functional breakdown as well to see which techniques influence which areas of personality.

Organizing Types of Change

Identifying Specific Change Techniques

There are a vast variety of change techniques used in psychotherapy and no official list of them exists, although Prochaska and Norcross provide an inventory at a general level (Prochaska & Norcross, 2003, pp. 516–519). To develop a representative sample of specific change techniques, I sampled 52 such techniques, and descriptions of them, from several psychotherapy and counseling textbooks, and ancillary sources (Day, 2004; Ivey et al., 2002; Prochaska & Norcross, 2003; Scharf, 2004). A sample technique was, “analysis of transference,” described as “bringing into consciousness—by pointing out—overgeneralizations of early relationships through reference to the current psychotherapeutic relationship.”

The change techniques were sampled from 10 different therapeutic approaches to ensure that a wide diversity of possible interventions was represented. Six techniques each were drawn from four “classic” groups of therapies: (a) psychodynamic, (b) behavioral/learning, (c) client-centered/experiential, and (d) cognitive/social cognitive (e.g., Smith & Glass, 1977). A specific change technique from each perspective is shown in Table 1. In addition, three change techniques each were drawn from six narrower therapies that were still significant enough to warrant mention in one or another of the textbooks above, including: the (a) Adlerian, (b) emotion-focused, (c) multi-cultural/gender, (d) psychodynamic-interpersonal, (e) reality therapy, and (f) transpersonal. An attempt was made to sample techniques that represented innovations (e.g., did not overlap) with techniques from the four classic groups. A sample technique in the emotion-focused group, for example, was “Developing self-soothing” and was defined as “Encouraging the client to be receptive to and compassionate about emerging painful emotional experiences.” Four more techniques came from a (g) other category (e.g., hypnotic analgesia), and six “common factors” of change were selected, including, “Establishment of a therapeutic relationship” (e.g., Frank & Frank, 1991).

The systems set itself was divided into nine specific groups of personality function, shown in Table 2, and approximately corresponding to the systems shown in Figure 2.

Table 1
Examples of the 52 Change Techniques and the Theoretical Orientations From Which They Were Drawn

Perspective	Sample Change Technique	Brief Description
<i>Four general therapeutic perspectives (24 techniques total; 6 from each area)</i>		
Psychodynamic	Analysis of transference	Bringing into consciousness—by pointing out—overgeneralizations of early relationships through reference to the current therapeutic relationship.
Behavioral	Systematic desensitization	Desensitizing the individual to anxious situations (e.g., on a fear hierarchy) by pairing the eliciting situations with the relaxation response.
Cognitive	Re-attribution	Helping clients attribute causes rationally (rather than, say, blaming themselves).
Humanistic/Experiential	Staying with the feeling	Instructions to experience a feeling and to let it develop so that the individual can better understand it.
<i>Six specific therapeutic perspectives (18 techniques total; 3 from each area)</i>		
Adlerian	Behavior experiments	Therapeutically encouraged, active experiments in behaving in new ways in social settings.
Emotion-focused	Developing self-soothing	Encouraging the client to be receptive to and compassionate about emerging painful emotional experiences.
Multi-cultural/Gender	Ethnic/gender role intervention	Acknowledging differences in how society treats people of different ethnicities and genders.
Psychodynamic-Interpersonal	Meta-communication	Pointing out aspects of the client's habitual means of communication so as to identify interpersonal patterns that need to be changed.
Reality therapy	Evaluating behavior	Deciding on whether behaviors meet one's own and others' needs.
Transpersonal	Meditation	Exercises involving concentration, performed on a regular basis, to focus the mind and attention for the pursuit of higher levels of consciousness.
<i>Other (4 techniques total)</i>		
From hypnotic-oriented techniques	Hypnotic analgesia	Using hypnosis to take away the pain of something.
<i>Common Factors of Change (6 techniques total)</i>		
From Frank & Frank, 1991	Establishment of a therapeutic relationship	The therapist acts as an ally of the client and creates a safe environment in which the client can confide problems.

Table 2

The Major and Subsidiary Areas of Personality Represented by the Systems Set and the Whole Personality

The Major Areas and Whole Personality	Subsidiary Area	Related Parts and Processes
Energy Lattice	Basic motives	<ul style="list-style-type: none"> • Need to achieve, need for affiliation, need for power, etc. • Socially constructed motives • Non-conscious processes that channel motives
	Emotions and emotional responding	<ul style="list-style-type: none"> • Basic emotions and emotional responses • Constructed emotions • Emotional expressions such as facial expressions
Knowledge Works	Energy-related knowledge	<ul style="list-style-type: none"> • Understanding one's own motives and emotions • Empathy
	General knowledge area	<ul style="list-style-type: none"> • Long-term conceptions of the self—stable self-concept, life story, etc. • Beliefs, politics, attributions, and other models of the world • Cognitive intelligences and creativity • Thought styles
	Social-related knowledge	<ul style="list-style-type: none"> • Understanding social situations • Understanding social relationships • Understanding culture and politics • Understanding practical knowledge
Social Actor	Basic styles of social expression	<ul style="list-style-type: none"> • Shyness or extroversion • Dominance or submission • Grace or clumsiness • Dimensions associated with temperament
	Strategic social behavior and roles	<ul style="list-style-type: none"> • Social skills • Social roles • Strategic self-presentation • Deception
Conscious Executive	Consciousness control	<ul style="list-style-type: none"> • Pure awareness • Conscious self-control
	Self-monitoring and defense	<ul style="list-style-type: none"> • Defense and coping • Self-attention and self-monitoring • Dynamic changes and re-evaluations of the self
The Whole Personality	—	<ul style="list-style-type: none"> • All of personality • A person's developmental progress • Overall functioning

For example, the conscious executive was divided into two areas: first, a conscious awareness that involved “pure awareness, and conscious self-control;” second, self-monitoring and defense, including “defense and coping, self-attention and self-monitoring, and dynamic changes in self-understanding.” These nine smaller units clarify the contents of each system set area (Mayer, 2003). The four areas and nine more specific processes they divide into are shown in Table 2, along with a tenth category for the whole personality.

Demonstration Rating Study

The approach taken here is mostly theoretical but testing whether independent judges agree that certain change techniques can be associated with specific areas of personality, and using their collective judgments to make such assignments can heighten confidence in the classification. So, a demonstration study was conducted. Note that the study concerns experts' judgments, as opposed to the actual, demonstrable effects of change techniques on personality. The study therefore tests whether there exists reliable agreement among judges as to the theoretical influence of change techniques on specific areas of personality. Further studies will be required to understand whether the techniques actually bring about the changes they are expected to.

The combined (e.g., modal) judgment of the judges was employed to assign change techniques to a given area of personality. Aggregating the responses of judges tends to reduce errors of judgment in complex tasks requiring complex judgments, and to increase their validity (Epstein, 1983; Legree, 1995; Nunnally, 1978). For example, an earlier study was conducted examining the assignments of personality traits (e.g., extroversion, intelligence, self-consciousness) to the personality areas of the systems set. In the study, aggregated raters agreed in placements approximately 70% of the time, compared to pairs of individual judges, who agreed at the 50.8% level, and versus a 20% agreement rate by chance. The average kappa coefficient for judges was significant; its level was not readily interpretable, however, because the statistic inappropriately corrects for nonrandom base-rate responding in this context (Uebersax, 1987). In the sorting task for traits, the systems set proved superior to the trilogy of mind (the most used system for sorting traits). For example, at the level of pairs of judges, agreement was 35.1% for the trilogy versus the aforementioned 50.8% for the systems set, which was statistically significantly higher. Chance levels were approximately 20% in both studies.

To test the hypothesis that judges can assign change techniques to personality areas with some reliability, 10 judges with knowledge of personality and psychotherapy sorted the change techniques according to the areas of personality they believed them to target. The judges varied in educational level from doctoral level, licensed therapists, to honors-level undergraduates, with graduate students in between; I also served as one of the judges. All judges had courses in both personality psychology and counseling or clinical psychology. Each judge received slips of paper on which were printed each of the 52 change techniques, and 10 larger pieces of paper with the 9 personality areas on them from Table 2 (middle column), and the last labeled, "The Whole Personality."

Judges were asked to assign each change technique to the given area of personality that would be most influenced by the technique. The procedure took about 45 minutes and the all judges except the author received a \$10 gift certificate as an expression of thanks.

Analysis and Results of the Study

Sortings into the 10 categories were first recoded into the systems set classification. For example, ratings for the "pure consciousness" and "defense and coping" categories were both re-coded so as to refer to the conscious executive. After re-coding, there were five possible categorizations: (a) the energy lattice, (b) the knowledge works, (c) the social actor, (d) the conscious executive, and (e) the whole personality. If judges' assignments of techniques to areas were random, they would be expected to agree 20% of the time (i.e., on 1 out of 5 placements).

The odd- and even-numbered judges were compared as to their modal ratings of the change techniques. In cases where the ratings of the group exhibited no mode, the first judge in either group was used as the tie-breaker (and, if that rating wasn't relevant to breaking the tie, the second rater was employed). The agreement level between odd and even groups of judges was 75%, and significantly and meaningfully exceeded chance levels of 20% ($t(51) = 25.6, p < .001$). It seems conservative to conclude that the group of 10 raters as a whole would agree with other groups of 10 raters at an 80% level or more.

This aggregated level was, as expected, a considerable improvement over the pairwise average interjudge agreement across the 45 pairs of raters $[(10 \text{ judges} \times 9)/2]$. That value, 47.5%—was still, however, well above chance levels (20%; $t(51) = 9.47, p < .001$). There was no statistically significant difference in rater agreement as a function of educational level; indeed, the individual raters with the highest and lowest degrees of agreement with the rest of the group both had attained their doctorates.

Another way of assessing interjudgment agreement is through the use of the kappa coefficient, which provides a more limited test of rater agreement, because it employs assumptions that do not all apply here (e.g., correction for nonrandom base rate responding; Uebersax, 1987). The kappa based on the aggregate odd and even judges was $\kappa = .68$. The average pairwise kappa coefficient was lower but still significantly different from zero $\kappa = .33; t(44) = 20.4, p < .001$.

Each change technique was assigned to a personality area based on the modal rating it received from the 10 judges together, as shown in Table 3. The number of judges agreeing is shown in parentheses. Three of the 52 techniques were rated as bi-modal, and in that instance, the author made a final determination as to the technique's best placement (indicated by an asterisk). Generally speaking, the placements made a good deal of sense. For example, the conscious executive was influenced by "meditation," and "interpretation of defense." The energy lattice was rated as most closely targeted by techniques such as "changing emotion with emotion" and "problem expression." The knowledge works was targeted by techniques such as "developing a new life story" and "developing new philosophies." Similarly, the social actor was targeted by "role playing," and "language statements" (e.g., learning to use "I" statements). Finally, the whole personality was influenced by such techniques as "establishing a therapeutic relationship" and "instilling trust, hope and confidence."

Another question raised at the outset of this article was whether different psychotherapies might use different change techniques, and yet end up targeting the same areas of personality. Table 4 illustrates that change techniques drawn from different therapeutic approaches often targeted the same areas of personality change. For example, all four major therapeutic approaches employ techniques that influence the knowledge works. To change a client's knowledge works, psychodynamic therapists employ "looking for relationship themes," humanistic/experiential therapists employ "empathy," and cognitive therapists help "develop new philosophies." Similarly, three of the four therapies employ techniques to change the conscious executive. Psychodynamic therapists employ "interpretation of defense," behaviorists teach relaxation, and the humanists reflect meanings.

On the other hand, there were clear differences. Table 4 shows the number of times raters assigned a change technique from one of the four major areas of psychotherapy to a particular part of personality. For example, consistent with Freud's (1933/1965, p. 80) dictum "Where id was, there ego shall be," psychodynamic techniques were rated as influencing the conscious executive 58.3% of the time, whereas the cognitive techniques were rated as influencing the knowledge works 68.3% of the time. A chi-square test among the four major approaches indicated that there were highly significant differences

as to which areas of personality they targeted overall ($\chi^2(12) = 124.7, p < .001$). Of course, the selected change techniques representing each orientation are small in number. Still, the findings do appear to reflect some intuitions about the areas under discussion.

A final question was whether adequate techniques exist to influence each of the areas of personality and personality as a whole. The change techniques were rated most frequently as influencing either the conscious executive (31.3%), or the knowledge works (35.8%). Change techniques were also viewed as influencing the energy lattice and social actor with some frequency (14.6% and 10.8%, respectively). The remaining ratings of techniques assigned them to the whole person (7.5%). That is, techniques were rated as applying to all areas of the personality system.

Discussion

Synopsis of the Argument Thus Far

In this article, I have argued that different parts of personality are differentially targeted by specific change techniques used in psychotherapy. Determining whether this is the case is best done by comparing change techniques apart from their theoretical perspectives and relating them to a generic view of personality's major functions. That is, matching change techniques to personality function requires thinking outside the theoretical perspective-by-perspective frameworks of clinical psychology and personality psychology. The generic model of personality employed here divides it into four areas: An energy lattice that interweaves motives and emotions; a knowledge works, that creates, stores, and employs mental models of the self and world to create understandings; a conscious executive that brings information into awareness and acts on it; and a social actor, that expresses personality.

Fifty-two change mechanisms were sampled from across 10 therapeutic traditions and from a group of common factors. Judges then sorted these techniques according to the areas of personality the change techniques targeted (i.e., energy lattice, knowledge works, etc.). The rating study indicated that judges were able to reliably agree at 75% levels which areas of personality are influenced by which change techniques (compared to 20% by chance alone). The four major groups of therapies each possess techniques that influence different parts of personality. For example, both psychodynamic and cognitive-behavioral perspectives employed techniques that would affect the belief systems of the knowledge works (looking for relationship themes; identifying irrational thoughts). On the other hand the different approaches appear to specialize in changing one part of personality or another. For example, the psychodynamic approach employs many techniques to influence the conscious executive, whereas the cognitive approach employs more techniques to alter the knowledge works. Across therapies, the largest number of change techniques was regarded as directed toward the knowledge works and the conscious executive, with smaller but still appreciable numbers of techniques directed toward the energy lattice and social actor.

Limits and Issues With Findings

Interjudge Agreement

There are some limits to the results. Fairly high agreement was obtained in the placement of techniques by aggregating judges. Still, individual pairs of judges agreed at a low-to-moderate level. This and earlier findings raise interesting questions as to what

Table 3
Change Techniques Organized by the Modal Area of Personality They Affect

Change Techniques Applicable to:			
The Conscious Executive	The Energy Lattice	The Knowledge Works	The Social Actor
Meditation (10) (<i>transpersonal</i>)	Changing emotion with emotion (8) (<i>emotion-focused</i>)	Developing a new life story (10) (<i>other</i>)	Role playing (8) (<i>behavioral/learning</i>)
Mindfulness (9) (<i>transpersonal</i>)	Expression of emotionally significant problems (8) (<i>common factor</i>)	Developing new philosophies (9) (<i>cognitive</i>)	Behavioral experimentation (8) (<i>Adlerian</i>)
Interpretation of defense (9) (<i>psychodynamic</i>)	Increased emotional expression (6) (<i>emotion-focused</i>)	Staying with the feeling (9) (<i>humanistic/experiential</i>)	Language statements (e.g., "I" statements) (8) (<i>humanistic/experiential</i>)
Relaxation response (8) (<i>transpersonal</i>)	Legitimize power emotions (power intervention) (6) (<i>multicultural/gender</i>)	Ethnic/gender role intervention (9) (<i>multicultural/gender</i>)	Meta-communication (6) (e.g., pointing out communication issues) (<i>interpersonal/dynamic</i>)
Free association (8) (<i>psychodynamic</i>)	Evaluating behavior (5) (<i>reality therapy</i>)	Thought recording (8) (<i>cognitive</i>)	Discontinuing complementary responding (6) (<i>interpersonal/dynamic</i>)
Hypnotic analgesia (8) (<i>other</i>)	Desensitization (5) (<i>behavioral/learning</i>)	Understand another's viewpoint (empathy) (7) (<i>humanistic/experiential</i>)	Making better plans (5) (<i>reality therapy</i>)
Teaching relaxation (7) (<i>behavioral/learning</i>)	Modeling (5) (<i>behavioral/learning</i>)	Challenging absolutes (7) (<i>cognitive</i>)	Appealing to the client (5) (<i>Other</i>)
Interpretation of behavior (7) (<i>psychodynamic</i>)	Developing self-soothing (4) (<i>emotion-focused</i>)	Identifying irrational thoughts (7) (<i>cognitive</i>)	Recording behavior (4) (<i>reality therapy</i>)

Analysis of transference (6) (<i>psychodynamic</i>)	Assessing fear (4)* (<i>behavioral/learning</i>)	Power analysis (7) (<i>multicultural/gender</i>)
Catching oneself (6) (<i>Adlerian</i>)		System or scheme for improvement (6) (<i>common factor</i>)
Imaginal flooding (6) (<i>behavioral/learning</i>)		Reattribution (6) (<i>cognitive</i>)
Paradoxical suggestion (4) (<i>other</i>)		Empty chair technique (6) (<i>humanistic/experiential</i>)
Reflecting meaning (3) ^a (<i>humanistic/experimental</i>)		Looking for relationship themes (5) (<i>interpersonal/dynamic</i>)
		Reflecting emotion (5) (<i>humanistic/experiential</i>)
		Decatastrophizing (4) (<i>cognitive</i>)
		Confrontation and clarification (3)* (<i>psychodynamic</i>)
Change techniques applicable to the whole personality		
Trust, hope, and confidence (8) (<i>common factor</i>); Establishing a therapeutic relationship (7) (<i>common factor</i>); Working through (6) (<i>psychodynamic</i>); Teaching new behaviors (5) (<i>common factor</i>); Encouragement (4) (<i>Adlerian</i>); Feedback and reality testing (4) (<i>common factor</i>).		

^aNo clear mode; assigned by author.

Table 4

Number of Times (and Percentages) the Representative Change Techniques of the Four Major Theoretical Approaches Were Rated as Influencing a Specific Area of Personality or All of Personality Across All Raters

	Conscious Executive	Energy Lattice	Knowledge Works	Social Actor	Whole Personality
Psychodynamic	35 (58.3%)	3 (5%)	8 (13.3%)	2 (3.3%)	12 (20%)
Behavioral	23 (38.3%)	19 (31.7%)	7 (11.7%)	11 (18.3%)	0 (0%)
Humanistic/Experiential	3 (5%)	9 (15%)	30 (50%)	12 (20%)	6 (10%)
Cognitive	14 (23.3%)	4 (6.7%)	41 (68.3%)	1 (1.7%)	0 (0%)
Total times techniques were associated with the area	75 (31.3%)	35 (14.6%)	86 (35.8%)	26 (10.8%)	18 (7.5%)

might be limiting judges' agreements (e.g., Mayer, 2003). At least three factors are likely involved. First, the change techniques (and traits, in earlier studies) are often not defined as clearly as would be desirable for classifications of this type. Second, the areas of personality to which the techniques are assigned represent broad divisions. Although these distinctions are often useful, they are made in the context of a generally integrated system (see Fig. 2), and it is likely that a number of borderline discriminations are necessary. Consider, the humanistic (Gestalt) technique "staying with the feeling." It was rated as changing the knowledge works, probably because it involves improving emotional self-understanding. Yet "staying with the feeling" is also thought to bring about changes in emotions, and hence, could also be classified with the energy lattice. Third, judges themselves vary in expertise and theoretical perspective and are otherwise subject to errors in judgment in complex tasks. Given these three limitations, the aggregate reliabilities of 75% seem reassuring.

Rater Agreement Versus Actual Change

In this study raters agreed on the placement of therapeutic change techniques according to the areas of personality they should influence. That is they showed conceptual agreement that certain change techniques influence specific parts of personality. However, this does not mean that the change techniques *actually* change those parts of personality and those alone. At the same time, at least a few specific techniques have research evidence that supports their specific action (e.g., Wolpe, 1997). Even by itself, the demonstration that change techniques and areas of personality correspond in theory is not trivial. Creating a connection between change techniques and areas of personality marks a first step toward determining what kinds of such specific changes actually take place. The question then arises, what is needed next in such research?

The Problem of the Outcome Measure

These analyses suggest the kind of research needed to answer questions about specific personality change requires changing the sort of assessment battery that is currently used in clinical research. Therapy outcome studies employ data from literally hundreds of different scales. Many such measures are used on a single occasion with little or no psychometric information associated with them (Froyd, Lambert, & Froyd, 1996). Even

in a relatively clearly defined research area such as treatment outcomes for depression, many different measurement techniques are employed (Basco, Krebaum, & Rush, 1997; Piotrowski & Lubin, 1990); a recent survey of APA Division 38 members found that 13 different depression scales were in common use by its practitioner-members. This lack of a standard has led to the call for a core battery of assessment, yet no such agreement on what it might be has been reached (Barkham et al., 1998; Strupp & Hadley, 1977; Strupp, Lambert, & Horowitz, 1997).

There are many obstacles in the way of a core assessment battery, and yet answering questions about personality change plainly requires some consideration of the assessments that would be needed to understand them. Future batteries would be enhanced if they included instruments capable of detecting change in specific areas of personality. In the instance of depression, for example, outcome measures of the energy lattice would assess a motivation and depressed affect (e.g., Senecal, Koestner, & Vallerand, 1995). Measures of the knowledge works would assess irrational and depressogenic beliefs (e.g., Beck, Rush, Shaw, & Emery, 1979; Seligman & Schulman, 1986). Measures of social actions would assess depression-related social-skill deficits (e.g., Oltmanns et al., 2002). Measures of the conscious executive would assess the individual's capacity to regulate negative emotion and emotion-related thoughts (e.g., Senecal et al., 1995). Similar four-fold approaches to developing and selecting instruments would be employed for other disorders and to assess a person's positive adjustment as well. Psychotherapy research is among the most challenging and important types of research to conduct, but most psychologists would agree it has not fully matured. Better understanding the therapy–personality connection will likely be fostered by assessments specific to the different areas of personality.

The Chart on the Wall

A further application of this approach is to create a “chart on the wall” with which to illustrate to clients how their personalities might change. When someone goes to a physician's office for a particular problem, there is often a representation of the body hanging on the wall—its muscles, bones, and major organs: in short, the body's structure. The doctor and patient refer to the chart during discussions. “This is the ligament in your arm,” the doctor might say, pointing to the chart, “and the theory is, that you have torn it.” The chart's presence provides a comforting sense that such injuries have been seen before. Some knowledge has been organized around similar injuries; there exist answers to the specific problem. This is not a specifically medical approach. Nutritionists employ a food pyramid for educational purposes, chemistry instructors employ a periodical table of the elements, and management consultants sometimes discuss change in the context of an organizational chart.

A wall chart that outlines therapeutic change and its impact on personality would serve a similar educational purpose to the use of charts in other fields. Personality psychology and the structural models of it communicate well about the theories of our discipline. As an indication of what a chart of therapeutic change might look like, a number of the change techniques are shown in Figure 3, arranged according to the areas of personality they influence. As a therapist summarizes his or her treatment plan, he or she might make reference to a chart and use it to explain what might be accomplished:

(Pointing to the overall chart . . .) You can think of personality as involving several broad functions shown here. This is an example that divides personality into its motives and emotions (the *energy lattice*), its beliefs (the *knowledge works*) its conscious executive, and social

PSYCHOTHERAPY'S INFLUENCE ON PERSONALITY: A PROPOSED WALL CHART

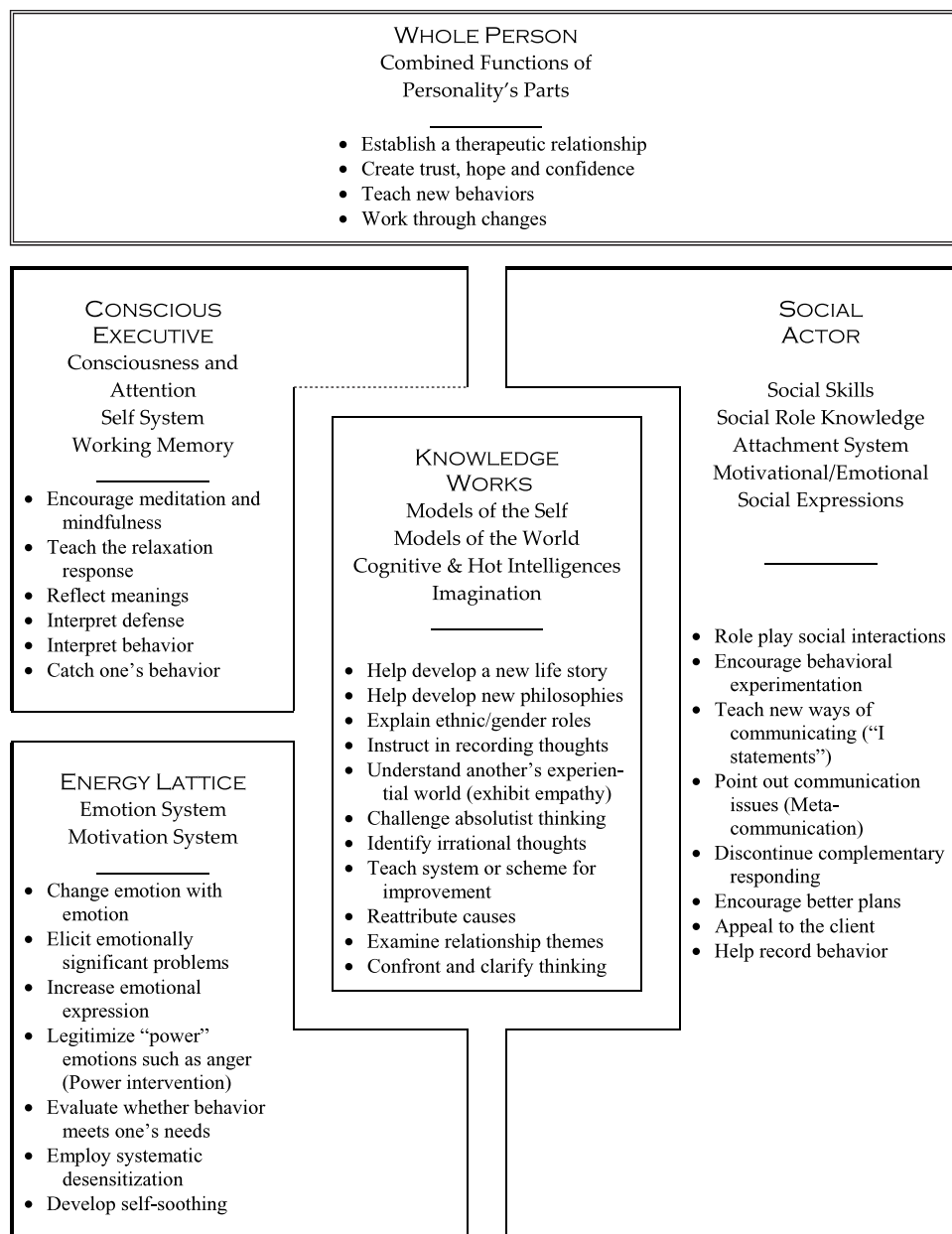


Figure 3. A proposal for a psychotherapist's wall chart. The chart would be used to explain some of the change techniques therapists employ and how they will influence the therapy client's personality. Personality is divided into four structural areas: The conscious executive, the energy lattice, the knowledge works, and the social actor. Within each area of personality are specific change techniques directed toward changing those areas. These techniques are drawn from diverse psychotherapies and represent examples of the kinds of change methods that therapists employ.

actions. (Then, to some clients:) Any such division is a simplification, but it can serve as a general outline of what we will be addressing here.

The chart would then be used to discuss the person's particular problems and how they might be addressed during therapy. For example, in the case of depression, the therapist might continue, "... Our plan will be to alter the emotional states you experience by examining beliefs in the knowledge area that could be making you feel bad ... [Pointing to the social actor] ... we will also examine any interactive patterns you have that may be causing you social difficulties ...," and so on. Such a chart and the discussion around it may serve to demystify our science and convey the hard-earned research findings that support it.

Concluding Comments

There are many who believe that both the study of psychotherapeutic change techniques and the study of personality can benefit from pan-theoretical, crossdisciplinary views. I have presented one such unification that reorganizes certain ideas from two fields: clinical and personality psychology, by matching change techniques to the parts of personality they may influence. It is but one way that the integration of the fields may yield new insights about the research and practice of psychotherapy.

There is more than one way to unify a discipline, of course. And there is more than one way of dividing any complex system. Yet the unifications of today may be far closer together than the competing therapeutic perspectives of the 20th century ever hoped to be. By their very claim to be unifications, such perspectives are forced to interact more with one another. For example, the systems framework for personality makes critical use of the same molecular-molar dimension that Henriques (this issue, pp. 1207–1221) employs for his unification of psychology in general. Much of what he says concerning the expression of personality is consistent with the views here. The unity among unifications, in other words, may be rather substantial. A unifying framework for a discipline is, of course, a very abstract thing. Yet, such frameworks can have far-reaching practical implications. In clinical psychology, integration may influence everything from how therapy outcome research is conducted, to how a therapist communicates the changes that will be carried out in psychotherapy.

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