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# Unified Professional Psychology: Implications for the Combined-Integrated Model of Doctoral Training



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The authors outline a new identity for the professional psychologist termed Unified Professional Psychology (UPP). UPP combines recent movements toward a unified psychological science, an independent professional psychology, and Combined-Integrated (C-I) doctoral training programs in psychology. The value in the synthesis of these ideas is that they (a) provide a comprehensive system of thought that defines the science and practice of psychology in a commensurable manner, (b) offer a clear identity for the professional psychologist, and (c) set the stage for a training model that develops competencies that will prepare graduates to serve as leaders and advocates in a wide array of health settings. Issues pertaining to why a new view is needed and how UPP specifies the science–practice relationship are addressed in detail. © 2004 Wiley Periodicals, Inc. *J Clin Psychol* 60: 1051–1063, 2004.

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In this article, we offer a new vision and identity for the professional psychologist termed Unified Professional Psychology (UPP).<sup>1</sup> UPP represents the amalgamation of movements toward (a) a unified psychological science (Henriques, 2003; Staats, 1999; Sternberg & Grigorenko, 2001), (b) an independent professional psychology (e.g., Peterson, 1997), and (c) Combined-Integrated (C-I) doctoral training programs in psychology

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<sup>1</sup>The perspectives in this article do not necessarily represent “official” policy for any of the organizations or groups with which these authors may be affiliated.

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(Beutler & Fisher, 1994; Shealy, Cobb, Crowley, Nelson, & Peterson, 2004). Weaving together the central premises of each of these movements, UPP argues that (a) a coherent, unified framework for psychological science is possible, (b) the concept of professional psychology as applied human psychology that is separate from psychological science is legitimate, and (c) the C-I model of doctoral training in psychology, which prepares students to be generalist practitioners before preparing them for a specialization, provides a distinctive, synergistic training program that is advantageous for both student education and the future of the discipline. The value in the synthesis of these ideas is that they (a) provide a comprehensive system of thought that defines the science and practice of psychology in a clear and commensurable manner, (b) offer a clear identity for the professional psychologist, and (c) set the stage for a training model that develops competencies that will prepare graduates to serve as leaders and advocates in a wide array of health settings.

### The Need for a New View

In this article, we outline the primary reasons why the call for UPP is needed. However, given the abundance of "novel" proposals in psychology, many of which tend to add to the existing morass of information in the discipline (Staats, 1999), it is reasonable for psychologists to be wary of such proposals. The novelty of this proposal exists primarily in the organization of ideas. In particular, we propose that the alignment of ideas encapsulated in the concept of UPP both provides connection with previous ideas and builds a clear, coherent, generalist foundation. In so doing, UPP represents a crucial piece of the solution to psychology's increasing fragmentation. This point brings us to our first claim justifying the need for UPP.

### *Psychology Is a Fragmented Discipline, and Fragmentation Hurts*

As must be clear to any student of psychology, the discipline is currently (and has been in the past) fragmented. The fragmentation in the field is apparent in the following: (a) There is no agreed-upon definition of the field; (b) there is no agreed-upon subject matter; (c) paradigms with fundamentally contradictory assumptions compete for influence, and unresolved philosophical schisms abound; (d) there is a proliferation of overlapping, yet inconsistent, concepts; and (e) numerous prominent authors have flatly stated that the field cannot be unified (e.g., Gardner, 1992; Koch, 1983). From the standpoint of UPP, these are symptoms of psychology's existing in a preparadigmatic state. They are in contrast with the state of the mature, paradigmatic sciences of physics and biology (Staats, 1983).

Although several scholars have questioned the severity of the problem and even have suggested that the diversity of ideas represents strength in the discipline (e.g., McNally, 1992; Viney, 1989), we believe there are several reasons that fragmentation should be a serious concern. First, as noted by Yanchar and Slife (1997), scientific rationality requires common standards for the interpretation of information. Without such standards, separate discourse communities cannot evaluate or integrate theory and data generated in other communities. In other words, fragmented epistemologies dramatically reduce the utility of the empirical process. Yanchar and Slife also stated that extreme fragmentation threatens the field via dissolution (e.g., Gardner, 1992). We would add to these concerns that, like a library system that randomly categorizes books, a fragmented psychology prevents knowledge from being effectively organized. Fragmentation also creates problems because

huge resources are spent on infighting, competing agendas frequently result in the devaluing of other perspectives, and the conceptual disorganization leaves psychology vulnerable to being viewed as a “would be” discipline (Staats, 1999).

### *An Identity Crisis*

Deeply connected with psychology’s problems of fragmentation is psychology’s identity crisis. Consider how the field struggles with basic questions such as “Is the science of psychology a natural or a social science?” (e.g., Kimble, 1984) or “What is the nature of the relationship between science and practice?” (e.g., O’Donohue & Halsey, 1997) or “What differentiates professional psychology from psychiatry or clinical social work or general counseling?” (e.g., Lindskoog, 1998). The lack of effective answers to these questions has resulted in the serious difficulties the field of professional psychology has had in crystallizing an identity. The difficulty has been substantial enough such that lawyers and legislatures have warned the discipline that if professional psychologists cannot agree on the nature of the discipline, it will be defined for them (Reaves, 1983).

The unclear professional boundaries are not only apparent between professional psychology and other health care disciplines but also are seen within the field itself. For example, numerous authors have noted that the distinction between clinical and counseling psychology has diminished substantially (e.g., Norcross, Sayette, Mayne, Karg, & Turkson, 1998). Clinical, counseling, and school psychology are each considered “general practice” disciplines and “health service providers,” and research has demonstrated that there is a high degree of overlap in the eventual employment of individuals with degrees in each of the specific practice areas. Analysis of the curriculum and training experiences across the specialties suggests that many single-specialty programs could incorporate aspects of other specialties with as little as a 10% alteration to extant course and practicum requirements (Cobb et al., 2004; Cobb & Schare, 2002). So much overlap in curriculum and eventual job placement raises serious questions about the distinctiveness of the core practice areas. Indeed, Beutler and Fisher (1994) concluded that “although the distinctive developmental and educational histories of the three specialties have benefited each, contemporary practices, employment patterns, and social demands have largely eliminated the relevance of these original distinctions” (p. 64).

### *An Economic Crisis*

Several authors have noted some alarming and problematic trends in the profession. For example, numerous surveys have found decreases in the salaries of professional psychologists (e.g., Saeman, 1998) as well as increasing numbers of psychologists having a low opinion of the field and considering a job change (Knapp & Keller, 1998). After conducting a broad survey of the status of professional psychology, Knapp and Keller (2001) concluded, “professional psychology in recent years has fallen on difficult times, as psychologists’ incomes have leveled off or decreased, the quality of professional lives has declined, and employment opportunities (especially for newly licensed psychologists) have decreased” (p. 71). In addition to economic difficulties, there also are problems in the relationship between amount of training and eventual incomes. After surveying the relationship between licensure requirements and salary, Olvey, Hogg, and Counts (2002) concluded that

when compared to other professions, professional psychologists are clearly the top-of-the-line in terms of requirements for licensure. It is also apparent that psychologists lie near the bottom-

of-the-heap in terms of earnings. Professional psychology finds itself at a crucial juncture in the continuing evolution of the field. To begin reestablishing itself in the market place, psychology needs to . . . assess its identity as a profession and reinvent itself for the 21st century.” (p. 328)

To summarize, psychology is a diffuse and fragmented construct with little or no univocal definitions or agreements about its fundamental nature. Furthermore, although the causes are complex and undoubtedly multiply determined, it seems clear that professional psychology has recently faced a decline in its power base and is facing a crucial juncture in its development as a discipline. We believe that if it is going to be successful in its revitalization, it will need to define itself in a manner that clarifies its mission, solidifies its place as a primary health care discipline, and clearly specifies its boundaries with other disciplines. Toward that end, we offer the construct of UPP.

### Defining UPP

As mentioned previously, UPP consists of the amalgamation of three different movements in psychology toward: (a) a unified science of psychology, (b) an independent professional psychology, and (c) generalist training models as embodied by C-I programs. In this section, we briefly review each of these three movements, highlighting their major components. We then articulate why these movements carry a synergistic potential that can help clarify and define some foundational issues in professional psychology.

#### *Toward a Unified Science of Psychology*

Although there is clearly a general trend in the field toward increasing scientific specialization in psychology, there has recently been a growing interest in articulating a unified vision for psychological science (e.g., Anderson, 1996; Gilgen, 1987; Magnusson, 2000; Newell, 1990). Staats (1963, 1991) articulated one of the most ambitious approaches to unification. Called psychological behaviorism, Staats's (1996) approach explicitly attempts to build bridges both within the various fields of behavioral science and between behaviorism and traditional psychology (e.g., social, personality). Staats (1996) described his work as an interlevel, interfield theory that cuts across the various disciplines in the field and uses simpler phenomena to explain more complex phenomena. Anchored to an evolutionary biological framework of emotions, Staats articulated how organisms build “basic behavioral repertoires” throughout their development by learning to approach positive emotional stimuli and avoid negative emotional stimuli. Staats used this model as a building block for more complex models of human cognitive phenomena, such as language, and thus linked behavioral theory with higher cognitive processes. Staats (1983, 1999) also offered incisive analyses of psychology's culture of separatism and showed how psychology was lacking in an infrastructure to develop a coherent organized knowledge structure.

Both of the current authors also have offered separate, but complementary, visions for developing a unified psychological science. Sternberg and colleagues (Sternberg & Grigorenko, 2001; Sternberg, Grigorenko, & Kalmar, 2001) proposed a new way of thinking about and organizing the field of psychology, which they termed “unified psychology.” Unified psychology is the multiparadigmatic, multidisciplinary, and integrated study of psychological phenomena through converging operations. In other words, the unified psychologist draws from many schools of thought and many different disciplines, and

“knits” these ideas together to offer a coherent, multilayered description of psychological phenomena. In presenting their model, the authors called on psychological scientists to give up the current bad habits of overreliance on single methodologies, single schools of thought, and identities based on somewhat arbitrary psychological subdisciplines (e.g., personality) rather than specific psychological phenomena (e.g., prejudice). In essence, unified psychology calls on psychological scientists to be more self-reflective about the separatist nature of the discipline and to move toward developing a more cooperative, synergistic orientation.

In a similar vein, Henriques (2003) offered a “theoretically unified psychology.” Concerned with the lack of agreement regarding the conceptual foundations of the discipline, he proposed a new epistemology termed the Tree of Knowledge (ToK) System. The ToK System is a diagram that depicts the evolution of complexity as mapped out by scientific inquiry. The most significant element of the ToK System is that it offers a new vision of the nature of knowledge as consisting of four levels or dimensions of complexity (Matter, Life, Mind, and Culture) that correspond to the behavior of four classes of objects (material objects, organisms, animals, and humans), and four classes of science (physical, biological, psychological, and social).

This novel view sets the stage for new ways of looking at the science of psychology. Yanchar and Slife (1997) argued that the key question facing the unification movement was the question of commensurability between competing theories. Henriques (2003) argued that commensurability could be achieved through the use of the ToK System. He focused specifically on the works of Freud and Skinner. When one considers the magnitude of the epistemological divergence and the scope of their influence on the larger field, it can be readily argued that Skinner’s radical behaviorism and Freud’s psychoanalysis represent two of the seemingly most incommensurable sets of ideas in psychology. Yet Henriques (2003) showed how the ToK System could be used to demonstrate that there are many implicit assumptions shared by the two systems. For example, Skinner’s (1981) three tiers of selection demonstrate a clear correspondence with Freud’s (1940) structural model of id, ego, and superego. These notions, in turn, clearly relate to biopsychosocial models currently prominent in the discipline.

Henriques (2003) further showed how Skinner’s (1981) fundamental insights concerning behavioral selection related to developing a framework for the general laws of animal behavior. In contrast, Freud’s (1940) fundamental observations, seen in his structural and topographical models of mind, related to the tensions between biopsychological processes and the sociolinguistic context in which humans live. Henriques (2003) used the ToK System to demonstrate explicitly that these two foci represent two fundamentally different levels of analysis. Specifically, he showed how Skinner focused primarily on animal behavior and the “joint point” between biology and psychology whereas Freud’s focus was on human behavior and the “joint point” between psychology and the social sciences.

After demonstrating how the ToK System could be used to effectively align the central insights of Skinner and Freud and define psychology in relationship to physics, biology, and the social sciences, Henriques (2003) concluded:

A well-defined subject matter, a shared language, and conceptual agreements about the fundamentals are key elements that constitute a mature science. The physical and biological sciences have reached maturity. The psychological sciences have not. Instead, students of psychology are given choices to be or not to be radical behaviorists, cognitive psychologists, evolutionary psychologists, social constructivists, feminists, physiological psychologists, or psychodynamic psychologists, among others. The lack of a shared, general understanding has had unfortunate consequences. Paradigms are defined against one another and epistemological

differences justify the dismissal of insights gleaned from other approaches. The result has been a fragmented field and a gulf between the natural and social sciences. (pp. 177–178)

This analysis suggests that the fragmentation that currently characterizes the field of psychology is unnecessary. Instead, by utilizing the ToK System as a meta-theoretical framework, a coherent unified theory of psychology is possible. With it, the truth stands a genuine chance of emerging.

### *Toward a Powerful and Independent Professional Psychology*

As should be clear from the previous excerpts, the term “psychology” was used to connote a science. But psychology is not only, or even primarily, a science. Formally recognized by the American Psychological Association in 1946, psychology also is a profession. As is well documented, professional psychology received an enormous boost following World War II, when professionals were needed to help the returning veterans learn to readjust to their lives at home. The 1960s and 1970s saw continued growth in the profession, and the period has been referred to as “the golden age of psychotherapy” (Cumings, 1995), in which practitioners saw an endless flow of patients, for as long as desired, with consistent and generally unquestioned reimbursement for their services.

Despite this relative prosperity, many still questioned whether psychology was legitimately considered an independent profession (Peterson, 1997). Indeed, the cornerstone of psychological practice, the scientist–practitioner model, can readily be interpreted as arguing that the only way the practice of psychology is justified is via science, and thus did not fully legitimize psychology as an independent profession. Furthermore, the Vail conference of 1973 was defined in contrast to the Boulder model, and endorsed the concept of training psychologists solely as professionals, as distinct from scientists and scientist–practitioners. The development of the Doctor of Psychology degree further solidified the notion that the profession of psychology was separate from the science.

Donald Peterson has been one of the most prominent and vocal leaders of the professional psychology movement. Characterizing the field as evolving from a preprofessional phase through the scientific–practitioner phase to a professional phase, he has articulated with clarity and precision why psychology was ready to establish itself as an independent profession and how that identity was separate from psychological science (e.g., Peterson, 1991). Defining professional activity as discipline inquiry, Peterson specified the fundamental distinction between science and practice as follows: “Science and practice differ in fundamental ways. Science begins and ends in a body of systematic knowledge . . . Professional activity begins and ends in the condition of the client” (pp. 425–426). Thus, the goals of the scientist are qualitatively different than the goals of the practitioner. As we will argue later, this crucial point has historically been muddled within the field, and it is only through the explicit recognition of this fundamental difference that science and practice can be made to be commensurable.

### *Toward a Generalist Training Model for Professional Psychologists*

Although training programs that combine across two or more of the recognized practice areas (clinical, counseling, and school) have existed for a number of years, it is only recently that scholars have begun to argue for the legitimacy of the C-I model on deep philosophical grounds (e.g., Beutler & Fisher, 1994; Shealy et al., 2004). Importantly, the central argument for legitimizing C-I doctoral training programs parallels a central argument for the unification of psychological science. The argument is that there is tremen-

dous overlap in the basic foundational knowledge, skills and competencies, ethical systems, roles, and eventual employment settings among the core practice areas. As such, it makes good practical sense to train students in these general areas initially, and subsequently provide specialization in specific areas.

The reason it makes good practical sense to do this is because a generalist orientation opens up pathways to draw from each of the three practice areas in a manner that is complementary and synergistic. This is different from the specific school approach because the single schools exist, by definition, in contrast to the other practice areas. That is, to justify its legitimacy, clinical psychology has to be different from counseling psychology, which in turn has to be different from school psychology. From the generalist point of view, the focus on difference and separatism can create problematic schisms, turf wars, the magnification of minor and peripheral differences, and the proliferation of overlapping and redundant concepts (Braxton et al., 2004; Cobb et al., 2004; Shealy et al., 2004).

Consider, for example, the recent proposal for a positive psychology, a movement co-launched by a prominent clinical psychologist, Martin Seligman (Seligman & Csikszentmihalyi, 2000). Much of the justification for the movement was that the field had traditionally focused on mental illness and deficiency and needed to develop empirically grounded explorations of constructs such as optimism, hope, resiliency, and courage. However, as was pointed out by several critics (e.g., Shapiro, 2001), the authors generally neglected to mention many aspects of the entire human-potential movement. We believe the omission is symptomatic of the problems that can arise as a consequence of separatism within the practice areas. In contrast to clinical psychology, counseling psychology much more centrally adopted the humanistic tradition (Beutler & Fisher, 1994). Indeed, a focus on human growth and potential has been one of the key defining elements that historically has distinguished counseling psychology from clinical psychology (Lopez, Edwards, Magyar-Moe, Pedrotti, & Ryder, 2003). Thus, the positive psychology movement was novel only from the clinical point of view. It also should be noted that the call for a positive psychology by a clinical psychologist raises questions regarding the conceptual distinction between clinical and counseling psychology. The point here is not that positive psychology is a bad thing. Rather, the point is that the fragmented and separatist nature of psychology sets the stage for the constant reinventing of the wheel and the proliferation of redundant notions.

The generalist training philosophy also is directly in line with recent developments to define the core competencies of professional psychologists. Responding to the increasing need to establish and clarify the identity of professional psychologists, the National Council of Schools and Programs of Professional Psychology (NCSPP) developed a competency model that became a nationally recognized standard against which professional programs in any of the practice areas could be evaluated (Peterson, Peterson, Abrams, & Stricker, 1997). More recently, the landmark *Competencies 2002 Conference* also specified knowledge areas, skills, and values that should be acquired by professional psychology students across the practice areas of clinical, counseling, and school psychology (Association of Psychology Postdoctoral and Internship Centers, n.d.; see also Schulte et al., 2004; Shealy, 2004). Importantly from the point of C-I programs, the core competencies that were agreed upon at *Competencies 2002* and the *Consensus Conference* cut across the practice areas and thus provided a clear foundational training base for an integrative and generalist practitioner model (Shealy et al., 2004; see also Consortium of Combined-Integrated Doctoral Programs in Psychology, n.d.).

In articulating the value of C-I programs, it also must be noted that the C-I training philosophy recognizes that there is value to be had in the single-school approach to practice. The unique cultures and identities afforded by the single schools have much to

offer the developing professional. Furthermore, it should be stated explicitly that the C-I model is *not* against specialization; however, at the same time, we believe the C-I training model does offer a valid, unique, and powerful training program and philosophy. In short, although C-I programs offer a legitimate alternative to the single-school approach, they do not seek to delegitimize or invalidate such approaches (Shealy, 2002, 2003).

### The Relationship Between Science and Practice From the UPP Perspective

There is perhaps no more contentious and confusing issue in psychology than the relationship between science and practice. We believe that this confusion stems from (a) political antagonisms, which arise in the context of incomplete and inaccurate knowledge, and often result in devaluing the "opposing" side; (b) the inherent complexity in both accruing and applying psychological knowledge; (c) disorganization in the science of psychology; (d) major historical figures who failed to appreciate the core distinction between the science and practice; and (e) the fact that psychology is a single term used to reference both the science and the profession.

A core principle from the UPP perspective is that both the science and the profession of psychology are to be strongly valued. Both domains are seen to fill crucial niches and produce beneficial outcomes for society at large. Neither antiscience attitudes nor the view that professionals are somehow lesser or part of a "minor" discipline are congruent with UPP. Instead, UPP has, as a core value, the belief that the science and the profession need each other and can work in a manner that is cooperative, synergistic, and mutually beneficial.

Another core belief operating from the UPP perspective is the explicit recognition of the inherent complexity of psychological phenomena. This complexity justifies an orientation of disciplined inquiry, caution in making extreme statements, and substantial humility regarding the limits of our knowledge base for both scientists and practitioners. To see how this core value applies in facilitating a more constructive relationship between scientists and practitioners, consider, for example, the hotly debated issue of Empirically Supported Treatments (ESTs). Through valuing of both the science and the practice of psychology, the idea of ESTs should be seen as a very positive construct from the UPP perspective. That is, those operating from a UPP perspective should agree with the notion that, in theory, the therapy process will benefit from application of the scientific method in deciphering the most effective tools for assisting therapists in their task of helping people achieve better psychological functioning and a greater sense of well-being. This is because the scientific method should be welcomed in its application to therapy, at the very least to ensure that practitioners are not simply deceiving themselves regarding the effectiveness of their interventions out of a hidden, self-serving bias (see Rogers, 1961).

This generally positive attitude toward the concept of empirical exploration of psychotherapy does not, however, necessarily translate into a full-scale endorsement of manualized ESTs. The reason is because the situation is full of complications. Consider the fact that virtually all ESTs have been conducted on diagnoses derived from the *Diagnostic and Statistical Manual for Mental Disorders* (DSM IV; American Psychiatric Association, 1994). Yet, many scholars have voiced serious concerns about the basic conceptual foundation of the DSM, with virtually all individuals acknowledging that the DSM's descriptive nosology represents a less advanced state than a nosology based in etiology (Henriques, 2002). Of course, if a large portion of the conceptual base of the EST program is anchored to a highly problematic classification system, confidence in the endorsement of ESTs diminishes. Additional issues regarding external validity, difficulties encountered with conducting manualized treatments in practice, treatment fidelity in dis-

semination, the fact that ostensibly different treatments often yield very similar effects, and the fact that more researchers operate from a cognitive or behavioral orientation rather than a psychodynamic or humanistic orientation all interact to make the issue of ESTs one about which well-meaning, intelligent individuals can come to substantially different conclusions. Importantly, these ideas were encapsulated by a basic principle guiding the C-I model of training—that “C-I programs support evidence-based practice that is ecologically valid and relevant for practitioners and scientists alike” (Shealy et al., 2004). The point here is that a unified professional psychologist, with his or her explicit acknowledgment of the complexities inherent in the task, is well positioned to be appreciative of and open to a wide variety of viewpoints on many of the central issues in professional psychology.

Another central issue in clarifying the relationship between science and practice from the perspective of UPP is the formal acknowledgment that psychological science has, up to this point, not been effectively defined or organized. Thus, the unified professional psychologist both values psychological science and believes fully in its potential as indicated earlier, but at the same time is critical of psychological science for failing to produce a coherent, integrated body of knowledge that is readily applied in the service of promoting well-being.

Consider, for example, that the majority of practitioners trained in academic settings describe their orientation as “cognitive-behavioral” in nature. This is true because, at a practical level, drawing from both the cognitive and behavioral sciences makes good sense. However, at a deep theoretical level, there is a contradiction. Cognitivism is mentalistic in nature. Conversely, one of the defining features of behaviorism is an antimentalistic epistemology. Thus, at the level of scientific theory, CBT represents a mentalistic/antimentalistic approach to therapy. The point here is that is incumbent on psychological scientists to take some responsibility for producing a disorganized, poorly defined body of knowledge that inevitably results in practitioners putting information together in a piecemeal fashion. Of course, the remedy to this situation is found in one of the key elements of UPP, which endorses the movement toward a clearly defined psychological science.

A third key issue is that the unified professional psychologist recognizes a fundamental difference between science and practice. As alluded to earlier, the fundamental difference is that the goal of the (basic) psychological scientist is to contribute to the fund of general, scientific knowledge. By positioning himself or herself as a detached, objective observer, the task at hand becomes fundamentally descriptive. Type I errors are a major concern, and experiments are conducted to discard false leads. The task of the practitioner is fundamentally different: It is primarily to effect change, not describe it. The change is, of course, the improvement in the functioning and well-being of the client. To the practitioner, psychological knowledge is not the end but a means to the end. Thus, in contrast to others who have argued that science is practice and practice is science (Hoshmand & Polkinghorne, 1992), we argue that the two domains are qualitatively different, but intertwined. It is through the clear recognition of this fundamental difference that the complementary roles of the scientist and the practitioner are seen as both necessary and good.

It is crucial to note that many of the seminal figures in the field have had different and conflicting views regarding the relationship between science and practice. O’Donohue and Halsey (1997) reviewed the views of Freud, Skinner, Ellis, and Rogers and found marked differences in the substance of the science–practitioner relationship. Importantly from our perspective, none of these seminal figures articulated the view put forth by Donald Peterson that science and practice are fundamentally different exercises—the

former descriptive, the latter prescriptive. For example, Freud saw psychoanalysis as both a therapy and a scientific process. Similarly, Skinner, whose focus was on the control of behavior, saw behavior therapy as a logical extension of lab-based principles. Neither explicitly acknowledged the different goals of the basic scientist relative to a practitioner. We believe this failure relates deeply to the long-standing, conflicted relationship between science and practice.

A significant issue that surely contributes to confusion between the scientist and practitioner is the fact that psychology connotes both a basic science and a profession. Contrast this with the state of affairs in biology and physics. Applied, clinical biology is connoted by a different name—medicine. Similarly, engineering connotes the application of physical knowledge toward human ends. Thus, according to the perspective offered by UPP, professional psychology is to medicine and engineering what the basic science of psychology is to biology and physics. The former disciplines seek to apply scientific knowledge toward some end whereas the latter disciplines seek knowledge for its own sake.

This emphasis on the difference between basic science and professional practice raises the crucial question of whether practitioners are considered scientists. Science is a privileged term, and by emphasizing the conceptual difference between science and practice, it could be interpreted that UPP is arguing that professional psychologists are not scientists; however, this is not accurate. Professional psychologists are scientific practitioners (Peterson, 2002; Trierweiler & Stricker, 1998). The logic of this argument is seen when professional psychologists are compared to other helping professions such as ministers or lawyers. In contrast to these professions, professional psychologists are trained in scientific methodology and anchor their knowledge base to a basic scientific discipline. The parallels between professional psychology on one hand and medicine and engineering on the other offer further clarity in seeing how professional psychologists can be considered scientific practitioners. As stated by the NCSPP guidelines and consistent with the model advocated here, “the properly trained professional psychologist is a scientist in the sense that a skilled physician is a local clinical, biological scientist and the skilled engineer a local physical scientist” (p. 376).

### Conclusion

As we hope most professional psychologists would agree, individuals who possess fragmented, erratic, and logically inconsistent identities often have serious problems behaving effectively. We believe the same is true for professions. Neither the science nor the profession of psychology has been successful in carving out a well-defined identity that clarifies the roles and boundaries both with other disciplines and among the specialties within the field. Professional psychology’s first golden age has passed, and now faces serious challenges in its revitalization. If psychology is to thrive in the 21st century, it must resolve its identity crisis and effectively define its place as both a science and a profession. UPP lays a foundation from which a new and healthy identity can flourish. The C-I model translates this identity into a mission and principles that should have pragmatic appeal to scientists and practitioners alike.

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