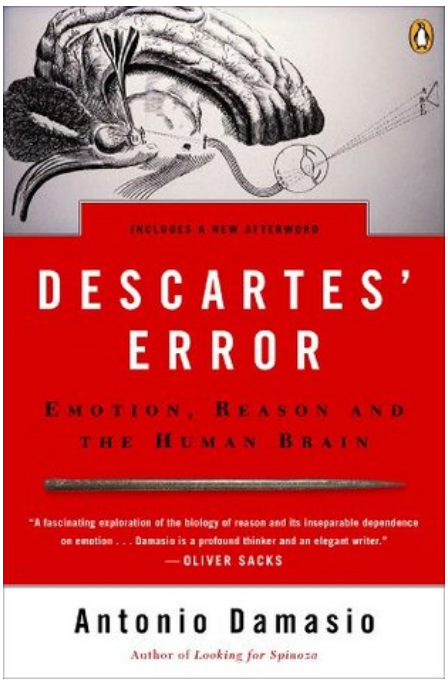

Descartes' Error: Emotion, Reason, and the Human Brain

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Since Descartes famously proclaimed, "I think, therefore I am," science has often overlooked emotions as the source of a person's true being. Even modern neuroscience has tended, until recently, to concentrate on the cognitive aspects of brain function, disregarding emotions. This attitude began to change with the publication of **Descartes' Error** in 1995. Antonio Damasio—"one of the world's leading neurologists" (**The New York Times**)—challenged traditional ideas about the connection between emotions and rationality. In this wondrously engaging book, Damasio takes the reader on a journey of scientific discovery through a series of case studies, demonstrating what many of us have long suspected: emotions are not a luxury, they are essential to rational thinking and to normal social behavior.

Descartes' Error: Emotion, Reason, and the Human Brain Details

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From Reader Review Descartes' Error: Emotion, Reason, and the Human Brain for online ebook

matt says

A very intriguing book exploring the relationship between reason and emotion. Having grappled with how the two can complement each other for most of my life, I'm digging it. The author uses historical medical examples of bizarre cases of brain damage, such as the story of Phineas Gage, a construction foreman from the 1800s who survived a 3-foot metal rod passing through his head, suffering nothing but blindness in his left eye physically but a whole slew of mental and emotional problems due to the precisely localized brain damage. Fascinating stuff.

Corey says

I had an unusually ambivalent reaction to this book and alternated between being fascinated and being, well, slightly bored. I'd say that the book is good and the author has some excellent insights, but he gets a little long-winded at times and tends to meander. For the curious, Descarte's "error" was the separation of mind and body, and consequently, an artificial dichotomy between rationality and emotion. Damasio makes an excellent case on neurological grounds that rationality simply doesn't work without emotion.

Joshua Stein says

Damasio's book is terrific, and works both as an introduction and a good guide for those studying neuroscience and cognitive science. The scientific case studies are easily accessible and thorough (it features, by far, the most thorough assessment of the Phineas Gage case that I've come across) as are the discussions of circuitry. Damasio does use some unqualified terms, but he does a reasonable job at keeping the very technical discussions brief or relatively well qualified by the context of the case studies.

There are a lot of areas that Damasio glosses over, but that is largely because he is attempting to cover a fairly massive scope, in terms of science. The text really is about the science, and it is only towards the end that Damasio really begins to address the philosophical assessment, at all. There are some interesting methodological considerations for those who are approaching this book from the "philosophy of mind" bent, as I am. I strongly recommend paying attention to Damasio's relatively interchangeable use of functions usually seen as properties of mind, and the the circuitry of the brain. Damasio is a brilliant writer, and there is a lot of thought put into that particular assessment of causal relationships.

The assessments of evolutionary psychology are very interesting, though I do have some skepticism with regard to some of Damasio's claims about genetics and the development of the brain, as he is not entirely clear about the role of genetics in the emergence of structures in the brain. There's a sort of weird micro/macrostructure distinction that isn't entirely clear to me, and I wish that portion of the text had been more lucid.

That is really nit-picky, though. I think that, overall, this is one of the best books on the subject that I have come across. I really like Damasio's writing style, though the asides can be a little rough, and feel a bit

disjointed. Overall, this is a terrific overview of the science and the repercussions on philosophical theories, both historical and contemporary. Damasio doesn't present this as a screed against Descartes (which would be gratuitous, as writers like Dan Dennett have already beaten that horse well to deal at this point) but instead allows his account of the brain to be taken in its proper philosophical context. Definitely a terrific text.

Morgan Blackledge says

OMG Damasio is a hand full.

I think he's trying to kill me.

The book starts out very readable (which is uncharacteristic of Damasio), then (about half way through) the book becomes nearly unreadable (which is typical of Damasio).

I am an educated reader. I teach affective and developmental psychology. I am not a researcher or a specialist but I can say that none of the material in this book is unfamiliar to me. But I'm often lost as to the larger point Damasio is trying to make.

I attribute this to Damasio's prolix writing style. Much of the book feels like he's barfing data onto page after page with out connecting any of it back to the central metaphor of the book.

I find this to be the case with a lot of European intellectuals. They (big generalization, lots of exceptions e.g. Dawkins) don't seem to value economy, clarity or functionality in their writing. The older I get, the more I respect writers who do.

I'll finish this book, I'll read the rest of his books, but dear god what a chore..

Nathan says

Ignore my bias of working in a body-centered cognitive neuroscience laboratory (whose nascence was likely inspired by researchers such as Demasio), but Demasio's theory resonates as a particularly well-informed "big-level" brain theory. I've read a number of others who attempt to explain away a lot of the mysteries of the brain by big-level theories, but Demasio turns out to build one of the more compelling set of explanations based mostly on evidence from his years of research in dissociation studies in neurology. Where others fail by skirting the issues of how neural structures and organization can lead to self consciousness and the link between mind and body, Demasio succeeds. His message is simple: we must not forget the entire biological organism when analyzing the brain.

The fallout from this main thesis is that proper "cool-headed reasoning", decision making, and logical thought is influenced by emotion, and vice versa. This symbiosis theme continues as we are taught to remember that the brain is part of the body, and the body is part of the brain. Forgetting the strong coupling between the two is denying the reality of the situation. A brain in a vat is no brain at all.

Stylistically, Demasio writes an engaging tale. The book is meant for a general audience, but I guess that

most people unfamiliar with the brain structures, competing theories, and the general debate in philosophy of mind will find the content a bit heavy and must re-read certain passages. The book sags a bit in the middle (editor please!), but Demasio's theories of self to be found in the closing chapters are well worth the wait.

I won't delve too much into the implications for neuroscience, but Demasio's claim only makes our task to describe the brain all the more difficult. He sides with high-level theorists, pointing out that no matter how well we understand the constituent units of our neurological system, it is not sufficient to describe behavior until we account for the whole picture. This means that every high-level experiment needs to understand that behavioral results can be not only task-related but also influenced by background emotion, something difficult to measure and control.

Bref: He's successfully left me with some new ideas and has made a compelling thesis. Congrats.

Laura Grabowski says

I was captivated and fascinated by this book, start to finish. The book addresses the importance of emotion in cognition, thus pointing out Descartes' error in separating mind from body. In many ways, this book simply affirms things that I have "known" for many years, having spent 20+ years as a dancer/choreographer, but Damasio's perspective as a neuroscientist provides additional and compelling insights. I recommend this book to anyone interested in cognition, psychology, philosophy, arts, or science -- basically, to just about anyone.

Dwight Cates says

Rene Descartes was a 17th French philosopher and scientist, often called the father of modern philosophy. Descartes argued that 'mind' is an essence that exists independent of 'brain' - this is known as 'Cartesian Dualism.' In 'Descartes' Error', Antonio Damasio argues persuasively that that mind is inextricably linked to brain - when you change the physical brain in specific, measurable ways, you induce specific and measurably changes in mind - personality and behavior.
Damasio illustrates this through numerous examples, drawn from patients who've exerienced brain damage due to trauma or disease, and emerged from the experience with a new personality and mental abilities. Given the evidence, it's very difficult to argue that the 'mind' or 'soul' is a non-material essence that exists independent of the physical structure of the brain.

Jon Boorstin says

Damasio takes advantage of some bizarre accidents to discover new things about the brain. Mainly, that decision making isn't rational, but involves a leap of faith. Very persuasive, and it jibes with William James's Will to Believe.

Tippy Jackson says

I was just finishing up chapter 8, the somatic-marker hypothesis. I find this idea fascinating! What it made me think of, interestingly enough, was my old Social Science class. My teacher had said that we are born with only a few innate behaviors and everything else is learned. Because we are learning everything we know, it is so deeply ingrained in us, that even when we actively try to be objective and to sort of turn off our cultural bias, it is impossible. He pointed to the book Return to Laughter as an example. He was explaining that this is one of the biggest challenges of anthropology. But after reading this hypothesis, it makes me think of that again. Not only is much of what we know and do culturally learned, but what we learn is even marked in our brain to help us make quick decisions! (Or rather our brain connected specific classes of stimuli with specific classes of somatic state, and our automated somatic-marker device is based on the "education to the standards of rationality of that [our:] culture." It is in effect a marker based on our secondary emotions) This book has really done a compelling job of explaining this hypothesis, both biologically and circumstantially. I appreciate its thoroughness and originality. I picked this book up because I've seen it referenced over and over again in many animal intelligence or animal mind books and I wanted to see what the fuss was about. That being said, I'm coming at this book from a zoologist perspective, not a neurologist perspective, so I haven't really been keeping up with current ideas in the brain science world. So far, reading what I have has made me want to go and look up more current research on this idea. This book was published in '94, but it seems that many more current books are referencing it and now I'm really curious to find out if these ideas have been tested more or what other ideas there are out there.

Also, I love that he opened with Phineas Gage and his use of case studies is very helpful.

Having finished the book now, there are a few other things he brings up which I found interesting. He distinguishes between pain and suffering, which is referenced in animals in translation. Essentially, he explains that suffering has an emotional component. Pain can be simply the physical responses, i.e. neurons firing, hormones/neurotransmitters released. He uses examples from humans who have had a leucotomy. Also, he defines the difference between feelings and emotions. He specifies that acknowledging that there is a physical (and rational) component to feelings/emotions does not mean that prescription drugs should necessarily be used for treating emotions, or performing any treatment that ignores the mind-body relationship, which he also throughly details. He explains that what we refer to as the mind cannot exist without receiving feedback from the body as he ponders the "brain hooked up to electrodes" question.

Jon Stout says

Antonio Damasio has written a fascinating book, taking as his point of departure a nineteenth century case of a man named Gage who had an iron spike neatly blown through his brain in a mining accident. Gage seemed to retain all of his faculties, amazingly enough, but failed in his later life due to emotional problems. Damasio, a neurologist, uses the case to explore the relationship between emotions and the neurological structure of the brain.

A friend recommended this book to me because of our mutual interest in the philosophical problem of free will, especially as illuminated by the nature of the emotions. Damasio addresses these problems by showing how emotions are related to a particular portion of the brain (ventro-medial cortex), and how emotions function on a basic level as instinctual (non-voluntary) responses to environmental situations. As animals evolve or as human beings grow up, the brain develops these instinctual responses to have a conscious,

cognitive component (free, rational thinking) while still using the mechanisms of the primitive instincts.

Damasio reacts to Descartes by criticizing his mind-body dualism, although this is old hat. Seemingly everybody since Descartes has knocked the dualism and still made use of the mind-body distinction.

My favorite part is Damasio's discussion of how one's emotional life plays an important part in rational thinking, by recalling bodily feelings which give a coloration to this line of reasoning or that. My analogy would be that emotions are like the sound box of a guitar, which gives timber and resonance to the vibration of the strings. John Dewey quotes George Santayana as talking about the "hushed reverberations" which give richness to life. These are the emotions, as Damasio describes them neurologically.

Sean says

I read Descartes' Error as an undergraduate. In grad school, I learned that my advisor's wife (herself a neuroscientist of some renown) had a very poor opinion of Damasio's work. However, by that point, this book had already changed my life.

Damasio provides here a popular account of research in neuroscience that started with the famous case of Phinneas Gage, who, upon having a railroad spike shoved through his head by an explosion, changed from being an upstanding, reliable citizen into a scurrilous bastard with a gambling problem. From this, as well as experimental work with other victims of brain damage, Damasio draws the conclusion that "reason" as we typically think of it is not an abstract process, but a fundamentally embodied one: the brain and the body are in constant communication, and the brain uses feedback from the body to evaluate, prune, and select for further exploration the branches of a decision tree that, for even the most minor of problems ("when should we get together next?") would be otherwise unmanageably large.

My interest in cognitive science and neuroscience were the natural outgrowths of my interest in computers and science fiction. I grew up, as did most people of my generation, with the metaphor of the mind as a computer, executing logical programs in a way that would have made Aristotle - and Descartes - proud. I knew from studies of psychology how apparently irrational the human mind could be, but until I read this book, I always thought the mind was, fundamentally, a separate thing from the body. This book convinced me they are, at least as we implement them, inseparable.

Isabel says

3,5*

Não sou uma leitora prolifera em matérias como a que é abordada por António Damásio neste livro, mas também não é a minha primeira leitura sobre o tema.
No entanto, nesta obra, que começa de uma forma algo acessível ao leitor "comum" no que respeita a conceitos sobre o assunto, com o avançar da leitura, a complexidade dos termos adensa-se, tornando-os demasiado científicos ou académicos, o que me dificultou, a dada altura, a sua compreensão.
Mas acho que o barco chegou a bom porto e António Damásio ganhou, definitivamente, uma nova leitora.
A minha predilecção foi para o capítulo 7 da parte II sobre as emoções e sentimentos.

P. 257- "(...) a compreensão cabal da mente humana requer a adopção de uma perspectiva do organismo. (...) a alma e o espírito, em toda a sua dignidade e dimensão humana, são os estados complexos e únicos no organismo. Talvez a coisa que se torna mais indispensável fazermos no dia-a-dia, enquanto seres humanos, seja a de recordar a nós próprios e aos outros a complexidade, fragilidade, finitude e singularidade que nos caracterizam."

Abailart says

Having read and become involved with his later books, I have gone to the first in a series which explains the difference between emotion and feeling, which makes the mind and body one again, and which profoundly disturbs the comfortable idea of any but conventional separation of 'reason' and the passions.

Damasio is of the 'sufficient but not necessary' strand when it comes to looking at the relationship between brain and mind: you can't be human with the attributes of feelings, emotions, memory and so on without a brain, but all of the attributes relate to things beyond the brain (in particular, the body). I'm a little puzzled as to why he looks forward to a time when 'we' will understand such a thing as aesthetic response. I am not sure, for one, that we are much further than Plato in beginning to understand aesthetics so finding even neural correlates with 'aesthetic states' seems conceptually doomed; more importantly it feeds into the current neuromanic slop that assumes with the intellectual grasp of a five year old that a mood state, a feeling, something like an aesthetic adjective are simple labels to 'things' that exist with the solidity of a stone. As I say, Damasio is aware of the dangers but sometimes, apart from inserted disclaimers, his enthusiasm for his subject tends to imply that while he is very good on the brain he has less of a grasp on the psychology, and of the immense conceptual complexities of enculturation.

For all sorts of reasons though, I'll give this five stars - not least because it's enjoyable and a highly accessible primer to some of the basic anatomy and hypothesised functions of the brain, and, most importantly, its embodiment: we separate brain from body only for conventional convenience. I find that Damasio's work fits (for me) with Lakoff and Johnson (especially relating to the embodied mind), Mark Turner (*The Literary Mind*), and Chambers, Clark et al (the extended mind).

Julian says

very bad. the title takes on a literal meaning as this book is good for:

1. a further explication but just largely a complete repetition of Descartes' philosophy under the guise of a 'correction'
2. never pointing out any errors Descartes actually made, and falling in to all of the same traps Descartes did, most of which were pointed out in the 17th century.

Jeremy Lent says

I’ve been reading Damasio “backwards”. One of the first books I read three years ago to try to understand

the neuroscientific view of consciousness was Damasio's The Feeling of What Happens: Body and Emotion in the Making of Consciousness published in 1999. That gave me a solid grounding in Damasio's view of embodied consciousness, which has become a foundation of my thinking. Later, I came across Damasio's paper on the somatic marker hypothesis, which powerfully rejects the idea that abstract thinking can take place without a direct connection to the body's bio-regulatory processes.

With this context, when I finally read Descartes' Error, (probably Damasio's most cited book), it had some of the characteristics of a quaint, historical document, making the case for embodied cognition as though it were a radical new idea: "Surprising as it may sound, the mind exists in and for an integrated organism." I guess that shows the enormous impact Damasio himself (and others such as Edelman, LeDoux, etc.) have had in changing perceptions about consciousness in a mere fifteen years. Thanks to these ground-breaking neuroscientists, "we've come a long way, baby."

I can only agree with the array of distinguished names that cite Descartes' Error as a key book for understanding human consciousness. Through Damasio, Phineas Gage has become a household name (in certain households!) – the emblematic tragic figure whose prefrontal cortex was severely damaged in 1848, and whose consequent experiences paved the way for the neurological understanding of the prefrontal importance in regulation of emotion, complex decision-making and general executive functioning.

I think there are two fundamental take-aways from Damasio's classic: (1) the mind is embodied and without this foundation, no approaches to higher cognitive functions or theories of consciousness have much validity, and (2) the prefrontal cortex (pfc) is the crucial mediator between our "innate regulatory circuits" and our self-aware consciousness, with its attributes of reason, willpower, symbolization, abstraction, etc.

Damasio's work is a significant resource for my research project. However, an initial impression of my thesis of "the tyranny of the pfc" might be that it's incompatible with Damasio. After all, if the pfc is the key bridge between bodily regulation and self-awareness, how can there be a "tyranny" of the pfc? And what sense does my distinction of conceptual and animate consciousness make if conceptual consciousness is fundamentally connected with animate consciousness? In fact, though, my approach is not only consistent with Damasio, it relies squarely on the work of Damasio and others for its evidence.

My argument is not that an individual's prefrontal cortex is, by itself, a "tyrant" of our consciousness, but that our Western cultural milieu, imposed on an infant's perceptions before s/he has even learned to speak, shapes the individual brain in such a way that our sense of identity and values give an inappropriate priority to pfc-mediated attributes (such as planning, reason, abstraction, logic, etc.) at the expense of a balanced self-identity emphasizing such attributes as integrated mind/body experience or full awareness of the present moment.

Here's a key passage from the book which relates to my notion of a split between animate and conceptual consciousness:

From an evolutionary perspective, the oldest decision-making device pertains to basic biological regulation; the next, to the personal and social realm; and the most recent, to a collection of abstract-symbolic operations under which we can find artistic and scientific reasoning, utilitarian-engineering reasoning, and the developments of language and mathematics. But although ages of evolution and dedicated neural systems may confer some independence to each of these reasoning/decision-making 'modules,' I suspect they are all interdependent.

What Damasio describes as the "collection of abstract-symbolic operations" is essentially the same as my

idea of “conceptual consciousness.” As he pointedly emphasizes, they are “interdependent.” But Plato, St. Augustine, Descartes and the whole momentum of Western civilization have idealized the conceptual consciousness as “the soul,” as the proof of our very existence, and as the foundation for science and civilization. It’s only when we begin to re-balance our values to give equal import to our bodily existence that we can begin to move towards a ‘democracy of consciousness.’

So thanks, Antonio Damasio, for your ground-breaking classic. Highly recommended for anyone with an interest in gaining a serious understanding of human consciousness.
