

Consciousness: Confessions of a Romantic Reductionist
by Christof Koch
Cambridge, Massachusetts: The MIT Press, 2012



Book Review by Tom Lombardo

Christof Koch is one of the leading figures in the study of brain and consciousness. His most recent book, *Consciousness: Confessions of a Romantic Reductionist*, has a lot to say about recent ideas and research in the study of the brain, and is also quite revealing about the conscious content of the mind of Christof Koch -- his personality, his hopes and anxieties, his goals and professional dreams. I would not say that it is especially rich or informative regarding the general topic of consciousness.

Early in the book Koch introduces the “hard problem” of consciousness -- how conscious states (which appear to be totally one kind of thing) could possibly be connected to brain states (which appears to be a totally different kind of thing). How does and why does an electro-chemical event produce a feeling of sadness or a sensation of red? Koch does a good job of describing the brain-consciousness problem. He also presents his general working hypothesis -- a view that he has subscribed to throughout his scientific career -- that through science and a naturalistic approach to the universe we can understand consciousness and how it fits into the big picture of things.

In the bulk of the book Koch reviews and discusses a variety of key areas of contemporary research into the neurological correlates of consciousness, and addresses the general question of how much psychological and cognitive processing goes on at an “unconscious” level. He repeatedly discusses various ideas regarding what the necessary and sufficient neurological conditions -- brains processes and structures -- for consciousness. In this regard, the book is interesting and informative.

Toward the end of the book Koch presents his general theory of the neurological foundations of consciousness, which he derives from the “integrated information theory” of brain scientist Giulio Tononi, who in turn has developed his theory based on his work with the Nobel Prize winning biologist Gerald Edelman. Reading Koch on Tononi’s ideas provoked me into buying Tononi’s new book *Phi: A Voyage from the Brain to the Soul*.

The challenge or problem with the theory, and Koch acknowledges this, is that it does not really explain how consciousness arises from the brain. As Koch believes, consciousness seems to be an irreducible quality of reality -- an ontological primitive -- and whatever we may uncover about the physical operations of the brain (including even corroboration of Tonini’s theory) would not explain how consciousness arises from a brain.

Koch opts for a “dual aspect” theory of brain and consciousness -- a theory that can be found earlier in the writings of philosophers Herbert Feigl and Bertrand Russell, among others. In essence, consciousness is the “inside” view of the physical brain (how the brain appears to itself); the physical brain -- that is, the world of physical matter -- as it appears to an outside observer (a neurosurgeon or biologist, for example), is the “outside” view of the thing. Is this “explanation” satisfying? Is it correct? At times, having read Feigl and Russell decades ago, I have thought that perhaps this is the way to understand the relationship between consciousness and the brain, but more recently I am no longer sure.

Koch also discusses the question of free will. Given the deterministic nature of the physical world, as revealed through science, and given the apparent corresponding deterministic nature of the physical operations of the brain, how can it be possible that we have any real choice in what we consciously experience or how we behave? Although Koch argues that science seems to strongly imply that we have no free will, he also argues that we must behave as if we do. He feels compelled to live his life as if he is the master of his own ship, believing that he has choices in how he directs his life.

Hence, we come to a basic question that runs through the book: How does the study of the brain and consciousness influence how we live our lives? Given his scientific beliefs and his quest for a scientific understanding of the nature of his own being (his body and mind), how does the author feel his life has been effected by this paradigm of thinking and action? Koch ruminates on this issue throughout the book, and that’s where we can gain insight into the workings and content of Koch’s own conscious mind.

Having read Damasio's new book *Self Comes to Mind* the previous year, I would say that Damasio's book provides more substance on the phenomenology of consciousness and how it possibly connects with various neurological processes. Still, Koch's book at least seems to confront the hard problem of consciousness and the brain more directly, and at the very least, offers some ideas regarding how to understand it, even if, when all is said and done, he does not solve it.