

# Antonio Damasio probes the mind in his new book

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In his new book, *Self Comes to Mind: Constructing the Conscious Brain*, Antonio Damasio, director of the USC Brain and Creativity Institute and David Dornsife Professor of Neuroscience, explores how the brain constructs a mind and how the brain makes that mind conscious.

*Without consciousness - that is, a mind endowed with subjectivity - you would have no way of knowing who you are. -Antonio Damasio*

The brain, mind, self and [consciousness](#), on their own and in relationship to each other, are the focus of Antonio Damasio's lifelong research and his latest book *Self Comes to Mind: Constructing the Conscious Brain* (Pantheon).

Damasio, David Dornsife Professor of [Neuroscience](#) and director of the USC Brain and Creativity Institute housed in USC College, dedicated the book to addressing two questions: How does the brain construct a mind? And, how does the brain make that mind conscious?

Damasio believes there should be a reason to write a book. In addition to having enough new material on the [neurology](#) of consciousness, his reason for writing *Self Comes to Mind* was to start over.

A prolific writer of scientific articles and books,

including his international best-seller *Descartes' Error: Emotion, Reason and the Human Brain* (Penguin Books), as well as an oft-quoted distinguished neuroscientist, Damasio grew dissatisfied with his account of consciousness. In this book, he discusses new and relevant research findings as well as what "we still do not know but wish we did."

Understanding rich and complex neurological systems requires deconstruction and that is what Damasio does as he studies the processes that lead to consciousness. He underscores the need for deconstruction to facilitate a better understanding of the systems by quoting American physicist Richard Feynman: "What I cannot build, I cannot understand."

According to Damasio, the brain uses specific mechanisms to produce consciousness, which is made of mind and self. The mind is the basic component and self is derived from the mind where consciousness emerges.

"We take consciousness for granted because it is so available, so easy to use, so elegant in its daily disappearing and reappearing acts, and yet when we think of it, scientists and nonscientists alike, we do puzzle," Damasio writes in the book's first chapter.

He begins *Self Comes to Mind* as an airplane passenger en route to Los Angeles when he wakes up as the airplane is preparing for landing. "I knew, almost instantly, with little hesitation if any, without effort, that this was me, sitting on an airplane...."

Damasio cautions that consciousness does not happen instantly as it may appear, as evidenced by sequences recorded on brain scans. For example, if you wake up in a different country several time zones removed, select areas of your brain will work together to bring you to full consciousness.

"You wake up and it takes you more than an instant to realize that you are not in your bed," he said. "In several hundreds of milliseconds you open your eyes, take in images that become increasingly vivid to form your proto self, and receive a message of who you are from a high level coordination of memory processes.

"The brain stem, cerebral cortex and memory act in unison in the complex mental process that tell us who we are and generate the feelings that are at the heart of being conscious," he said.

Damasio maintains that "humans are not either thinking machines or feeling machines but rather feeling machines that think." Organisms down to the level of invertebrates emotionally and automatically respond to threats from predators or environmental dangers for their betterment and survival.

Through evolutionary processes, the beauty of the mind has combined feelings of emotion with the accrual of knowledge, logic and reasoning. "We have less violence than 300 years ago, even 100 years ago because of this evolution that goes beyond basic emotional responses," he explained.

In addition to humankind's high level of reasoning, unique memory and rich language, Damasio holds that what separates us from primates is a sense of autobiography.

"We can look back at our past in great detail including the places we have lived, a variety of events that are very marked, and we can create a memory of our anticipated future."

Damasio said that what most characterizes living beings is coping effectively with the management of life and for that there is homeostasis, the ability of an organism to maintain a stable environment for survival, which has come to us by our genomes.

Once there was consciousness and we could develop memory, reasoning and eventually language, humans were able to construct something novel in the history of evolution - culture. "When humans started to interact with each other, artifacts of culture emerged, such as instruments that include moral systems, justice, economics,

religious beliefs, science, technology, and arts that are patterned entirely on the matrix of life regulations," Damasio said. "With culture, we begin to regulate not only the life of the individual but the life of the individual within the social group."

Unlike basic homeostasis, Damasio said that socio-cultural homeostasis - a work in progress for the last few thousand years that upgrades survival to survival with well-being - is an expression of a very complicated process that evolved not just in our genes alone. "Life is difficult. As humans strive for a sense of well-being and balance, they produce or are consumers of art, books and music," he said.

*Self Comes to Mind* is also the name of a three-movement concerto based on a poem written by Damasio and performed by cellist Yo-Yo Ma at the American Museum of Natural History in 2009. Brain scan images that accompanied the amazing performance were created in the laboratory of Hanna Damasio, Dana Dornsife Professor of Neuroscience and co-director of the USC Brain and [Creativity](#) Institute.

Released this week in the United States and Britain, *Self Comes to Mind* is already on several best-seller lists in Europe, and is in its second printing in Spain and France, where it has been favorably received.

V.S. Naipaul, Nobel laureate and author of *A Bend in the River* and *The Enigma of Arrival*, said of *Self Comes to Mind*: "The marvel of reading Damasio's book is to be convinced one can follow the [brain](#) at work as it makes the private reality that is the deepest self."

Provided by USC College

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