



Developing a Unified Theory of Psychotherapy: Mission Accomplished or a Bridge Too Far?

A Review of

Cognitive Neuroscience and Psychotherapy: Network Principles for a Unified Theory

by Warren W. Tryon

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Reviewed by

James P. Schmidt 

Over the past 40 years, Warren W. Tryon has written extensively on integrating various models of psychotherapy. *Cognitive Neuroscience and Psychotherapy: Network Principles for a Unified Theory* represents the culmination of those efforts, but aims far beyond that. Indeed, Tryon sets out to provide a unified theory that will encompass all of psychology. Asserting that psychology is “an immature science with a substantial explanatory problem” (p. ix), he proposes to provide “psychotherapy integration via theoretical integration in a way that enables psychology to be practiced as a mature science” (p. ix). He believes that in order for psychology to reach maturity, it must find a single, unifying, explanatory theory, which he proposes to provide.

What Is Tryon’s Proposed Theory?

In the first section of his book, titled Theoretical Unification, Tryon argues that psychology has failed to develop a single explanatory theory because it has failed to identify the underlying mechanisms that will allow us to *explain* rather than simply *describe* human behavior. In his view, the “explanations” proposed throughout our literature are nothing more than guesses based on often-false assumptions. He argues that our primary false assumption is that there is a psychological substrate to behaviour. In his view, the only real substrate is the biological one.

Tryon proposes to solve these shortcomings with his bio-psychological network theory or BPNT. BPNT rests on 12 principles that include four core network principles and eight corollary network principles. The four core network principles are, in brief, that (a) the vast majority of cognitive activity occurs in neural networks that operate outside of awareness, (b) learning consists of modifications of the network connections in response to exposure to

new stimuli, (c) thought is the transformation of the network connections by a biological process analogous to factor analysis, and (d) activation of network connections increases the likelihood that they will be reactivated in the future, accounting for memory. The eight corollary principles rely on such psychological phenomena as priming, part-whole pattern completion, and top-down/bottom-up processing. Tryon argues that all of these principles have been so firmly established by research that, although they may be subject to minor modification in the future, they almost certainly will not be disproven. Tryon refers to a wide-ranging body of literature drawn from such diverse fields as genetics, statistics, political science and economics to support the validity and significance of these principles. He then devotes a chapter to emotions, arguing that there are eight basic emotions (joy, trust, fear, surprise, sadness, disgust, anger, and anticipation) that arise in subcortical regions and, when blended, form the entire spectrum of emotions, just as primary colors when blended create the full spectrum of colors. For example, love is a blend of joy and trust, whereas contempt arises from a blend of disgust and anger.

The second section of his book is titled Psychotherapy Integration. In this section, Tryon applies the 12 network principles to psychotherapy. Although the content of this section is described as providing "clinical applications," the clinician will find little that will directly affect practice; rather, the discussion focuses on explaining how various aspects of psychotherapeutic practice can be understood in the context of BPNT.

Does Tryon Deliver on His Promise?

Will BPNT have the widespread and profound impact on psychology that Tryon hopes for? In my opinion, it's highly unlikely for three reasons.

First, Tryon's allusions to psychology, and by implication many psychologists, as "immature" or unscientific is likely to alienate or anger many psychologists, especially those who have grappled with and written about many of the issues he presents as if they had never before been discussed by anyone else. For example, Tryon virtually ignores the many previous attempts by others to integrate psychotherapy models, instead typifying psychotherapists as individuals who follow a single approach and ignore all others, not for empirical reasons but because this was the theory they were taught and with which they remain emotionally identified. He suggests that this has happened because

people selectively attend to and 'cherry-pick' information from memory, archival sources, and their current environment to support previously arrived at emotionally held convictions while maintaining the illusion that they are being objective. . . . Controlled research using standard research methods is. . . the only way we can protect ourselves from this automatic unconscious psychological process. (p. 237)

Many researchers in the areas of both neuroscience and psychotherapy are likely to take exception to the suggestion that they have fallen prey to this error.

Second, I believe that many readers will conclude, as I did, that Tryon himself has fallen prey to the very process he describes in the above quote. The reviews of the research that he provides as "proofs" of his 12 principles are likely to strike those with anything more than a passing knowledge of the research in these areas as based on "cherry-picked" bits of research, many of which provide interesting parallels but not causal links to neurobehavioral

processes. For example, although it is well recognized that computer-generated parallel and distributed processing networks are capable of producing output that is similar to at least some of the output of the human brain in such areas as visual perception, many and perhaps most neuroscientists would contest the notion that it has been proven that this is in fact how the brain actually functions. Indeed, evolutionary neuroscientists argue that different areas of the brain that evolved at different points in time operate in different ways (for an accessible discussion of this perspective, see Marcus, 2008). As another example, although the analogy of the brain sifting neural networks to create thought just as factor analysis sifts data arrays to identify underlying factors is an interesting one, it does not rise to the level of a theoretical explanation, much less a demonstrated mechanism of how the brain works. In the end, after a careful reading, I was unable to determine just what distinguishes Tryon's proposed "explanations" of behavior from those he derides.

My final concern about Tryon's model is that it implicitly relies on two theoretical models that have proven to be problematic when applied to a variety of spheres of scientific investigation. The first is reductionism and the second is systems theory. Tryon makes no mention of systems theory but does discuss reductionism, emphasizing that he is not a reductionist. However, he fails to provide a clear definition of just what he means by reductionism or, by extension, why he is not a reductionist. For the purpose of this discussion, we can define reductionism as the practice of explaining complex phenomena as being nothing more than manifestations of simpler or more fundamental phenomena that are sufficient to explain the complex phenomenon. Tryon notes that this process is flawed because such analysis of the simpler elements of a phenomenon ignores the interactions among those elements that make the whole more than the sum of its parts. We cannot, for example, explain the success or failure of a marriage simply by describing the individual psychological makeup of the two participants in that relationship. Although Tryon tacitly acknowledges this, in explaining psychotherapeutic processes using his 12 principles, he pays little or no attention to many phenomena that have a significant impact on psychotherapy, such as the influences of family or culture.

Systems theory is a model that argues that all "systems" (which can be defined as groups of interacting elements) follow certain systemic rules, whether those interacting elements are atoms, one-celled organisms, human beings, societies, ecosystems, or solar systems. Thus, the gravitational pull of the solar system can be equated with the electromagnetic fields of protons and electrons in atoms or individuals in a social group. Although such analogies can be useful for visualizing systems we can't see and can have heuristic value, scientific research has repeatedly shown that such systemic principles do not in fact exist and that such analogies are seldom robust. For example, although we have all been raised with a "solar system" image of what atoms look like, it is well known that, in fact, electrons do *not* behave like planets circling a sun. Although he does not mention systems theory, Tryon's implicit acceptance of systems theory is demonstrated by his willingness to perceive his principles at work in such diverse fields as statistics, economics, computer science, and learning theory, as well as by his willingness to equate, for example, factor analysis with thought.

Although a grand theory that integrates all psychotherapeutic models, much less all of psychology, has long been the pot of gold at the end of the rainbow for many theoreticians, a dispassionate examination of the evolution of science reveals that as sciences evolve, they move away from global theories that explain everything in general terms and toward narrower theories that explain smaller phenomena in much more specific terms. Global

theories, like the end of the rainbow, are mirages: Although they appear very real and inviting at a distance, as you draw closer they pixelate into nothing. I fear that most careful readers of this text will conclude that Tryon's grand theory meets the same fate.

Reference

Marcus, G. (2008). *Kluge: The haphazard construction of the human mind*. New York, NY: Houghton Mifflin.