NeuroRegulation



Book Review – *Altered Traits: Science Reveals How Meditation Changes Your Mind, Brain, and Body*

by Daniel Goleman and Richard J. Davidson. Penguin Random House, LLC, New York, NY, 2017, 336 pages, ISBN-10: 9780399184383.

Citation: Lyle, R. R. (2018). [Review of the book Altered Traits: Science Reveals How Meditation Changes Your Mind, Brain, and Body, by Daniel Goleman and Richard J. Davidson]. NeuroRegulation, 5(3), 103–104. http://dx.doi.org/10.15540/nr.5.3.103

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I am convinced that we spend the first half of our life collecting experiences and the second half trying to figure out how they all fit together to make new meanings. *Altered Traits* by Daniel Goleman and Richard Davidson represents one of those books that, at least for me, helped connect pieces of a puzzling personal and professional journey.

I have prided myself as being a lifelong scientist and science educator and as a result have attempted to live my life with logic and decisions based on facts. But I was brought up in a fundamental and very religious culture. While I fought most of the perceived dogma being presented, I could not ignore that many of those around me seemed to effortlessly remain in a blissful, loving space, perpetually at ease and exhibiting an ineffable state of mental calmness that I lacked. How did they accomplish this? And, more importantly, would I have to give up "thinking" to obtain this new mindset?

These questions have haunted me most of my life, but in recent years I have seen that these two mindsets may not be as far apart as I once thought. In fact, these two worldviews might even complement each other! Thomas Kuhn in his publication, *The Structure of Scientific Revolutions*, points out that the field of science can shift abruptly as novel ideas and radically innovative paradigms force new ways of thinking. I believe we are in the midst of such a shift in the field of psychology that may hold the key to unlocking hidden potential of the human mind.

In recent years I have spent countless hours reading and researching two somewhat different fields of study, decision-making neurological pathways and how emotions influence those decisions. My work has focused around two key authors, Daniel Goleman and Richard Davidson. While I attempted to figure out how these two bodies of knowledge might interact, I have to admit that I thought I was unique in my quest of formulating connections.

I could never have guessed that my two heroes were not only experts in their own arenas but were lifelong friends who shared undergraduate experiences that shaped both of their careers and who now in their waning professional years decided to expose to the world their mutual passion by writing a book that brings the founder of emotional intelligence and the pioneer of frontal lobe asymmetry together to develop a scientific understanding of meditation as a tool for maximizing human potential.

While the story of their early experience sets the stage for why they both have such a personal passion for the role of meditation, *Altered Traits* ties scientific evidence to these centuries-old practices in ways that makes one sit up and take note. The book is a blending of shared personal experiences, explanations that expand one's understanding of the meaning and forms of meditation, and lastly a review of compelling research findings that simply cannot be ignored.

Defining the Concept

It is important to understand that with mindfulness the meditator simply notes without reactivity whatever comes into mind, such as thoughts or sensory impressions like sounds, and then effortlessly lets them go. This results in a disciplined mind that is able to be free of negative emotions. One of the most widely quoted definitions comes from Jon Kabat-Zinn: "The awareness that merges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience." As Epictetus, a Greek philosopher wrote, "It's not the things that happen to us that are upsetting but the view we take of those things. Therefore, the goal is to become aware of awareness."

Examples of Research Findings Discussed

As I read this book, I found the following bulleted findings noteworthy. I have provided the page numbers so you can quickly locate any reference you might wish to expand upon.

- With practice, this is not a short-term fix, but results in neuroplasticity and a renewed mental balance (p. 51).
- Eight weeks of a variety of mindfulness seemed to enlarge a region in the brain stem that correlated with a boost in well-being on Ryff's test (p. 57).
- Meditating sped up the recovery rate, and seasoned meditators recovered quickest (p. 63).
- Differing types of meditation produce unique results. Therefore, all studies must routinely identify the specific type of meditation being studied (p. 68).
- Getting detailed information about the total lifetime hours of a meditator's practice should be a standard operating procedure in every research design (p. 70).
- Documenting involvement in retreats as well as the different types of meditation is crucial because retreats seem to have different and unique impacts (p. 70).
- The more experienced among the Zen students not only were able to bear more pain than could controls, they all displayed little activity in executive, evaluative, and emotion areas during the pain—all regions that ordinarily flare into activity when we are under such intense stress (p. 90).
- A study of the role of resilience found that the stronger a person's sense of purpose in life, the more quickly they recovered from a lab stressor (p. 92).

- Loving-kindness acts quickly, in as little as eight hours of practice. The longer people practice, the stronger these brain and behavioral tendencies toward compassion become (p. 121).
- A study of breath rate translates into more than 2,000 extra breaths for the non-meditators in a single day—and more than 800,000 extra breaths over the course of a year. These extra breaths are physiologically taxing and can exact a health toll as time goes on (p. 179).
- Yogis had elevated gamma oscillations, not just during the meditation practice periods for open presence and compassion but also during baseline measurements before any meditation was performed. This electrifying pattern was in the EEG frequency known as high-amplitude gamma, the strongest, most intense form (p. 232).
- On average the yogis had 25 times greater amplitude gamma oscillations during baseline compared with the control group (p.233).

Concluding Comment

Meditation is still considered by many a "new age remedy" that lacks scientific evidence. Even the authors acknowledge that "an absence of evidence is not evidence of absence." The roots of our conviction lay in our own experiences in meditation retreats, the few rare beings we had met who seemed to embody altered traits, and our reading of meditation texts that pointed to these positive transformations of being" (p. 288).

From an academic point of view, even this book and the research shared adds up to a set of questionable empirical evidence that at times clearly lacks impartiality. The challenge is clear. Many of the readers of this book review have encountered similar barriers as we pursue fields of study and protocols that lack widespread acceptance.

We must remember that leaders of parades have a wonderful view of the future, while they also make a rather obvious target for criticism.

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Received: September 20, 2018 Accepted: September 21, 2018 Published: September 29, 2018