Book Review

Review of Wolfgang Baer's Book: Conscious Action Theory - An Introduction to the Event-Oriented World View

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Abstract

Wolfgang Baer's project consists of nothing less than adducing from first principles a model of consciousness that reconciles subjective experiences with biophysical processes inherent in brain function (Baer 2020). His model, Conscious Action Theory (CAT) argues that unification of the subjective and objective can only be achieved by accepting the observer's existence as the foundational premise underlying all scientific inquiry. Starting from this premise it becomes possible to abandon object-oriented epistemologies that view subjective experience as epiphenomena of physical processes, and to develop a truly event-oriented ontology in which the first-person observer is a physical system that has always contained its own mental experience. Baer asserts that mind, brain, and world can be unified only when physics evolves to encompass both the causes and *subjective feelings* of experiences. His book transcends mere philosophical speculation by proposing the expansion of contemporary quantum physics to implement these unifying concepts.

Keywords: Conscious action, event, world view, brain, mind, experience, subjective, objective, biophysical process.

Concepts

Baer argues that the Aristotelian paradigm positing an a-priori independent world of dead objects was so strongly ingrained in physics historically that reference to the subjective observer was anathema. Even in the early 1900's Schrödinger's wave function was interpreted as a quantum probability object existing independently of human experience. Subsequently, logical positivism held that physics should be concerned only with relations between observable experimental results, which were statistical in nature, and that efforts to understand underlying causes was misleading and unnecessary. Since those early days, research findings have confirmed that physical effects take place at the quantum level in relationship to the mental experiences of scientists conducting research and observers. These findings have resulted in a paradigm shift from Aristotle's naïve empiricism to worldviews approaching Platonic idealism. The philosopher Whitehead (1959) who had a deep understanding of quantum mechanics, proposed that real events he called actual occasions should comprise the building blocks of reality rather than probabilities as defined by quantum mechanics, or objects as conceived in Aristotelian naturalism. More recently Vitiello (2001) and Tegmark (2014) have argued for the logical

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necessity of including the brain and the subjective experiences of the experimenter and observers in any investigation of the quantum nature of reality.

According to Baer the phenomenal content of sensory awareness is only one phase of a larger *processing system* required to generate what is actually *experienced*. This larger self—big "I"—stands in contrast to the phenomenal appearances of our surroundings and the little "i" we actually see and experience as our body. Differentiating between what we see "i-you-it" and what we are "I-You-It" is critical to understanding ourselves as events. The big "I" processing system can be described in strictly physical terms as a cyclic action flow structure. According to the CAT-model, a unity of mind and body exists as a sequence of inner and outer forces contained in event structures. Applying this unity to all objects allows humans to conceive of the rest of the universe as an event which differs from our *human event selves* in magnitude only. We both do the same thing and are in that sense equal partners in the dance of existence.

Baer reminds the reader that philosophers and physicists among them James, Whitehead, Bohm and Penrose have argued for an event-oriented world that places the objective world into the context of an event, which like the big "I" generates feelings of itself. The event-oriented worldview proposes a Universe of interacting action cycles each of which contains its own experiences evolving in its own time-frame. Baer asserts that the next major advance in understanding of the nature of phenomenal reality will be achieved when the universe is conceived as an event in which interacting conscious beings are formally described as action cycles.

Physics

After summarizing important philosophical arguments, the second section of the book develops a sophisticated model for an event-oriented world grounded in the knowledge of contemporary physics. Unity of mind, body and the universe can be achieved within this framework by recognizing that humans are events that contain both mental experiences and associated physical phenomena. Baer postulates that energy fields associated with charge and mass formalized as the weak and strong forces of nuclear physics correlate to observable mental experiences, and that gravito-electric forces correspond to the objective physical world. In this schema, mental and physical phases follow one another manifesting as a web of inter-relationships between subjective experience and external states of affairs *in the world*. This process results in repeating cycles of *mind-causing-body-causing-mind*. The above framework fundamentally changes our view of physics and the objective world it describes. Physics no longer describes 'things out there' but the apparent properties of events experienced by an observer. Everyone generates a unique *world of experience* as a function of stimulation received. Conscious awareness takes place when a measurement function compares signals from an internal model of the external world with computations of a neural network chain processing sensory or cognitive information. Nothing exists for mind and body to interact with outside of these cycles. In sum, the subjective

and objective are seamlessly integrated in a universe that has both a physical aspect and a mental aspect.

Implications

The third section of the book is a wide-ranging discussion of implications of Conscious Action Theory for current limited explanatory models of consciousness grounded in neuroscience, artificial intelligence, philosophy, psychology and religion. Baer asserts that equating the action cycle as a continuous happening that takes place in the domain of subjective experience to the physical universe solves the 'hard problem' of consciousness since the physical basis of subjective experiences is, by definition, equivalent to the 'Now' phase of an action loop. Chapter 6 offers a functional description of action flow in a conscious being including many insightful discussions of sensory awareness, memory, and action cycles that result in the generation of meaning. Chapter 7 discusses implications of Conscious Action Theory for neuroscience, artificial intelligence and psychiatry. Baer asserts that the same internal mass-charge structures necessary and sufficient for consciousness to take place are present in all material systems, at least on a primitive level. It follows that there is no inherent limitation of future AI systems that would preclude the emergence of consciousness.

Baer's proposed comparator mechanism implies that the physical correlates of human consciousness are located in the interface between the neuronal and glial networks. Recent research findings (Mitterauer 2020) have identified these interfaces as the field of tri-partite synapses controlled by Astrocyte cells and have confirmed that imbalances between neurotransmitters and receptors underline some psychiatric disorders.. Chapter 8 discusses general implications of Conscious Action Theory for philosophical, psychological and religious understandings of consciousness. Baer concludes the book with a review of ongoing investigations into the nature of consciousness aimed at confirming the existence of consciousness action cycles. Among other innovative approaches, he describes ongoing studies of dual eye and bi-scopic perception, and patented training devices designed to modify our normal three dimensional mental display, aimed at increasing our cognitive information bandwidth to more closely match emerging brain-computer interface technologies (Baer N 2012).

Received June 23, 2020; Accepted July 25, 2020

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