

# Editor's Preface

This book began with a symposium titled “Neurophenomenology and the Enactive Approach to Cognition,” sponsored by the Societies for Humanistic Psychology (Division 32) and Theoretical and Philosophical Psychology (Division 24), which I chaired at the 117th annual convention of the American Psychological Association in Toronto, Canada, in 2009. This symposium presented the collection of papers featured in this volume by five psychologists who aspire to interpret neurophenomenology to psychologists: reenvision the place of phenomenology within psychological science and the sciences in general; and define the contributions of existential-phenomenological and humanistic-transpersonally oriented psychology to this discussion.

Existential-phenomenological and humanistic-transpersonal perspectives focus on what it means to be fully, experientially human. They are concerned with the individual's creation of meaning, actualization of values, and potential for self-realization. Figures such as William James, Abraham Maslow, Carl Rogers, Rollo May, Gordon Allport, Lois and Gardner Murphy, Paul Tillich, Karen Horney, Erik Erickson, Carl Jung, Erich Fromm, Jean Paul Sartre, Martin Buber, and others focused their writings on the self that is directly experienced, on the actualization of potential, on striving toward health as intrinsic to human motivation, and on existential themes inherent to interior exploration. Their vision went beyond the measurement of behavior to embrace a wider view of personality than mainstream trait theories because they acknowledged a growth-oriented dimension of the person.

From 1940 to 1970, humanistic psychology, centered on transforming reductionist experimentalism, pioneered the emergence of a person-centered, growth-oriented, existential psychology of the whole person. It advanced a dialogue between science and the humanities within the Western university system and flourished as a viable form of academic discourse (Taylor, 1999, 2009). The lineage of humanistic psychology spans the person-centered science and psychology of William James in the 1890s and early 1900s; the macropersonality theories and social psychologies of Gordon Allport, Henry Murray, and Gardner Murphy in the 1930s and 1940s; and the self-actualizing and motivational psychologies of Carl Rogers and Abraham Maslow and the European existential-phenomenological psychotherapeutic

traditions united by Rollo May and Henri Ellenberger in the 1950s and 1960s.<sup>1</sup> As Taylor notes, humanistic psychology, as an academic discourse arising out of personality theory and motivational psychology, was absorbed by the American psychotherapeutic counterculture and split into three streams by the late 1960s: transpersonal interest in meditation and altered states of consciousness, experiential encounter groups and somatic bodywork, and human science and radical political psychology. Transpersonal psychology, which developed from the humanistic movement after 1969, began through the experiential study of entheogens, meditation, altered states of consciousness, and non-Western epistemologies.<sup>2</sup>

Phenomenology and neurophenomenology introduce an approach to philosophy, psychology, and human science that is able to articulate the ontological ground upon which science itself operates in ways that are not accessible to positivist science. Cognitive behaviorism, the present standard in mainstream theoretical and clinical psychology, founded on reductionistic positivism, can neither address the implications of the neuroscience revolution regarding the phenomenology of consciousness nor the relationship between the mind and the brain, because it lacks a self-reflective and prereflective element. Reliability, validity, standardization, prediction, and control are all subsets of holism and qualitative experience. Science ignores human consciousness in operationally defining the person when it disregards phenomenological data that it cannot see or measure. Science needs grounding in self-reflection, contemplation, and an embodied approach to experience that is unrestricted to the study of behavior and a phenomenologically oriented psychology that is foundational to the sciences.

Phenomenology studies consciousness, both the rational waking state as well as dynamics of the unconscious, as it is experienced from the first-person point of view. Experience must be grasped holistically as a relationship in which the subject relates to an object through its meaning. Classical approaches in phenomenological practice have ranged from the reflective analysis of lived experience as it presents itself (Husserl, Merleau-Ponty) to contextual hermeneutic phenomenology (Heidegger), radical empiricism (James), logico-semantic models that analyze the form of experience or specify conditions of truth, and empirical experiments that confirm or refute aspects of experience. On the basis of Husserl's epistemology, Heidegger, Sartre, and Merleau-Ponty pioneered phenomenological studies of existence (phenomenological ontology) diverging from Husserl's phenomenological reduction (PhR), which provided an intuitive method to transcend the natural attitude. Phenomenological methods allow observation of internal states of consciousness using a meditative focus to loosen presumptions, so that we may begin to understand the essence of lived experience. Neurophenomenology has attempted to *naturalize phenomenology* (Petitot, Varela, Pachoud, & Roy, 1999) training neuroscientists to become reflectively aware of the structure of experience in the conduct of research (Petitmengin, 2009; Varela & Shear, 1999, Zahavi, 2008).

However, while many recent books in neurophenomenology address the relationship between the mind and the brain and the nature and structure of consciousness, this pioneering work is largely inaccessible to psychologists who do not have

a framework for applying it to their discipline. I would argue that this is because neurophenomenology requires translation from the language of phenomenology, cognitive science, and non-Western epistemology to that of psychological science. A case on point is Shaun Gallagher and Dan Zahavi's *The Phenomenological Mind: An Introduction to Philosophy of Mind and Cognitive Science* (2008).

For example, in his review of their book, published in the *Journal of Phenomenological Psychology*, Amedeo Giorgi (2009b), author of *The Descriptive Phenomenological Method in Psychology* (2009a), states:

As I read this book, a certain envy overcame me. If only, in psychology we had such a dialogue going between phenomenological and mainstream, empirical approaches to psychological phenomena. However, in psychology, not only is phenomenology mostly ignored, even where it does occasionally show up, it is poorly understood. A possible secondary outcome of the book under review is that such a dialogue could trickle down to the psychological level. (Giorgi, 2009b, p. 108)

Giorgi's five-step research method uses Husserlian phenomenology as its philosophical foundation.<sup>3</sup> However, because Husserl's work was written for philosophy, Giorgi (2009a) needed to adapt the principles of his phenomenological reduction for psychological investigation. Giorgi's (1970) method provides the systematic rigor of empirical science but is not reductionistic in its treatment of the person. Subjects describe the structure of psychological phenomena so that it can be understood in a deeper, holistic, and more comprehensive way. It is the meaning of experience, as it is lived in the body (embodied), rather than the objective interpretation of behavior that is essential to phenomenology.

The authors of this volume introduce neurophenomenology to suggest steps toward a more experiential, nonreductive, phenomenologically oriented, descriptive, person-centered psychology of immediate experience. Neurophenomenology introduces a theoretical and practical framework that integrates the natural and human sciences to consciousness, which invites an interdisciplinary dialogue on the nature of awareness, the ontological primacy of experience, the perception of the observer, and the mind-brain relationship that will shape the future of psychological theory, research, and practice.

What is neurophenomenology? This term, coined by Laughlin, McManus, and d'Aquili (1990), was distinguished as a new research direction for the neuroscience of consciousness by Francisco Varela and colleagues in the mid-1990s. Neurophenomenology bridged ideas from systems theory, cognitive computationalism, and autopoiesis by combining first- and third-person methods in experimental research. *First-person methods* refer to phenomenological lived experience, the contemplative study of attention, present-time consciousness, body image, volition, perception, intentionality, fringe, centre, and emotion associated with subjective mental states. *Third-person methods* refer to the analysis of neurophysiological data from the measurement of large-scale sensorimotor processes in the brain using fMRI, EEG, MEG, and cognitive testing. *Second-person perspectives*, the empathic, intersubjective, interpersonal dimensions of conscious experience, are also investigated using phenomenological studies that borrow primarily from non-Western epistemology and the work in philosophy by Edmund Husserl, Martin Heidegger,

and Maurice Merleau-Ponty (e.g., Varela & Shear, 1999; Petitmengin, 2009; Varela, Lachaux, Rodriguez, & Martinerie, 2001; Thompson, 2001a).

This book explores the meaning and import of neurophenomenology (i.e., phenomenology in its current relation to the natural scientific studies of the nervous system), the philosophy of *enactive* or embodied cognition, and the theory of autopoiesis interpreted for psychologists. *Embodiment* refers to the bodily aspects of human subjectivity: the biological and physical presence of our body as a necessary precondition for the experience of emotion, language, thought, and social interaction. It provides a systematic and dynamical framework for understanding how a cognitive self – a mind – can arise in an organism in the midst of its operational cycles of internal regulation and outgoing sensorimotor coupling (Rudrauf, Lutz, Cosmelli, Lachaux, & Le Van Quyen, 2003). *Autopoiesis* explains the continuity of mind and life observed in the self-organizing properties of chemical, neuronal, and cognitive systems through which they continually regenerate, recreating themselves by their own mutual interactions.

Varela and colleagues have explored ontogenic developmental learning, perception-action in the synchronous coupling of neuronal cell assemblies, and present-time consciousness, philosophically rooted in the functionalism of William James and the European clinical traditions of Edmund Husserl, Martin Heidegger, Maurice Merleau-Ponty, and Jean Paul Sartre in existential-phenomenology (Varela, Thompson, & Rosch, 1991). Neurophenomenology has influenced the melding of traditional boundaries between continental and analytical thought, the move from behaviorism to cognitive neuroscience, and the affective and experiential revolutions presently underway in psychology. Instead of viewing the mind as an epiphenomenon of the brain, consciousness is seen as a distributed phenomenon of the whole active organism. Mental life is situated in the world and consciousness is intersubjectively enacted in interdependency with its surroundings through action, perception, emotion, and the self-moving flow of time consciousness (Thompson, 2007) from which meaning becomes inseparable.

Rooted in Varela's knowledge of biological systems and Indo-Tibetan Buddhism, a central question for neurophenomenology has been how consciousness and subjective experience relate to the brain and the body. While the "easy problems" for neuroscience pertain to questions about the difference between wakefulness and sleep and the mechanisms that allow us to focus our attention, the "hard problem" is the relationship between objective knowledge and subjective experience or *qualia*, the ineffable conscious experience, as distinct from the physical or computational process of the brain. Giving a fundamental role to first-person accounts and the irreducible nature of experience, neurophenomenologists address the problem of consciousness by establishing heuristic mutual constraints between biophysical data (third person) and the data produced by accounts of subjective experience (first person) as a co-emergent, enactive process (Lutz & Thompson, 2003; Petitot, Varela, Pachoud, & Roy, 1999; Varela, 1996).

In her tribute to Varela, Petitmengin (2009) points to the prereflective and implicit character of lived experience viewed from within as the most immediate and intimate thing about us that is not directly accessible but requires a method. She notes that becoming aware of prereflective experience is not a process of distancing and

objectification or a fracturing of the self between an observer and an observed. In psychological context, it means coming into closer contact with one's experience, not via accumulating new knowledge but by stripping ourselves of the knowledge that prevents us from entering into contact with our true nature and pure experience. Neurophenomenology is that method with its many applications to psychology.

## About This Book

Each of the five chapters in this book cohesively contributes to psychology's understanding of neurophenomenology. I have situated each to build on the foundations of the previous chapters.

In Chapter 1, "Enactive Cognition and the Neurophenomenology of Emotion," **Brent Robbins** explores theories of emotion from a perspective that integrates neurobiological, cognitive, and phenomenological approaches to consciousness and examines how this synthetic approach may resolve current difficulties in the conceptualization of emotion in psychology. Robbins argues that the enactive approach calls into question an old paradigm of the theory of emotion, which conceptualizes emotion and cognition as distinct functions located in separate regions of the brain. An account of emotion, instead, needs to preserve the meaning of the experience as it appears within the life-world context of the person, rather than being based on inferences drawn from laboratory conditions. He illustrates how we need to step back to examine how form is constituted as an object for cognition; how cognition, emotion, and perception appear to be well-integrated processes that cannot be teased apart without making artificial distinctions; and how the complex web of emotional experience requires a first-person perspective. Robbins argues that enactive and neurophenomenological approaches are promising avenues for bringing forth an affective, experiential revolution in psychology to fruition.

In Chapter 2, "Neurophenomenological Praxis: Its Applications to Learning and Pedagogy," **Robert McInerney** introduces neurophenomenology to the psychologist-educator and illustrates a prereflective, situated, enactive assessment of learning and thinking using concepts from autopoiesis and neurophenomenology. This chapter details the phenomenological approach and provides specific examples to illustrate enactive, embodied learning. McInerney discusses the theoretical basis of mind-body dualism, the perspectives of cognitivism and Husserl's phenomenological method, as well as the phenomenologies of James and Dewey in a psychological and pedagogical analysis of learning inherent to philosophy and epistemology. He outlines how neurophenomenological praxis can lead to a pedagogy that recognizes and liberates essential forms of learning that have been devalued by our educational system as well as the practical applications of this method to portfolio learning and assessment.

In Chapter 3, "Mutual Enlightenment: Cognitive Phenomenology in the Study of Tibetan Meditation," **Olga Louchakova-Schwartz** presents original neurophenomenological research and discusses its theoretical, empirical, and practical applications to the study of cognition and the nature of prereflective awareness in meditation. She

illustrates this relationship through an analysis of the types of meditation and discusses her method of *phenomenological-cognitive mapping* for studying cognitive changes during meditation. This method helps to translate the empirical conditions of meditation into cognitive psychological experimental research. Louchakova-Schwartz reports on the experimental results of enhancement of visual imagery in Tibetan meditators, discusses her neurophenomenological approach, and presents a comparative phenomenological analysis of four styles of meditation in Tibetan Buddhism (Rig-pa, Vipashyana, Mandala, and Deity). She argues that the phenomenology is crucial for a successful experimental design.

In Chapter 4, “Déjà-Vu: William James on ‘The Brain and the Mind,’ 1878,” **Eugene Taylor** explores the historical and theoretical basis of James’ philosophy of radical empiricism for present-day neuroscience through a discussion of James’ Lowell Lectures of 1878 on “The Brain and the Mind,” as a way to remind us that the problems of neuroscience today were broached more than 125 years ago. Taylor explains how Varela and his interpreters are on the cusp of a breakthrough in understanding James’ philosophy of radical empiricism and the role of the intersubjective observer for a person-centered approach to science. He argues that the implications of this breakthrough have the potential to address the so-called hard problem, namely, the relation between the brain and the mind, which could possibly set the stage for an examination of the phenomenology of the science-making process itself. Such a new science would account for the *weltanschauung* of the experimenter, the intersubjective relation between the observer and the observed, and alter our understanding of the presence of the experimenter on the outcome of what he or she studies.

In Chapter 5, “Psycho-neuro-intracrinology: The Embodied Self” (**Susan Gordon**), I introduce an autopoietic model of the *neurophenomenological self* or growth-oriented dimension of the person as the confluence of psychological, neurological, and intracrinological systems. Two theories are advanced to explain how the self has correlates not only in the brain, but also in the connections between the hypothalamic-pituitary-gonadal and hypothalamic-pituitary-adrenal (HPG-HPA) axes, which are responsible for enactive engagement and the development of meaning through their connections to the higher-order functions of the brain. The theory of psychoneurointracrine autopoiesis explains how the regulation of a steroid’s receptor is modulated by the person’s perception of experience and sense of well-being. The theory of emergent global states examines how reciprocal limbic projections from the HPG-HPA axes integrate prereflective, autonomic, subliminal, and archetypal experience in the development of meaning and the emergence of the self. These theories extend knowledge of the mind-brain relationship and the growth-oriented dimension of the person.

These chapters proceed from the neurophenomenology of emotion to an analysis of neurophenomenological praxis in learning and pedagogy, to a neurophenomenological study of visuospatial process in Tibetan meditators, to a theoretical and philosophical commentary on the relations between neurophenomenology, radical empiricism, and the future of scientific psychology, to a psychoneurointracrine model of the embodied, neurophenomenological self. Emotion is explored as the ground from which cognition occurs, and prereflective awareness is examined as foundational

to the lived experience of meaning and the growth-oriented dimension of the person. The ideas presented in this volume have wide application to psychological science: understanding the experience of emotion, expanding our methods of teaching and learning, the value of research on meditation to an understanding of consciousness, the implications of James' epistemology for present-day neuroscience, and an embodied approach to experience. By integrating Western Anglo-American and Continental phenomenology with cognitive science and Eastern contemplative experience and practices, neurophenomenology provides a bridge between the sciences that neither reduces the mind to the physiology of the brain nor the living organism to cause and effect relationships, but instead provides steps toward a more person-centered science. It is my hope that this book stimulates a rich and fruitful academic discourse for psychologists across the professional spectrum as well as interdisciplinary scholars of phenomenology, neuroscience, philosophy, and consciousness.

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## Notes

1. Rollo May, Henri Ellenberger, and others became central figures uniting the separate European traditions of existentialism and phenomenology under the umbrella of humanistic psychology in the form of existential-phenomenological psychotherapy. Others such as Charlotte Bühler, James Bugental, Adrian van Kaam, and Sydney Jourard wrote on humanistic themes in existential psychology. It was Rogers, Maslow, and May; however, who established a new norm for psychology as a whole, despite opposition from behaviorists and psychoanalysts, declaring that humanistic psychology, at the center of their vision of a transformed discipline, was person centered, growth oriented, and existential in orientation (Taylor, 2009, pp. 263–264).
2. Figures out in the wider culture, such as Alan Watts, a student of Zen teachings and Episcopal minister, his teacher D. T. Suzuki, the theosophist Jiddu Krishnamurti, Indian yogis such as Swami Rama, psychophysicologists such as Elmer and Alyce Green, indologists and religious philosophers such as Frederic Spiegelberg and Huston Smith, and Vedantic practitioners such as Aldous Huxley and Gerald Heard inoculated Westerners with concepts of consciousness and techniques of meditation drawn from classical Asian psychology and other world religions. This was also the time when psychedelic drugs were first introduced into the general population and had the effect on the resurgence of a popular spiritual psychology (Taylor, 2009, p. 264).
3. For an introduction to the phenomenological approach to psychology taught by Giorgi and others, see Buytendijk (1967), Giorgi (2010), Gurwitsch (1966), Merleau-Ponty (1962), and Strasser (1967). *Note: Relational intentionality*, which is what empirically grounded, phenomenological psychologists do within the natural attitude (Churchill, 2010), is different from *adverbial intentionality*, which refers to Husserl's transcendental philosophy that focuses on the process of consciousness "itself" as bracketed from the "transcendent reality" that surrounds it (Hardy, 1990).



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