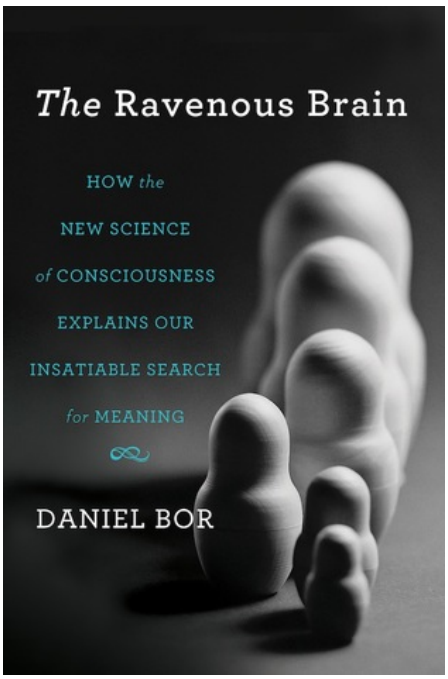

The Ravenous Brain: How the New Science of Consciousness Explains Our Insatiable Search for Meaning

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Consciousness is our gateway to experience: it enables us to recognize Van Gogh's starry skies, be enraptured by Beethoven's Fifth, and stand in awe of a snowcapped mountain. Yet consciousness is subjective, personal, and famously difficult to examine: philosophers have for centuries declared this mental entity so mysterious as to be impenetrable to science. In *The Ravenous Brain*, neuroscientist Daniel Bor departs sharply from this historical view, and builds on the latest research to propose a new model for how consciousness works. Bor argues that this brain-based faculty evolved as an accelerated knowledge gathering tool. Consciousness is effectively an idea factory—that choice mental space dedicated to innovation, a key component of which is the discovery of deep structures within the contents of our awareness. This model explains our brains' ravenous appetite for information—and in particular, its constant search for patterns. Why, for instance, after all our physical needs have been met, do we recreationally solve crossword or Sudoku puzzles? Such behavior may appear biologically wasteful, but, according to Bor, this search for structure can yield immense evolutionary benefits—it led our ancestors to discover fire and farming, pushed modern society to forge ahead in science and technology, and guides each one of us to understand and control the world around us. But the sheer innovative power of human consciousness carries with it the heavy cost of mental fragility. Bor discusses the medical implications of his theory of consciousness, and what it means for the origins and treatment of psychiatric ailments, including attention-deficit disorder, schizophrenia, manic depression, and autism. All mental illnesses, he argues, can be reformulated as disorders of consciousness—a perspective that opens up new avenues of treatment for alleviating mental suffering. A controversial view of consciousness, *The Ravenous Brain* links cognition to creativity in an ingenious solution to one of science's biggest mysteries.

The Ravenous Brain: How the New Science of Consciousness Explains Our Insatiable Search for Meaning Details

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Explains Our Insatiable Search for Meaning Daniel Bor

From Reader Review The Ravenous Brain: How the New Science of Consciousness Explains Our Insatiable Search for Meaning for online ebook

Jana Light says

I loved this book about the brain and how we can think about consciousness as capacity for creative, innovative thought. Rich content, engaging stories, and a very practical thesis. I was struck by his endorsement of meditation in the last 10 pages -- the more I learn about meditation, the more I realize how beneficial a practice is it for our brains and well-being. I was a little underwhelmed by Bor's attempt to explain mental health issues and autism in terms of healthy/unhealthy attention or awareness, but some underwhelm is to be expected in books about consciousness. It is such a difficult concept and we have so far to go before we understand it well. Bor's book is the best one I have read yet on this topic and I highly recommend to anyone interested in the brain, ethics, and what makes humans human.

Arminius says

Our conscious is such an interesting topic. There are a lot of books that tell us to use our subconscious to better ourselves. I am always grateful for “The Power of the Subconscious Mind” by Dr. Joseph Murphy for helping me see life for the better. This book gives scientific proof that that Dr. Murphy’s techniques work, even though that is not its point.

The brain has four lobes which provide different services for us.

1. The Frontal lobe is obviously at the front of the head. It is the area responsible for abstract thoughts. It is also associated with IQ and virtually every task we engage.

2. The Parietal lobe is behind the frontal lobe; it starts in the middle of our head and extends to the end of the head. It is responsible for processing nerve impulses related to the senses, such as touch, pain, taste, pressure, and temperature. It also handles language functions.

3. The Temporal lobe lies beneath the Frontal lobe and takes up 2/3 of that region. The Temporal lobe is responsible for our vision and some of our language.

4. Occipital lobe is directly behind the Temporal lobe occupying 1/3 of the space of that region. The Occipital lobe is responsible for our vision.

The brain also contains the Cerebellum. The Cerebellum is at the rear of the head at the bottom. It is responsible for sensory perception, coordination and motor control.

The Thalamus connects these parts together. It is like a switchboard which activates almost all areas of the brain. It is responsible for wake and sleep as well. It is the most important part of the brain.

The Cortex forms an outer shell around the brain lobes. It allows for the free flowing of mental activity.

The author states that stress is the single largest trigger for almost all mental diseases.
When humans experience stress the amygdala (a set of neurons which control emotions and stress) increase in production. However, in most people, the frontal parietal cortex suppresses the amygdala. This is possible because the frontal parietal cortex can make a conscious assessment of the possibility of danger. In mental illness the amygdala floods the frontal parietal causing unrealistic expectations in the person.

He also emphasizes the importance of sleep. It is obvious that a tired person may be irritable however there is evidence that lack of sleep can cause substantial memory loss and concentration.

Coffee is, once again, applauded because studies show that it prevents depression.

The author is also an ardent supporter of meditation and a lesser supporter of medication. Meditation can reverse stress and many mental illnesses. Over years of practice, regular meditation seems to permanently change the prefrontal parietal network while reducing the activity of the amygdala.

Short term uses seems beneficial as well. A study found that just four sessions reduced tiredness and increased working memory performance.

The book does something I like when reading a science book. It describes the problems, explains why they happen and then offers cheap easy solutions.

Nick says

At times dense and unforgiving, but a valiant effort to haul the study of consciousness out of the realm of myth and conjecture. The book stands as a celebration of frontal lobe prowess and the beauty of our powerful pattern finding minds. You will definitely find something in this book that will spark a conversation that goes well into the night with friends.

Arash Farzaneh says

An excellent, informative and interesting read! Although I generally avoid scientific books on the brain (I find them rather intimidating to downright confusing), this one is worth your time as it explains complex processes in imaginative ways. I learned quite a lot in the whole process and was quite impressed and pleased with the style and subject matter.

Jon says

This book came highly recommended by a Goodreads friend, and the first 50 pages or so are right on point with the kinds of questions that I have about consciousness, what it is, and whether the brain is a sufficient or only a necessary cause of it. Bor is a very clear writer and is quite frank about his own view that the brain can completely account for all aspects of consciousness. He tries to dismiss the philosophers with whom I tend to agree (Thomas Nagel in "What is it like to be a Bat?" and John Searle with his famous Chinese language thought experiment). But his arguments don't convince me and are, he admits, based to some extent

on his own intuition. He also ignores the whole problem of the circularity inherent in using consciousness to understand itself. He seems to think that information exists objectively (like data), whereas most people would agree that consciousness is needed to turn data into information: it is smuggled into the very idea of information. Still, I'm happy to agree with his fairly spirited defense of trying to investigate and learn about anything you can, going ahead with experiments even if you only have hunches and intuitions to inspire them. I just don't share his optimism that science can completely explain consciousness. As I remember reading somewhere, "not next week, not next year, not ever."

Ester says

I especially find the first and the last two chapters interesting. The last two chapters are relevant regarding the treatment of mental conditions like autism, schizophrenia, ADHD and mood disorders (depression and bipolar disorder). Bor reports on new approaches to treatment, including fresh views of underlying chemical causes of schizophrenia and on why meditation practices improve the level of consciousness in brain parts that in turn lessen amygdala activity, which is associated with (irrational) fear responses in people with anxiety disorders. Worth a read.

Ninakix says

loved it. Great discussion of consciousness, a little mind bending, and fun to read an actual researcher's thoughts on it (as opposed to a science journalist) (but still accessible, readable)

Sabin says

This book is an interesting argument made by Mr. Bor on the side of the mechanistic view of conciousness and of the brain as a computational machine.
The lasting information I got out of this book, however, was not of the theoretical models of conciousness but of the applications of technology to determine a person's state of conciousness and awareness.
I found it a well structured book with many examples which explained well the concepts underlying his argument.

Ronan O'Driscoll says

Prefrontal Parietal Cortex. That's where consciousness is. Or at least the core part of awareness. Bor grounds his discussion of consciousness in the science of awareness and evolutionary science. He also offers some fascinating explanations for a host of brain disorders: ADHD (often due to a lack of sleep - which explains why it is eased by a stimulant like Ritulan), depression and schizophrenia. He also describes Autism as an *excess* of awareness which is one of the better definitions I have encountered. He also makes a good argument for the benefits of meditation. Good book if you want to get an overview of the state of the art of the science of awareness.

Gary says

The meaning of consciousness is no longer completely inaccessible to me after reading this book. It's starting to make sense to me. The author does an excellent job of reviewing what is only recently becoming known about the field. He explains difficult concepts wonderfully and uses some of the best analogies I've heard.

The author looks at the relevant philosophy, evolution psychology and the recent neuroscience understandings to go a long way with explaining what is consciousness. He indirectly answers two question, 1) what is it about humans that make us different and 2) will computers ever think.

I've listened to about five or so books and even watched a Great Course lecture on this topic and this book is the first one that went beyond just claiming that the meaning of consciousness is unknowable, and after having read this book, I feel that I'm getting closer to its understanding. I enjoyed the other books, but this one makes me believe that people way smarter than me are getting close to answering those two questions and discovering the real nature of consciousness. .

You know you have a good narrator when you recognize his voice from another book you've read and loved. Mr. Dixon also read "The Beginning of Infinity" and my mind would go back to some passages in that book which were covering similar material. Nicely narrated.

Eva says

Bor's theory of consciousness says that consciousness emerged to guide our mind's attention and working memory, to help with storing, recalling and processing the patterns we perceive in the world around us. Chunking - the grouping of information into more memorable segments - is at the heart of man's advantage over animals. It allows us to increase the limits of our working memory and therefore process and analyse more complex patterns.

Bor explains his theory by starting from zero, starting all the way down with genetic evolution. Even though there is content you've likely heard before, he does find interesting ways of telling the story. I especially remember finding his description of the Chinese Room thought experiment to be very insightful.

"Perhaps what most distinguishes us humans from the rest of the animal kingdom is our ravenous desire to find structure in the information we pick up in the world."

When we are children every sensory stimuli excites us, as it represents new and undiscovered territory. Over our lifespan we lose that childlike excitability as we store more and more patterns into memory. Bor suggests the power of meditation to try to retrieve some of that fresh insatiable state of mind that children have.

Riccardo says

It is a strange voyage which one embark reading this book. It is a travel over the deep black sea of cosciousness, with your captain, Daniel Bor, trying to find the Big Conscious Whale using as harpoon the

instruments of science. But this courageous captain is not a science of formation, he comes from the island of philosophers and so sometimes you think that he is not able to find the Big Whale because he does not really know how to use science. Especially if one compares this book to "are we smart enough to know how smart animals are?" by de Waals, some questions arises. de Waals criticize all the scientists and philosophers who try to define some mental caracheristics that distinguish humans from all other animals. He does not deny that it could maybe exist but he just show that it is the wrong approach, too antropocentric and biased. Expecially when we want to study coscience. Bor is not a scientist and this is crucial when it comes to give a definition of cosciousness: he does not. he presents various model that tries to explain cosciousness of the human brain but he does not give any definition. but how can you write a book a bout cosciousness and actually work on it whitouht giving a definition of it? Stanislaus Deahene for example wrote a book about cosciousness and he gives a definition within the first few pages. maybe the definition is arbitrary but you need a definition from which to start or you cannot do scientific experiments about it. but, as I said, Bor is not a scientist but a philosopher and as such he does not need definitions because his thoughts are not confined by the rules and principles of science. and this is a really good thing because he can explore lands and seas never explored, he could argue and create models of cosciousness never tried. but we should remember that this is not science.

David says

The title "The Ravenous Brain" refers to the human's insatiable appetite for finding structure in information. Daniel Bor is a neuroscientist, and his contention is that

> the main purpose of consciousness is to search for and discover those structured chunks of information within working memory, so that they can then be used efficiently and automatically, with minimal further input from concsciousness.

In other words, the purpose of consciousness is to find structures, so that in the future the information can be used unconsciously.

Daniel Bor has written a book that is very approachable by the layman. The book is almost devoid of all the jargon that tends to complicate other books about science. Bor has some rather extended analogies that might simplify some of the ideas--but some of these analogies just go too far, and tend to obfuscate these ideas. For example, Bor writes about scientists who balance conservatism against creativity. He discusses this for quite a while, before making the analogy with organisms who reproduce offspring with slight modifications, some of which are useful innovations, while others are likely to be harmful.

Bor sneaks some mild humor into the book, which is very much appreciated, and is never too much to become distracting from the main thrust of the book. He inserts some of his personal experiences in an fMRI machine, which give the book a nice touch. He also includes some anecdotes that are quite humorous, or even incredible. For instance, the story about the mathematician Norbert Wiener, who was completely scatter-brained. He lost the slip of paper on which his new home address was written. He went to his old home, and asked a little girl if she knew where he had moved. The girl answered, "That's okay, Daddy. Mummy sent me to fetch you."

One of the most interesting portions of the book is the description of how memories in the brain are not localized, but are distributed in the strengths of connections between neurons. Bor describes why this distribution of memories is actually *required* by evolution--there is no other way for the retention of memories to have evolved.

Bor relates a number of psychology studies. Most of them are very interesting, and I've previously encountered very few of them in my reading. I consider that to be a good thing, as many of the recent set of "pop psychology" books tend to repeat the same old set of studies.

Bor mentions how some people have have asserted that quantum mechanics is somehow responsible for consciousness. The argument is something like "consciousness is mysterious and quantum mechanics is mysterious, so quantum mechanics must explain consciousness." This type of argument is not very convincing, and Bor suggests that the mechanism for consciousness is to be found in some of the more recent theories. These theories all have to do with the exchange of information across a dense network.

There are some fascinating anecdotes about scientific studies of animals. One of Aesop's fables involves a crow that finds a pitcher full of water. It can't fit its beak into the pitcher's opening. Then it decides to drop lots of pebbles into the pitcher, raising the water level to where it can drink. Some experimenters tried a very similar setup for some rooks, and it turned out that the rooks actually performed a similar feat! And chimps were able to do something very similar, in order to raise the water level in a container, to get some food.

Another fascinating section of the book deals with mental syndromes and illnesses. Bor contends that some of these illnesses are related to a reduced state of consciousness. Victims have a reduced working memory. Some drugs may help with this, but recent research finds that certain types of memory exercises may help even more.

I recommend this book for those who are interested in neuroscience, but do not have the desire to learn a new language filled with jargon. This book is well written, has a nice personal touch, and is chock full of fascinating ideas.

Akhil Munjal says

This book truly represents the leading theories of consciousness and is full of ideas that are based on the the state of the art research. I had been reading quite a few books on the topic of consciousness but all I used to understand from them was that this topic is mysterious in some mystical way. For example in a book by Deepak Chopra, he alludes to the fact that consciousness uses quantum phenomenon and hence it will only be understood when we understand dark energy and dark matter. However Daniel in the Ravenous Brain clearly proves how this is not the case and human consciousness is in fact not as hard to understand as is the common conception. Consciousness is in fact a composite of many specialty algorithms running in parallel and the actual composite is developed by a linkage which is describes beautifully with two phenomenon - Chunking and Attention. This really resonates with the conscious mind of my own and I think this is a great book for truth seekers and researchers in this area.

Teo 2050 says

[Bor D (2012) (11:14) Ravenous Brain, The - How the New Science of Consciousness Explains Our Insatiable Search for Meaning

Introduction

01. Conceptual Conundrums of Consciousness – Philosophy
– technological telepathy
– philosophy versus science
– Descartes and the mind-body duality
– modernity arrives and ghosts leave
– the impenetrability of “what it is like”
– can a program have feelings?
– can a laptop really understand chinese?
– the most complex object in the know
