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the case for progress

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Fear Itself

A provocative claim that anxiety and fear involve conscious awareness. Post published by Glenn C. Altschuler Ph.D. on Jul 07, 2015 in This Is America

Review of Anxious: Using the Brain to Understand and Treat Fear and Anxiety. By Joseph LeDoux. Viking. 465 pp. $27.95

Conditions in which a maladaptive fear (in response to a specific object or situation) or anxiety (in which the threat is not manifestly “present”) play a central role constitute the most prevalent psychiatric “disorders” in the United States, afflicting about twenty percent of the population, twice as many people as are diagnosed with mood disorders, including depression and bipolar disorder.

Many scientists believe that fear and anxiety (and other emotions) originate in circuits in the brain that when activated mediate between the threatening event and the responses (facial expressions, freezing, fleeing, fighting).

Joseph LeDoux, a professor of psychology and director of the Emotional Brain Institute at New York University (who moonlights as a member of two bands, the Amygdaloids and So We Are, which perform original songs about the mind, brain and mental disorders) does not agree. In Anxious, he argues against the notion, articulated by Charles Darwin in Expression of Emotion in...
Man and Animals (1872), and consistent with folk wisdom, that emotions exist in higher mammals and are represented in essentially the same form in the brains of all humans. LeDoux maintains instead that subcortical survival circuits provide “non-conscious ingredients that contribute to feelings of fear and anxiety, but are themselves not the source of such feelings.” Anxiety and fear are best understood not as biologically wired phenomena emerging in a pre-packaged way from brain circuits, but as experiences that have intruded into and become factors in conscious awareness. These emotions should be understood – and treated – separately from the non-conscious processes that play a role in triggering them.

Anxious is an extraordinarily ambitious, provocative, challenging, and important book. Drawing on the latest research in neuro-science (including work in his own laboratory), LeDoux provides explanations of the origins, nature, and impact of fear and anxiety disorders. He assesses drugs prescribed to alter the neuro-chemistry of the brain; and he critiques exposure therapy. He raises the possibility of “dampening” traumatic memories that give rise of maladaptive anxiety and fear. According to LeDoux, the claim that some mammals have “feelings” (Darwin referred to them as “cheerful,” “savage,” and “jealous”) or what humans call consciousness is an argument from analogy rather than from scientific evidence - and he cautions researchers to be more rigorous in applying the results of animal research to human beings.

Anxiety, LeDoux reminds us, can be brought on by the presence of an existing or imminent threat; a body sensation; thoughts and memories that stimulate worry about physical or psychological well-being; or an existential threat (about leading a meaningful life or about death). Anxious and fearful individuals exhibit hyper-vigilant attention to these threats, their significance and likelihood of occurring; excessive avoidance; and loss of cognitive and behavioral control.

Although LeDoux acknowledges that scientists have not figured out how to read the content of people’s minds, he indicates that they have identified some processes (along with threat activation circuits) that contribute to conscious experiences – and are directly or indirectly related to anxiety and fear. They include working memory, attention, sensory mechanics, monitoring (and other executive functions), long-term semantic and episodic memory, and self-evaluation.

Informative and illuminating as it is, Anxious also reminds us that the science of emotion is in its infancy. Researchers and psychotherapists are only beginning to understand, for example, how feelings can change as a byproduct of interventions to alter defensive circuits. They now concur that threat processing circuits often interact with (and influence) the conscious mind (though perhaps not in the case of existential anxiety) – and vice versa. But, LeDoux acknowledges, they do not know “if exactly the same circuits, cells, and synapses in the prefrontal cortex and amygdala” are involved in all attempts to change cognitive, behavioral and physiological responses to threat; or if they interfere with one another. And so, not all emotion experts are likely to agree with his proposal to treat responses controlled by “implicit processes” separately from thoughts and behaviors controlled by explicit processes and top-down cognition.

And, of course, researchers and psychotherapists continue to investigate the extent to which human beings are rational decision makers. Given substantial evidence that people lack direct
knowledge of the motives underlying their behavior and often fabricate after-the-fact explanations to make them seem more rational than they were, it remains unclear how to use “the resources of consciousness” to address maladaptive anxiety and fear.

Consciousness, LeDoux concludes, can be our best friend and our worst enemy. For better and worse, it enables us to write the narratives of our lives – and to revise them. Change is difficult, but our cognitive equipment is adaptable and the science of fear and anxiety can help: “It’s just a matter of finding how to make those changes happen.”

Professor LeDoux’s confidence is comforting, but his “just” may also underscore that the task he has laid out is daunting.