

REVIEWS AND COMMENTARIES

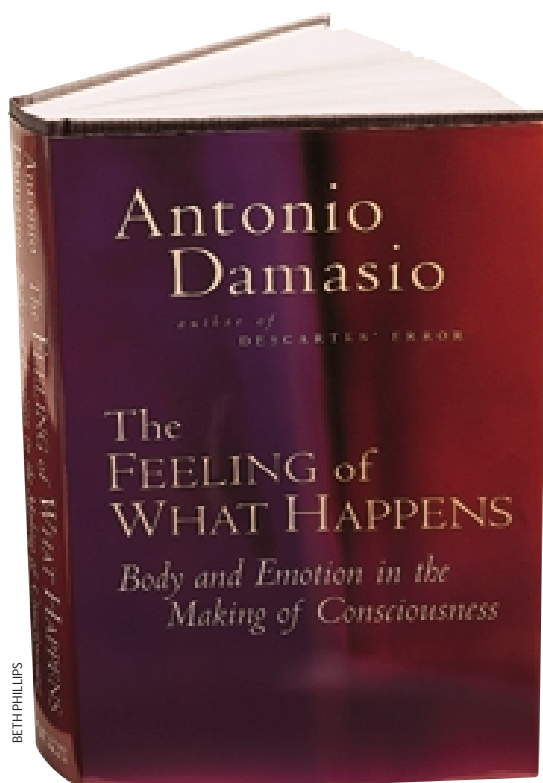
THE HINT HALF GUESSED

Review by Thomas Metzinger

The Feeling of What Happens: Body and Emotion in the Making of Consciousness

BY ANTONIO DAMASIO

Harcourt Brace, New York, 1999 (\$28)



As you read the first sentence of this review—trying to find out whether this will be an interesting book, one you might like to read yourself—what exactly is the content of your conscious experience? Is it formed by the letters and their white background, which make up your visual experience? By the feel of the paper in your hands? By thoughts, now slowly beginning to bubble up as you continue to read? Or is it, rather, the experience of a *self in the act of trying to understand*?

In his new book, Antonio Damasio investigates the deep representational structure of consciousness. He argues that it always portrays a relation between an organism and an object and that the basic format of this portrayal is not thought but feeling. Damasio, head of the department of neurology at the

University of Iowa College of Medicine and adjunct professor at the Salk Institute, won international acclaim for his 1994 book, *Descartes' Error*. It is easy to predict that *The Feeling of What Happens* will have a similar impact. The book is clearly aimed at a broad, nonscientific audience; in fact, a large part of its strength lies in the elegance of its language and the seeming ease with which it makes difficult issues accessible to readers with highly divergent backgrounds.

In the introductory section, Damasio presents two different notions of consciousness: core consciousness and extended consciousness. Core consciousness is what we share with some nonhuman animals—a simple biological phenomenon, the scope of which is the Here and

Now. This basic, integrated representation of one moment and one place is independent of language and reasoning, of conventional as well as of working memory. Essentially, it stays stable across the whole lifetime of an organism. What evolves in the course of a life, subtly flowering from the Here and Now through many levels and grades of content, is an awareness of being situated within an individual history—the conscious experience of anticipated future possibilities and of a lived past. This is extended consciousness. Human beings share it only with a much smaller number of other animals.

Intimately related to this difference between basic and extended consciousness are two distinct notions of self-consciousness: the core self and the autobiographical self. They are central to

the new approach to the problem of consciousness that Damasio presents. Again, the richer version—autobiographical self-consciousness—is closer to what we usually refer to when discussing our selves. Its content is a systematic record of the organism's memories of past situations, of its name, and of its likes and dislikes—in short, of the more invariant properties that this organism has discovered about itself. It generates the subjective experience of possessing a transtemporal identity. Interestingly, what it grows out of is a much more transient entity—the core self, which is “ceaselessly re-created for each and every object with which the brain interacts.”

This new idea of anchoring our traditional self-concept in a more fundamental notion of continuously changing bodily processes is the central motive of this exciting book. Incessantly pulsating, like a heart pumping blood, the core self swiftly and constantly generates new states in which images of objects and a basal model of the self are integrated into an overarching representation of “a self in the act of knowing.”

Answer to a Question Never Asked

For Damasio, solving the problem of consciousness has two aspects. The first is to narrow down the neural correlates of conscious image generation, of what he calls the phenomenal “movie-in-the-brain.” The second aspect, which has been widely neglected in the past, is more subtle: it consists of advancing our understanding of how “the *appearance* of an owner and observer for the movie *within the movie*” can be created. We have to understand how a phenomenal self can be generated and perceived as being external to the brain while being fully immersed in a complex, multimodal scene. Damasio points out that, phenomenologically, the presence of the self is often subtle and implicit but that, nevertheless, it is the key ingredient in transforming mere wakefulness into consciousness in the true sense of the word.

The presence of self centers the flow of your interactions with perceptual ob-

jects on itself, thereby making them your own experiences. It is here that the author for the first time employs one of many beautiful literary metaphors to come. He writes about the self, silently flickering in the background:

The presence is quiet and subtle, and sometimes it is little more than a "hint half guessed," a "gift half understood," to borrow words from T. S. Eliot. Later I shall propose that the simplest form of such a presence is also an image, actually the kind of image that constitutes a feeling. In that perspective, the presence of you is the feeling of what happens when your being is modified by the acts of apprehending something. The presence never quits, from the moment of awakening to the moment sleep begins. The presence must be there or there is no you.

My own favorite metaphor, however, is another one: The self, says Damasio, is an answer to a question that was never posed.

In the second part of the book, Damasio explores the relation between emotion and feeling at length, analyzing emotions as bioregulatory devices. Their experiential content expresses the logic of survival *to* the organism, enabling it to feel this logic directly from an inward perspective. As it turns out, consciousness and wakefulness, as well as consciousness and low-level attention, can be separated. Interestingly, what *cannot* be separated are consciousness and the emotions. Damasio now introduces the notion of an unconscious proto-self. Changes in the proto-self, caused by the perception of external images, underlie a high-level mapping in the brain that depicts an ongoing relation between organism and object. This relation is, then, the crucial step into core consciousness, including a conscious core self.

Those readers hungry for some nuts-and-bolts ideas about possible neural underpinnings of the proto-self, the core self and organism-object mapping finally get their fill in part 3 (especially chapter 8, "The Neurology of Consciousness"). The cingulate cortex, a massively somatosensory structure also

involved in attention, emotion and the generation of movements, turns out to be a prime candidate for implementing the crucial mapping needed to create the "self in the act of knowing." It is telling that bilateral anterior damage to the cingulate disrupts core and extended consciousness, while preserving wake-

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fulness. On the other hand, because the correlates of the unconscious proto-self and the core self are concentrated in certain nuclei in the upper brain stem and the hypothalamus, damage to those areas causes the most profound and irreversible losses of phenomenal experience. Damasio makes a number of testable predictions, and one can only hope that they will engender a flood of empirical research, leading to a fine-grained mapping of the actual functional matrix realized by those brain regions.

The Survival Value of Consciousness

Being a philosopher, I will remain mute about empirical details and refrain from further speculation. Most intriguing is how this research supports a certain theoretical intuition that I have long found attractive myself: not only is the human self-model firmly anchored in ancient bioregulatory processes that secure the physical coherence of the organism, but it also builds a bridge. This bridge reaches first to higher-order forms of mental self-organization as seen in the mental simulation of possible worlds or possible selves, and second, and more important, to the universe of social cognition and cultural evolution. We are not machines. The simple fact of our own present existence affects us. Imagination, future plans and the mental states of other living beings *matter* to us, because our cognitive, autobiographical and social selves are riding on the internal dynamics of bodily homeostasis and emotion. In Damasio's words: "Consciousness is valuable because it introduces a

new means of achieving homeostasis."

In trying to assess the primary virtue of this book, I would offer its sensitivity to the subtleness of real phenomenology and to the deeper philosophical issues associated with the ongoing search for a convincing theory of consciousness. In particular, and in the jargon of my own theory, Damasio has discovered the central feature of the representational deep structure of conscious experience: the "phenomenal model of the intentionality relation." Put simply, this amounts to the

claim that the content of consciousness is a dynamic, transient relation namely, the relation between a perceiving self and an object. If the internal image of this relation is what philosophers call "transparent"—the organism has no chance of recognizing that all this is just an internal model—then, by necessity, a rudimentary first-person perspective will emerge. The organism will suddenly be phenomenally situated in the movie in his own brain, seamlessly immersed in a biologically grounded virtual reality and simultaneously having an "out-of-brain experience."

It may be that I am blinded to weaknesses in Damasio's approach because our respective theories converge in a number of points. But even aside from this happy convergence of ideas, I believe that the book's clear, beautiful language, its fascinating case studies and the way in which it brings difficult scientific issues to life for readers with many different interests may actually make it a landmark in the interdisciplinary project of consciousness research.

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