Toward a Metaphysical Empirical Psychology

Gregg Henriques

Take a moment and reflect on the following questions: (1) *What is the world made of?*; (2) *Why is world the way it is?*; (3) *What is the place of humans in the world?* In the language of the current chapter, the answers that emerge in response to these kinds of questions are drawn from what Pepper (1942) called one's "world hypotheses." Here I refer to this as one's "metaphysical system." The goal of this chapter is to show that the metaphysical system being used is as crucial to the enterprise of psychology as empirical investigations—they simply occupy different ends of the spectrum of knowledge. Correspondingly, my re-envisioning the future vision for theoretical and philosophical psychology calls for the analysis of the metaphysical systems that are operative, although often implicit in the field. This chapter makes the case that mainstream psychology move from its current exaggerated emphasis on empiricism to a "Metaphysical

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G. Henriques (✉)
James Madison University, Harrisonburg, VA, USA
e-mail: henriqgx@jmu.edu

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Empirical" approach. A Metaphysical Empirical Psychology would be one that attends the entire dimension of analysis that stretches from specific empirical findings all the way to the concepts and categories that define and describe the core subject matter (i.e., behavior, mind and consciousness).

Defining the Metaphysical and Empirical Domains of Analysis

The Merriam-Webster on line dictionary (https://www.merriam-webster.com/dictionary/; retrieved April 23, 2018) defines *metaphysics* as: (1) a division of philosophy that is concerned with the fundamental nature of reality and being that includes ontology, cosmology, and epistemology; and (2) abstract philosophical studies, including what is outside of objective experience. The same dictionary defines *empirical* as: (1) originating in or based on observation or experience; (2) relying on experience or observation alone without due regard for system and theory; and (3) capable of being verified or disproved by observation or experiment. Mainstream psychology has, by and large, completely neglected metaphysics, and it has adopted a heavy emphasis on the second and third meanings of the word empirical. That is, academic psychologists generally eschew philosophy and big picture thinking and subjective observations (the first definition of empirical), and instead focus on data gathering and experimentation. The vision offered here is that psychologists should be considering the entire dimension that stretches from metaphysics to empirical data collection (Fig. 1).

Because the word metaphysics has a long and complicated history, it is necessary to clarify what is meant by the term here. The word is sometimes associated with New Age, alternative, or mystical ways of thinking. In a related vein, the word can be used in a pejorative sense to communicate things that are not very serious or things that are unknowable. For example, if someone were to say, "Now you are just talking metaphysics," it is likely that the speaker would mean the person was just talking nonsense or was engaged in pure speculation. Using metaphysics in this way stems in large part from the emergence of modern scientific ways of

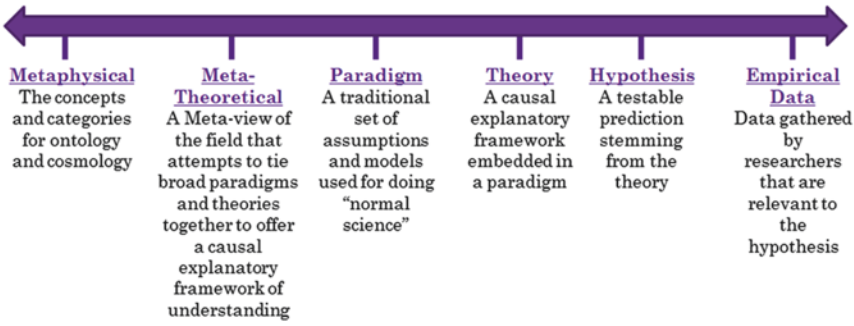

Fig. 1 The metaphysical to empirical dimension of analysis

thinking, which emphasized the importance of empirical investigations over pure philosophical inquiry (or speculation or unfounded claims). Although understandable, it is unfortunate that metaphysics came to be ignored by so many because, in its formal sense, metaphysics refers to the most fundamental branch of philosophy.

Inside academic philosophical circles, metaphysics remains an important area of inquiry. Philosophers who work in metaphysics are generally concerned with deep questions about ontology. In this chapter, I will be emphasizing the concept of a "metaphysical system," which refers to the system of concepts and categories one is using to describe reality. As noted in the Merriam definition, metaphysics deals with the intersection of ontology, cosmology, and epistemology. A metaphysical system, then, is defined here as one's theory or version of reality, which includes: (1) the picture of the universe as a whole (cosmology); (2) claims about what is real, including the concepts and categories that one uses to map the world (ontology); and (3) one's knowledge systems about the world and what constitutes justifiable knowledge (epistemology).

Mainstream psychology generally does not deal with these big picture questions; the field is instead generally committed to a narrower empiricism focused on variables of interest that can be measured. This focus is apparent as soon as one enters the discipline. In a highly popular introductory textbook, David Myers and Nathan DeWall define psychology as "the scientific study of behavior and mental processes," (Myers & DeWall, 2016, p. 7) which is a standard, mainstream definition. The authors

proceed to define behavior as "anything an organism does—any action we can observe and record," and mental processes as "the internal, subjective experiences we infer from behavior—sensations, perceptions, dreams, thoughts, beliefs and feelings." One's a priori definitions are derived from one's metaphysical system; that is, the concepts and categories that one uses to carve up reality. Thus, Myers and DeWall are operating from a metaphysical system, even if it is implicit.

Yet the textbook authors do not explore their definitions, nor the model of the world from which they were derived. Instead, the focus moves quickly to the primary focus of mainstream psychology, and states "the key word in psychology's definition is science," which "is less a set of findings than a way of asking and answering questions" (Myers & DeWall, 2016, p. 7). In other words, psychologists approach their subject matter through the lens and methods of empiricism. The authors central hope is that readers learn "how psychologists play their game," by which they mean the students will learn how psychological researchers engage in studies, measure constructs, and test hypotheses to evaluate conflicting opinions and ideas about psychological subjects. Similar examples of this kind of perspective on psychology abound.

The technical term for the position that Myers and DeWall take is called *methodological behaviorism*. This refers to the notion that because science must deal in measurement and general, third person observation, data must come from behaviors. In 1956, Bergman wrote, "Virtually every American psychologist, whether he knows it or not, is nowadays a methodological behaviorist" (p. 270). It is as true of the cognitive psychologists as of the more traditional behaviorists. George Mandler put it this way:

> [N]o cognitive psychologist worth his salt today thinks of subjective experience as a datum. It's a construct…. Your private experience is a theoretical construct to me. I have no direct access to your private experience. I do have direct access to your behavior. In that sense, I'm a behaviorist. In that sense, everybody is a behaviorist today. (Mandler in Baars, 1986, p. 256)

The idea has permeated the whole discipline and is deeply embedded in the institution. Moore (2012) put it this way:

> methodological behaviorism currently underlies mainstream research programs in psychology as well as professional socialization in that discipline. It underlies courses in research methods, experimental design, and statistics in most psychology departments at colleges and universities. It underlies such standardized tests in the discipline as the Graduate Record Examination. Research and psychological explanations that are not consistent with these features are given less weight, if any weight at all, in the scientific community, for example, as reflected in the editorial practices of journals and research support from granting agencies.

In short, in mainstream psychology rests on an (often implicit) methodological behaviorism. The goal of this chapter is to explain why this is not sufficient and lay out why attention on the broader metaphysical system is necessary for psychology to reach its full potential. This is where much attention from theoretical psychologists should be focused.

Before proceeding, I need to avoid a strawman characterization of empirical psychology. It is, of course, the case that no one operates on empirical data alone. Rather, empirical data are always interpreted in relationship to some model or theory, which in turn is embedded in a larger paradigm or shared understanding of the way the world works. Common psychological paradigms include social cognitive, behavioral, psychodynamic, humanistic, evolutionary and cultural or indigenous approaches. In short, we need to acknowledge that mainstream psychology is already operating on more than just empirical data, and that there are many conceptual frameworks and models that have been offered as maps for organizing data. Figure 2 captures the levels of analysis in mainstream empirical psychology.

Both mainstream and theoretical psychologists are aware of this layering. In their proposal for formally defining the sub-discipline of theoretical psychology, Slife and Williams (1997) acknowledge that "theories" have always been a part of the field. Theories have ranged in scope from specific models that connect variables (e.g., social support relates to human happiness) to grand theorizing by the field's luminaries, such as William James, Sigmund Freud and John Watson. Consistent with the current critique, these authors point out that broad theorizing has largely diminished, and the primary focus and activity of the discipline has narrowed to models tied directly to empirical data. They write (p. 118):

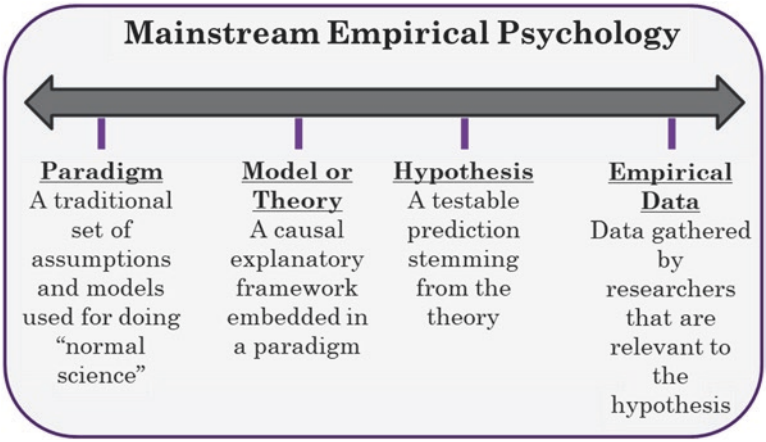

Fig. 2 Mainstream psychology ranges from paradigms to empirical data

> [T]here has been a general disaffection with theory in psychology. The discipline has moved away from grand, subsuming theories in the traditional sense and moved toward models, techniques, and micro theories in the more modern sense. Most experimentally oriented psychologists, for example, focus on models. …Models are typically delimited explanations that involve only a circumscribed field of endeavor, such as visual memory or neurotransmitters. These models are rarely expanded to full-blown theories. And yet such models rest on a host of broader theoretical assumptions that are often never recognized and almost never examined.

Slife and Williams (1997) proceeded to argue that mainstream psychology has evolved toward the positivist philosophy of Augusta Comte, who had a vision of science that moved from theory into statements and claims directly supported by empirical evidence. However, Slife and Williams point out that positivism is itself a philosophy and conceptual position that is not empirically supported per se, but rather supported by argument and assumptions, many of which are highly dubious. These authors proceed to make the case for why we need theoretical psychologists who examine the underlining assumptions of the paradigms and methodologies that drive the discipline. They buttress that argument by point-

ing out the highly fragmented state of psychological knowledge and the many competing paradigms that are overlapping but also contradictory, resulting in a rather chaotic state of knowledge. Such conceptual confusion cannot be solved via empirical research alone. As such, the field needs individuals who can engage in a meta-theoretical perspective, and who can evaluate the assumptions of various theories and serve as a consultant and commentator at this higher and more abstract level of analysis.

The current proposal for re-envisioning theoretical and philosophical psychology is to extend the picture offered by Slife and Williams (1997) in a constructive manner. Slife and Williams note that much work in theoretical psychology has offered critical philosophical analyses of the current field or pointed toward alternative directions to the mainstream. However, they also emphasized that the role of the theoretical psychologist is to view the field as a whole, and the need to explore ways of conceiving that whole. It is here that the current proposal advances a new vision for the field. Specifically, by emphasizing the left side of the continuum, the call is for theoretical and philosophical psychologists to offer both critical and constructive analyses of the metaphysical systems, as well as explore meta-theoretical perspectives that examine the paradigms and their interrelations (see Fig. 3).

The current chapter thus advocates for theoretical and philosophical psychology to stake out this aspect of the field and to embolden psy-

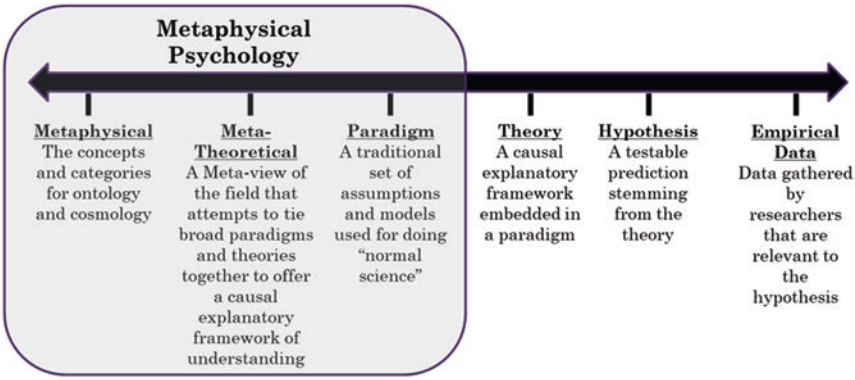

Fig. 3 Theoretical and philosophical psychology focuses on the left side of the continuum

chologists to insist that attention to this aspect of the continuum is crucial for the field as a science. In addition, this chapter outlines what a proposal for a Metaphysical Empirical Psychology can look like. However, prior to articulating some of the features of that system, we need to understand first why psychology has been plagued by metaphysical problems since its inception.

Understanding Psychology's Metaphysical Problems

In *How to Think Straight About Psychology*, Keith Stanovich (2012) notes that many students are "disappointed because psychology contains not one grand theory but many different theories, each covering a limited aspect of behavior" (p. 4). These students have a sense regarding the importance of coherently organized knowledge, and we should heed their disappointment. Empathizing with these students begins to allow for the recognition of the "problem of psychology" (Henriques, 2008). The problem of psychology is illuminated by considering the story of Sigmund Koch. Koch was charged by the American Psychological Association to conduct a "study of the science" in the late 1950s, with the goal of clearly defining the discipline. After years of study, he concluded that the field of psychology was not a conceptually coherent entity and, more than that, he concluded *it could not be one*. Instead, his conclusion was the thing we called psychology was really a loosely overlapping "confederation of subdisciplines" that were concerned with different subject matters from different perspectives and advocated different methods of investigation (Koch, 1993).

The nature of psychology's conceptual problems become clearer when we look at the history of psychology and see that it was founded by pioneers who focused on different subject matters. The birth of the discipline is often dated to 1879, which corresponds to the opening of the first scientific laboratory for the empirical investigation of psychological phenomena by Wilhelm Wundt in Germany. Wundt defined psychology as the science of human consciousness, and he studied human perceptual

experiences in the lab. The American William James, in contrast, thought of psychology as the study of mental life and mental functions. The primary focus for him was on how people (and other animals) functionally adapted to their environment. Sigmund Freud focused on "unconscious" mental forces as the key drivers of human behavior.

In contrast to each of these positions, John B. Watson proclaimed strongly that concepts like consciousness or unconsciousness were not scientifically viable and that the subject matter of psychology had to be "behavior" (which essentially includes all animal actions) if it was to be a real natural science like physics. These fundamentally different formulations begin to get at the heart of the problem. The debates about the essential subject matter of psychology show that we are not just talking about differences of opinion at the level of research, findings or even theory (i.e., causal explanations for why things happen). Rather, the problem goes deeper than that. It is fundamentally about the subject matter and the concepts and categories that one uses to talk about it. That is what makes it a "metaphysical" problem.

Why did psychology have such a problem with its subject matter and the concepts and categories that scholars used to describe it? The reason has to do with the worldviews scholars had about the world and consciousness and behavior, animals and persons, and the scientific investigations of such phenomena when the discipline first emerged. Psychology was officially born as a discipline in the second half of the nineteenth century, during the flowering of the Enlightenment. The Enlightenment thinkers valued the power of reason, and leading intellectuals argued that the natural world could be understood using logic, math, and the empirical method. Although the Enlightenment is formally dated to begin 1715, the roots of it date even back further, and the work of early scientists like Galileo and Descartes laid key parts of the foundation. Some argue that the Enlightenment should begin with the publication of Isaac Newton's "Principia" (Mathematical Principles of Natural Philosophy) in 1687, which is arguably the single most important scientific publication in history. What did Newton do in *Principia*? He developed a mathematical framework that described matter in motion (sometimes called "classical mechanics"). He did this so well and so completely that his mathematical theory of matter in motion that was the foundation of

physical science for almost 225 years, up until the development of modern physics that occurred in the beginning part of the twentieth Century.

Newtonian physics was so powerful that it began to give rise to a completely new worldview. Prior to Newton's work, virtually every prominent Western intellectual held a Christian worldview. However, although Newton himself was deeply Christian, many scholars who emerged later during the Enlightenment began to adopt a purely "physical" worldview grounded in Newtonian physics. Thus, at the time of the birth of psychology there were two great metaphysical systems; the Christian view and the Physicalist view (Koons & Pickavance, 2014). The key metaphysical differences in these two worldviews can be seen in how they respond to these three questions: (1) *What is the world made of?*; (2) *Why is world the way it is?*; (3) *What is the place of humans in the world?*

The Christian metaphysical worldview dominated Europe and the United States for centuries. It offers the following basic answers to these three questions:

1. The World consists of God and all that He made. Everything exists because of God and exists because God chose it to exist. God created both the material world of things and the spiritual world of the human soul and angels and other supernatural forces.
2. God has always existed and He has to exist because the world exists and the logic of the world exists because of God. In this sense, God exists in much the same way that 2 + 2 = 4 exists; it is a logical consequence of the world as we find it. Although God has to exist, all other things could have not existed if God chosen not to create them.
3. Human Beings were created by God to love and serve him forever. He infused in them the power of the Spirit, which allows them to be connected to God, if they chose to embrace this calling. In the same way that the heart is designed to pump blood, human beings are meant to serve God and their lives are a testament to the extent to which they do so. The course of human history is nothing less than a record of the extent to which humans have chosen to do what they were made to do (i.e., love God and serve him or turn away from Him toward sin).

Although the Christian worldview was dominant for centuries, as the Age of the Enlightenment progressed, more and more intellectuals found the power of a Newtonian worldview of matter in motion to be sufficient to explain the world around them. The Enlightenment intellectual Pierre-Simon Laplace is an example of an advocate of the new *physicalist* worldview. He believed everything was completely determined by the laws of matter in motion. With this backdrop, we can now list how a nineteenth century Physicalist worldview answers the three metaphysical questions:

1. The World consists of matter in motion, and there is nothing but matter. Matter obeys strict laws and everything is determined by these laws.
2. Matter has always existed and can never be created or destroyed, only its form can change. Because matter has always existed, there is no higher reason for the World to be. It just is and always has been and always will be.
3. Human beings are just complex arrangements of matter, and they exist because they just happen to be how matter is organized right now. Also, because all material things obey strict laws, there is no such thing as free will or the freedom to choose. Human lives have no meaning other than what they construct for themselves, and when they die they simply become different arrangements of matter.

There are deep and profound tensions between the Christian and Physicalist metaphysical worldviews, and we can still see these views as competing in politics and other social domains in modern times (Ambrosio & Lanzialo, 2013).

What does this have to do with psychology? These were the two dominant worldviews that were operating when the science of psychology emerged. Thus, psychology gets started as a discipline when its founders had to basically choose between either the first or second worldview. Because it was defined as a science and the science of the time was the lawful, physical determination of matter in motion, most psychological scientists adopted the second worldview, that of a Newtonian physicalism (Gantt & Williams, 2014). Indeed, this perspective united views that were otherwise very much in competition. For example, Sigmund Freud's

psychoanalysis and John Watson's behaviorism were both reductive, atheistic physicalist worldviews. Both assumed a classical, deterministic, matter-in-motion view of the universe, and believed that, at bottom, people were *just* complicated arrangements of matter.

The problem is that neither of these two worldviews is adequate for modern psychology, as they do not provide us a framework for the concepts and categories of behavior, mind, and human consciousness that are up to the task of a modern psychological science. The reason the Christian worldview is not a good framework for scientific psychology is the same reason that has been given since the Enlightenment. The concept of God does not work in the "language game" (or metaphysics) of science (Henriques, 2005). The reductive physicalist worldview like that adopted by Laplace is also not an adequate metaphysical worldview for the field of psychology. There are many reasons, and I will briefly list five major ones here.

One key change that has taken place in the foundations of science over the past 100 years is that the concept of energy now shares with matter "foundational status" in the sense that both energy and matter are fundamental concepts in physics. Indeed, most physicists now would likely view energy as the more fundamental concept. This shift from matter to energy changes the central conception of the universe from an "object view" to a "process view" (Smolin, 2001), meaning that the long view of physics focuses on change processes over time as a fundamental frame with which to view the universe.

A second major change is that modern cosmology (i.e., the science of the universe as a whole) now offers a picture of the universe that has a beginning point of emergence called the Big Bang. This is the idea that the universe transformed from a singular point into an "energy-matter-space-time" grid about 13.8 billion years ago. This is important because it suggests that the universe has a beginning and a documentable history, which is a different model of cosmology than offered by Newton.

A third change to the Newtonian matter-in-motion worldview is that complexity evolves and has increased over time via natural processes. Charles Darwin's theory of evolution was central to this realization, but now modern scholars talk even more broadly of a cosmic evolution

(Chaisson, 2001), which refers to the emergence of complexity from the singular beginning point and growing to first include particles and forces, then stars and galaxies, then complex elements and planets, and finally increasingly complex forms of life. It is only by taking a broad, cosmic evolutionary view that we will be able to have a picture of the necessary concepts and categories that define behavior, mind, and consciousness.

The fourth big change involves the developments in modern physics in the early portion of the twentieth century that blew up the strict deterministic picture that people like Laplace had of how matter (and energy) actually behaves. It is now largely understood that the fundamental character of the most basic elements of the universe (i.e., particles) has a random (or statistical) character. That is, there are unknowable random variations that play a role in what happens in the future, and this means that the kind of determinism that Laplace argued for is impossible.

The fifth big change involves the rise of information science that happened in the middle of the twentieth century, largely on the seminal contributions of Claude Shannon. The science of information has provided a new perspective on causation. Rather than causation being purely mechanistic in terms of exchange of forces, there are many systems whose causal properties are described in informational terms of inputs, computational processes, and outputs. Cells, brains, human language, computers and so forth must be understood in the language of information processing, which is not reducible to the language of Newtonian matter in motion.

Many other changes have occurred since the time of Newton, in both science and philosophy. Mainstream psychology, with its focus on empiricism, has not evolved in a way that can effectively address these issues. Instead, as a discipline, psychology has focused mostly on generating findings grounded in the empirical method rather than on building broad conceptual systems that can effectively frame our understanding and give rise to cumulative knowledge. However, a proposal to solve psychology's metaphysical problems has been offered, one that can assimilate and integrate its paradigms, and align empirical investigations into a coherent whole.

The Tree of Knowledge System: An Example of a Metaphysical Empirical System for Psychology

The Tree of Knowledge System (Henriques, 2003, 2004, 2008, 2011, 2013) offers a new big picture view of the universe that sets the stage for the kind of proposal that can solve psychology's metaphysical problems. The reader is referred to early publications for details and its graphic depiction. The crucial point here is that the ToK System provides a metaphysical map of behavioral complexity that delineates four separable dimensions of Matter, Life, Mind, and Culture. In their textbook introducing the subject, Koons and Pickavance (2014, p. 13) that state that metaphysics is about understanding:

> the fundamental structure of reality as a whole. How do things fit together in the world? Plato describes this task of philosophy as "carving nature at the joints," comparing metaphysics to a skillful and knowledgeable act of dissection. Here are four relations that seem to be among the fundamental relations of this worldly structure: the relation between things and their properties, between wholes and parts, between causes and effects, and things related to each other in space and in time.

This reads as an excellent description of what the Tree of Knowledge System attempts to accomplish. It provides a new way to carve nature at its joints and gives rise to a new definitional picture regarding things and their properties, wholes and parts, causes and effects, and the interrelationship between dimensions of behavioral complexity in space and time. Consider the following answers to the three big questions: (1) *What is the world is made of?*; (2) *Why the world is the way it is?*; (3) *What is the place of the human in the world?*

1. The universe is an unfolding wave of Energy-Matter-Information that can be described in behavioral terms of objects, fields and change and exist that exist in both levels (parts, wholes, groups) and in four different dimensions of behavioral complexity, Matter, Life, Mind and Culture. These are separable dimensions of complexity because the

behaviors that take place at the levels above Matter are mediated by systems of information processing; specifically, genetic (Life), neuronal (Mind) and linguistic (Culture) systems.

2. The universe came into being approximately 13.8 billion years ago. There was a "moment of creation" in which a chain reaction in a "pure energy singularity" that created a massive inflation and gave rise to the four fundamental forces (i.e., electromagnetic, strong, weak and gravity) and the elementary particles (e.g., bosons, quarks, leptons). These forces and particles formed into atoms, stars and galaxies. Because of differential concentrations of energy and matter, there has been a flow of energy across various sections of the universe, and this energy flow has resulted in the emergence of different forms of complexity. Energy flow on the surface of planet earth resulted in the emergence of self-organizing, self-replicating systems that we call life.
3. People exist on the fourth dimension of behavioral complexity. Human beings are a kind of primate, and thus are mental creatures that exhibit complicated actions and have experiential consciousness. Unlike other primates, humans then developed full, open language capacities, which resulted in them exhibiting qualitatively unique behavior patterns and having unique capacities for self-reflective knowledge and for generating and sharing explicit knowledge about the world. That process turned our primate ancestors into modern people who are deliberative actors who can justify their actions on the social stage. Processes of justification, coupled with agriculture and the rise of the nation state, gave rise to large-scale systems of justification and to modern peoples who are deliberative actors on a cultural stage. In addition, such patterns justification gave rise to modern knowledge systems like science.

From Methodological Behaviorism to a Metaphysical, Universal Behaviorism

The ToK System provides a new tool for theoretical and philosophical psychologists. Specifically, it allows these psychologists to start with an enormously broad, scientifically consistent depiction of the relationship

between Matter, Life, Mind and Culture, each defined as emergent dimensions of behavioral complexity. The remainder of the chapter outlines some key ideas regarding how the system addresses psychology's definitional problems and how it sets the stage for connecting across the major paradigms in psychotherapy.

As mentioned previously, the standard approach in mainstream psychology is to frame behavior via a methodological behaviorist position. Methodological behaviorism makes sense from the vantage point of scientific empiricism. If we are going to anchor our knowledge on public observation and data collection, which is what science does, then we cannot use subjective experience as data *per se* because an individual's subjective experience is not publicly accessible. Rather what we might use are overt self-reports of subjective experience. Nevertheless, methodological behaviorism is not sufficient for defining the subject matter of psychology. This point can be clarified if we take a step back and ask: *What, exactly, do we mean by the term behavior?* When we do that we can see we have a serious problem.

Methodological behaviorism is a feature of empirical science *in general*, and it does nothing to specify the specific kinds of behavior various scientists are interested in. In contrast, the ToK functions as a metaphysical system that maps behavior in all its forms. It points out that there are different kinds of behavior, material/physical, bio/organic, neuro/psychological and socio/linguistic (Henriques, 2003). If a cat falls out of a tree, it behaves as an object with mass and a shape. However, although both a dead cat and a living cat behave as falling objects, the latter also behaves very differently. The dead cat behaves *only* as a function of gravity (physical behavior). The living cat behaves as a function of gravity *and* its active bio-physiology *and* its neuropsychology. That it lands on its feet and takes off is not a function of gravity, but a represents an entirely different kind of behavior pattern.

The kinds of behaviors that animals exhibit that are not simply physical movements are characterized by the ToK as *mental behaviors*. The point here is that to get an effective conception of behavior, one must keep in mind the relationship between the behavior of objects relative to organisms relative to animals relative to people. Or, to put it slightly differently, we need to start from the most basic forms of behavior and

work our way up the dimensions of behavioral complexity, characterizing how each emergent dimension is both continuous with and different from the dimension prior to it. By mapping behavior metaphysically, we can move toward solving the problem of psychology and developing a shared definitional system that is up to the task.

Solving the Problem of Psychology

Psychology's failure to be defined has not been simply a matter of inevitable fuzzy boundaries. Rather, scholars disagree about the fundamental nature of what psychology is about. Specifically, there are three major domains of contention, which are debates about whether or not psychology is primarily: (a) about minds or behaviors; (b) about animals in general, some animals but not others, or only humans; and (c) a natural science, a human science, or a profession focused on fostering psychological health. The ToK System affords a new meta-perspective on this issue, and the explicit definition of psychology that emerges from analyses derived from the ToK System is as follows (Henriques, 2011):

> *Psychology is the science of mental behavior and the human mind, and the professional application of such knowledge toward the greater good.*

Based on the map afforded by the ToK System, psychology should be divided into three broad domains (Henriques, 2004; Fig. 4). The first domain is "basic psychology," a natural science discipline that has the behavior of animals in general as its subject matter. Animal behavior is characterized in the ToK System as *mental behavior*, defined as the behav-

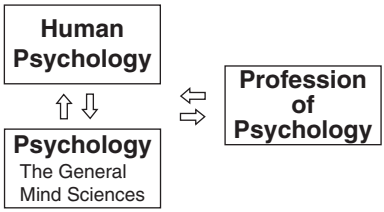

Fig. 4 The three domains of psychology

ior of the animal-as-a-whole mediated by the nervous system. Such behaviors can be overt or covert. Overt mental behaviors are observable by others and take place between the animal and the environment. Hunting, mating, and defending a territory are exemplars of overt mental behaviors. Perceptions, feelings, imaginings, and even nonconscious cognitive processes are also considered mental behaviors; they simply take place within the animal and thus are covert. In slight contrast to the meaning of Mind, which is the third dimension of behavioral complexity and consists of the entire set of mental behaviors, 'the mind' refers to the architecture of the neuro-information processing system, which includes the information instantiated within and processed by that system. In short, the ToK System affords scholars a new vocabulary for mind, experiential consciousness, and animal behavior.

The second domain has human behavior at the individual level as its proper subject matter and includes an emphasis on the human mind and human self-consciousness. This division is necessary because the behavior of persons is fundamentally different from the behavior of other animals. Human persons are deliberative actors who have the capacity to self-consciously justify their actions on the social stage (Ossorio, 2006). This capacity for self-conscious justification changes the behavioral equation dramatically. Not only does it open up a wide variety of higher thought processes and reasoning capacities, but it also means human persons develop cultural systems of justification that coordinate human activity and evolve over time. Thus, Culture and human self-consciousness have transformed humans from primates into persons. It is this fact that makes human science so different from the natural sciences. One of the major differences between these two domains can be seen by considering the problem of the double hermeneutic. According to Giddens (1987, p. 19), this refers to the fact that "the concepts and theories invented by social scientists circulate in and out of the social world they are coined to analyze." In other words, the justifications generated by social scientists to explain some human behavioral phenomenon are digested by human actors with genuine causal consequences. The philosophical problem this creates becomes more apparent when one considers that the most successful descriptions of human behavior are precisely those that will receive

the most attention. As such, one cannot have a comprehensive theory of human behavior and also expect that human behavior will remain unaffected by this very theory. Freud's theories, for example, changed people.

Finally, the ToK System points to their being a fundamental difference between the science and the profession because one has as its primary goal the description and explanation of animal and human mental behavior and the other has the improvement of human well-being (Henriques & Sternberg, 2004). The profession thus must include an explicit evaluative dimension of the good and how to move humans toward that (Henriques, Kleinman, & Asselin, 2014). In sum, at the institutional level, the current proposal argues for dividing psychology into the following three great branches: (1) basic psychology which focuses on mental behavior; (2) human psychology which focuses on the human mind and individual human behavior; and (3) professional psychology which focuses on the professional application of psychological knowledge for the greater good.

In the current formulation, a metaphysical system refers to the system of concepts and categories that one uses the define foundational terms. In this view, the problem of psychology is diagnostic of the field having a profound need for a new metaphysical system. However, there are many other key terms that require definitional and conceptual analysis. Perhaps the most central terms are behavior, mind, consciousness, well-being, and personhood. The ToK System provides theoretical and philosophical psychologists new ways to work out definitions of these terms (Henriques, 2011; Henriques et al., 2014). In addition to metaphysical or conceptual analyses of key terms and their interrelations, the ToK System also serves as a framework that can address issues pertaining to meta-theory. As Anchin (2008, p. 814) put it:

> The bridges that can thus be erected between the natural sciences, social sciences, and humanities through the unifying metatheory of the ToK System and its foundations of ontological pluralism and epistemological dialecticism shimmer with heuristic potency, creating endless opportunities for the disciplines to integrate their vast pools of knowledge.

Addressing the Problem of Meta-theoretical Integration: The Example of Character Adaptation Systems Theory

Meta-theory is a theory about theories, and the unified theory of psychology is proposed as a system that can assimilate and integrate key ideas from the dominant paradigms into a coherent whole. Here I review Character Adaptation Systems Theory, which is an outgrowth of the unified framework that has been developed to the bridge between personality and psychotherapy (Henriques, 2017). Via the metaphysical and metatheoretical view afforded by the ToK System, CAST reinterprets the key insights and emphases of the four primary paradigms in individual psychotherapy, which are behavioral, experiential, psychodynamic and cognitive approaches, as being models of "character adaptation."

It was the trait researchers Costa and McCrae (1994) who first introduced the term "characteristic adaptations" in the context of their Five Factor Trait Theory. Character adaptations were different from personality traits. They refer to the unique ways the individuals learn to adapt and adjust to context and stressors. They can be thought of as the (mental behavioral) repertories that people develop to handle situations. McAdams and Pals (2006, p. 208) included character adaptations as a key "level" of personality. They defined it as the dimension of personality as consisting of units that "include motives, goals, plans, strivings, strategies, values, virtues, schemas, self-images, mental representations of significant others, developmental tasks, and many other aspects of human individuality that speak to motivational, social–cognitive, and developmental concerns."

The concepts of adaptation and adaptive versus maladaptive mental behavioral processes cut across the major paradigms. Indeed, psychotherapy can be considered "as a formal relationship established with a professional trained in the values, knowledge base and skills in applying methods grounded in the science of human psychology with the purpose of assisting the client toward more valued and *adaptive* states of being." Along these lines, each major psychotherapy paradigm offered a frame that explained how people adapted to their environment, how maladaptive patterns could develop, and the kinds of interventions that were required to shift maladaptive patterns into more to adaptive ways of being.

The ToK metatheory allows for the reinterpretation of the paradigms as systems of adaptation. The CAST framework is depicted in Fig. 5. It depicts three contexts (the biophysical, learning and developmental, and socio-cultural) and five systems of adaptation. The five systems of character adaptation delineated by CAST emerged as a function of applying the ideas that made up the unified theory toward bridging modern personality theory and psychotherapy. Each of these systems and to how they are connected to the key insights of the major paradigms in individual psychotherapy is discussed below. The point here is to demonstrate how an extension of the ToK System can be used to foster meta-theoretical integration of the paradigms.

Behavioral Therapy Aligns with the Habit System

In CAST, the habit system is the most basic system of character adaptation. It consists of sensori-motor patterns and reflexes, fixed action patterns, and procedural memories that operate automatically and without any conscious awareness. The habit system of adaptation assimilates and integrates key insights from the behavioral tradition. The general emphasis in behavior therapy is not on one's inner experience or, traditionally, even one's thought processes. Rather, the focus is on action and the environment and how the individual responds to stimuli (in associative conditioning) or is rewarded or punished for certain actions. These ele-

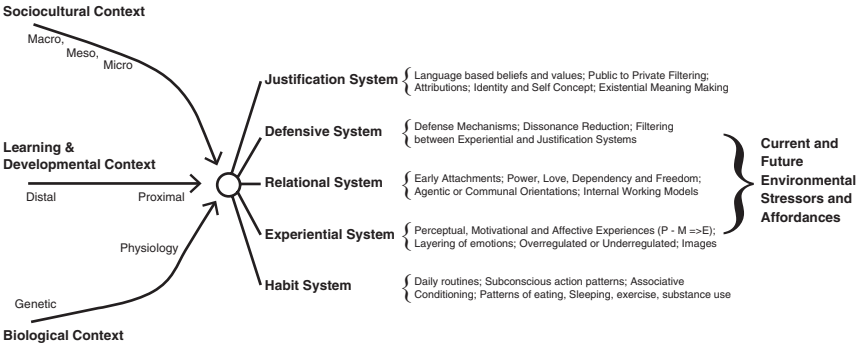

Fig. 5 Character Adaptation Systems Theory

ments line up directly with habit formation. As reviewed by Duhigg (2012), habitual responses can usefully be divided up into three elements that form a loop. First there is a stimulus or cue which is followed by an enacted procedure or response, and finally there is a rewarding consequence. This is called the habit loop.

Emotion Focused Therapy Aligns with the Experiential System

Consistent with work in affective neuroscience (Panksepp, 1998), the experiential system corresponds to the nonverbal perceptions, motives and drives, and emotional feelings states that make up mental life. This domain of adaptation corresponds well with Emotion Focused Therapy (EFT; Greenberg, 2002). Central to EFT is a focus on understanding the way emotions organize experiential consciousness and the process by which such emotional processing is generally adaptive or maladaptive. If an individual is attuned to those needs and arrives at those feeling states and integrates what the feeling is communicating into their higher self-consciousness, then one is in a much better place to achieve mental and relational harmony. However, if the primary adaptive emotional response is blocked because it is deemed threatening or confusing or unacceptable and either ignored or replaced with a secondary feeling (e.g., rather than feeling hurt about being rejected, the individual becomes angry at the unfairness of it and says he does not care), then there will be significant disharmony and misalignment between the core needs and emotional expression. In EFT, therapists work to coach clients to understand how to connect to their primary adaptive feelings and work through unfinished emotional business, in which they historically were not able to process their primary feelings.

Modern Psychodynamic Therapy Aligns with the Relational and Defensive Systems

Modern psychodynamic approaches correspond with the relational and defensive systems of character adaptation. As Magnavita (2008) notes,

modern psychodynamic theory emphasizes, that we are relational beings who are guided and shaped by the exchanges we encounter. This fact corresponds to the relational system, which is conceptualized as an extension of the experiential system that emerges both as mentation becomes more complicated (i.e., as animals evolve with increasing cortical functioning) and as animals become more social. The relational system refers to the social motivations and feelings states, along with intuitive internal working models and self-in-relation-to-other schema that guide social mammals in general and people in particular in their social exchanges and relationships. It is important to note, then, that the relational system as considered here is not dependent upon verbal processing, although, of course, in humans verbal processing can dramatically influence the operations of the relational system.

The second key insight of modern psychodynamic theory pertains to the organization of consciousness and the nature of defense mechanisms (Magnavita, 2008). The fourth system of character adaptation is the defensive system, and it refers to the ways in which individuals manage their actions, feelings, and thoughts, and specifically the way individual's shift the focus of conscious attention to maintain a state of psychic equilibrium in times of threat or insecurity. The defensive system is the most diffuse of the character adaptation systems; however, it can nevertheless be specified by examining how images, impulses, cravings, and desires from the nonverbal systems (i.e., habit, experiential, relational) are integrated (or not) with the individual's self-conscious justifications for being (for a recent review of psychological defense consistent with the current formulation, see Hart, 2014).

These two key areas of emphasis, which correspond to the relational and defensive systems of character adaption, are effectively represented in the two "triangles" developed by David Malan. One is the Triangle of Persons, which represents the interpersonal matrix in psychotherapy as defined by three "points": (a) past important relationships that laid the developmental ground work for a person's relational schemas; (b) current relationships in which needs and conflicts are being played out; and (c) the therapist relationship, which attempts to provide a new and healing context for working through maladaptive relational problems.

The second is the Malan Triangle of Conflict. It provides a simple map for understanding human defensive processes. It too consists of three points: (a) images, impulses and affects triggered by current or past situations; (b) signal anxiety activated in response to those emerging feelings; and (c) defenses that attempt to avoid the threat and return to a state of equilibrium. The idea is that disturbing or problematic images, impulses or affects trigger a "signal anxiety" because they are dangerous. This anxiety triggers a defensive response that attempts to avoid the danger and restore what might be called a justifiable state of being. The Malan Triangle of Conflict explains why some material is readily accessible to self-consciousness, whereas other material, especially that which is threatening to one's real or perceived status or identity, is often avoided, repressed or filtered out. In class, I would often use the example of a 15-year-old boy who starts to experience homosexual impulses to illustrate these processes of relational navigation and defense. It is not hard to envision how, upon starting to experience homosexual urges, an individual would experience signal anxiety and attempt to avoid or repress them. Such individuals may have strong memories of his father affirming masculinity in boys and thus attempt to identify with this aspect of his relational world and seek out relationships or activities that attempt to affirm that he is secure and valued because he is masculine.

Consistent with these claims, the modern psychodynamic therapist generally seeks to enter the patient's relational system and restructure it through a corrective emotional experience and through insight achieved via interpretations the therapist makes. Therapy is structured on gaining insight into those processes and fostering adaptive correction of attachments and associated feelings in the context of a healing therapeutic relationship. Through such interpretations, previously unconscious relational schema and defenses become conscious and that allows the client much more freedom to make informed choices which in turn fosters adaptive living.

Cognitive Therapy Aligns with the Justification System

The justification system is the fifth system of character adaptation, and it represents the seat of verbally mediated thought and symbolic reasoning.

It is organized into language-based systems of beliefs and values that an individual uses to determine which actions and claims are legitimate and which are not, to give reasons for one's behavior, and ultimately to develop a meaningful worldview. Although individuals can learn how to engage in analytic reasoning via the justification system, the formulation provided by the unified approach is that the justification system is first and foremost a motivated reasoning system (Kunda, 1990), one that is guided by (although not necessarily dictated by) nonverbal drives, goals, and intuitive frames, and is functionally organized as a reason giving system, rather than a purely analytical reasoning system. The justification systems corresponds to the key insights of cognitive therapy. For example, traditional Beckian cognitive therapy works by teaching individuals how verbal interpretations and self-talk feedback on feeling states and subsequent actions. Beliefs (i.e., which are characterized as justifications in the current framework) such as, "I will likely fail at this" or "She will never like me" activate feelings of failure and defeat and tend to lead to behavioral avoidance and contribute to maladaptive cycles. The focus of cognitive therapy is to develop awareness of one's justification system and to determine the validity and adaptiveness of various beliefs. For example, it is common in cognitive therapy to teach patients to conceive of their verbal cognitive system as consisting of three levels: (a) automatic thoughts, (b) intermediate reasoning, and (c) core beliefs. Patients are then taught to link the content of their beliefs at those levels to feelings and actions, and then to develop systematic ways, via collaborative empiricism, to determine which justifications are accurate and helpful and which are not.

Constructing a Metaphysical System for Psychology's Future

This proposal has a number of implications for theoretical and philosophical psychologists. First, the majority of work in the past several decades in theoretical psychology has focused on critical theory and deconstructing lines of power and privilege that underlie mainstream

assumptive models. Although this is a crucial aspect of theoretical psychology, equally important is the emphasis on constructing theories that address the field's big picture issues. The current chapter offers grist for the constructive theoretical mill. Specifically, it offers awareness of the metaphysical—empirical continuum and the claim that all scientific enterprises need work on both conceptual and experimental ends of that continuum. Second, it offers a novel metaphysical proposal for the concept of behavior and advocates for a shift from methodological behaviorism to a universal behaviorism, characterized by four different dimensions of behavioral complexity (Matter, Life, Mind and Culture). This system offers novel philosophical ways to approach mind and matter and define the field of psychology. In addition, via CAST the system bridges the metatheoretical formulation with key insights in psychotherapy, reframing the major paradigms as models of character adaptation. The insights and analyses of theoretical psychologists are needed to evaluate this proposal, compare it with the few other approaches for unifying the field, and explore the advantages and disadvantages of each relative to the current fragmented pluralistic state of empirical psychology.

This proposal could be made concrete via imagining a new way to conceive of the field. Consider, for example, a Psychology 101 text book that begins with the idea of worldviews and introduces the worldview of the ToK. From that, the text defines psychology into the three branches of basic, human and professional. Part one of the book focuses on the key issues pertinent to basic psychology, such as neuroscience, sensation and perception, motivation and emotion, and learning. The subject matter here is animal behavior in general. Then Part II explicitly transitions from natural science epistemology into human science epistemology because the behavior of people is qualitatively different from the behavior of animals. Language, reasoning, and human social and cultural dynamics emerge as central. Finally, the profession of psychology, as a health service discipline is introduced. Its mission is to reduce suffering and improve psychological well-being. Theoretical and philosophical analyses are needed to explore the validity of this branching arrangement, the societal implications of it, and the reception such a vision might receive from students.

Conclusion: Toward a Metaphysical Empirical Psychology

The central point of this chapter is to highlight the fact that there is a continuum of analysis, stretching from empirical data and information on one end, through hypotheses, models and theories, paradigms into meta-theoretical and finally metaphysical questions on other end of the spectrum. It is the role of the theoretical and philosophical psychologists to attend to the latter portion and to examine the interrelations between claims across the various points of the spectrum.

The problem of defining psychology emerged from the absence of an adequate metaphysical system that could effectively answer some of the field's most difficult conceptual problems. These include disentangling mentalist versus behaviorist accounts of psychological phenomena, delineating the ways in which persons are both continuous and discontinuous with other animals, and clarifying whether the discipline is primarily a natural science, a social/human science or an applied profession. The ToK System is a new metaphysical empirical system that is consistent with developments in modern science and affords theoretical and philosophical psychologists a new tool to view the whole of the discipline. From this system, a number of conceptual and meta-theoretical proposals have been developed. This chapter ended with a review of CAST as a meta-theoretical integration that can build bridges between different paradigms in psychotherapy. As such, the example was provided as to how theoretical and philosophical psychologists might constructively operate from the metaphysical and meta-theoretical ends of the spectrum to build systems and integrate the paradigms and allow for more cumulative psychological knowledge.

References

Ambrosio, F., & Lanzialo, E. (2013). Measuring the horizon: Objectivity, subjectivity and the dignity of human personal identity. *Open Journal of Philosophy, 3*, 32–40. https://doi.org/10.4236/ojpp.2013.34A006

Anchin, J. C. (2008). The critical role of the dialectic in viable metatheory: A commentary on Henriques' tree of knowledge system for integrating human knowledge. *Theory & Psychology, 18*, 801–816. https://doi.org/10.1177/0959354308097258

Baars, B. (1986). *The cognitive revolution in psychology*. NY: Guilford Press. ISBN 0-89862-912-8.

Chaisson, E. J. (2001). *Cosmic evolution: The rise of complexity in nature*. Cambridge, MA: Harvard University Press.

Costa Jr., P. T., & McCrae, R. R. (1994). Set like plaster? Evidence for the stability of adult personality. In T. F. Heatherton & J. L. Weinberger (Eds.), *Can personality change?* (pp. 21–40). Washington, DC: American Psychological Association.

Duhigg, C. (2012). *The power of habit: Why we do what we do in life and business*. New York: Random House.

Gantt, E., & Williams, R. (2014). Psychology and the legacy of Newtonianism: Motivation, intentionality, and the ontological gap. *Journal of Theoretical and Philosophical Psychology, 34*(2), 83–100. https://doi.org/10.1037/a0031587

Giddens, A. (1987). *Social theory and modern sociology*. Stanford, CA: Stanford University Press.

Greenberg, L. (2002). *Emotion-focused therapy: Coaching clients to work through their feelings*. Washington, DC: American Psychological Association.

Hart, J. (2014). Toward an integrative theory of psychological defense. *Perspectives on Psychological Science, 9*(1), 19–39.

Henriques, G. (2008). The problem of psychology and the integration of human knowledge: Contrasting Wilson's consilience with the tree of knowledge system. *Theory and Psychology, 18*, 731–755.

Henriques, G. (2013). Evolving from methodological to conceptual unification. *Review of General Psychology, 17*, 168–173. https://doi.org/10.1037/a0032929

Henriques, G. R. (2003). The tree of knowledge system and the theoretical unification of psychology. *Review of General Psychology, 7*, 150–182.

Henriques, G. R. (2004). Psychology defined. *Journal of Clinical Psychology, 60*, 1207–1221.

Henriques, G. R. (2005). Toward a useful mass movement. *Journal of Clinical Psychology, 61*, 121–139.

Henriques, G. R. (2011). *A new unified theory of psychology*. New York: Springer.

Henriques, G. R. (2017). Character Adaptation Systems Theory: A new big five for personality and psychotherapy. *Review of General Psychology, 21*, 9–22.

Henriques, G. R., Kleinman, K., & Asselin, C. (2014). The nested model of well-being: A unified approach. *Review of General Psychology, 18*, 7–18. https://doi.org/10.1037/a0036288

Henriques, G. R., & Sternberg, R. J. (2004). Unified professional psychology: Implications for combined-integrated doctoral training programs. *Journal of Clinical Psychology, 60*, 1051–1063.

Koch, S. (1993). "Psychology" or "the psychological studies"? *American Psychologist, 48*, 902–904. https://doi.org/10.1037/0003-066X.48.8.902

Koons, R. C., & Pickavance, T. H. (2014). *Metaphysics: The fundamentals*. New York: Wiley Blackwell.

Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin, 108*, 480–498. https://doi.org/10.1037/0033-2909.108.3.480

Magnavita, J. J. (2008). Psychoanalytic psychotherapy. In J. L. Lebow (Ed.), *Twenty-first century psychotherapies* (pp. 206–236). New York: Wiley.

McAdams, D. P., & Pals, J. L. (2006). A new Big Five: Fundamental principles for an integrative science of personality. *American Psychologist, 61*, 204–217. https://doi.org/10.1037/0003-066X.61.3.204

Myers, D., & DeWall, C. N. (2016). *Exploring psychology* (10th ed.). New York: Macmillan Worth Publishers.

Ossorio, P. G. (2006). *The behavior of persons*. The collected works of P. G. Ossorio, Vol. V. Ann Arbor, MI: Descriptive Psychology Press.

Panksepp, J. (1998). *Affective neuroscience: The foundations of human and animal emotions*. New York: Oxford University Press.

Pepper, S. C. (1942). *World hypotheses: A study of evidence*. Berkeley, Los Angeles, and London: University of California Press.

Slife, B., & Williams, R. (1997). Toward a theoretical psychology: Should a subdiscipline be formally recognized? *American Psychologist, 52*, 117–129.

Smolin, L. (2001). *Three roads to quantum gravity*. New York: Basic Books.

Stanovich, K. (2012). *How to think straight about psychology* (10th ed.). Boston, MA: Allyn & Bacon.