

Book Review: Lessons from the Lobster-Eve Marder's Work in Neuroscience - Eve Marder's Work in Neuroscience

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BOOK REVIEW "Lessons from the Lobster - Eve Marder's Work in Neuroscience", by Charlotte Nassim. The MIT Press,Cambridge, MA, USA. ISBN: 978-0-262-03778-5, 264 pp. | June 2018

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Self-reflecting on your scientific career, how would you define your intellectual journey? For renowned neuroscientist Prof. Eve Marder, her intellectual progress has been a "straight line". Despite entering college to study politics and becoming a lawyer, Marder quickly grasped the opportunity to enter the emerging field of research that was neurosciences at the time. Driven by her original scientific thinking, she started to work on neurotransmitters at the end of the sixties, and was introduced to the 30 neurons that were to define her career: the stomatogastric ganglion (STG) that controls lobster mastication and swallowing. Her early discoveries on acetylcholine led her to study neuromodulation and circuit reconfiguration, later building computational models, and focusing on homeostatis and variability. This intellectual history, peppered with groundbreaking discoveries and paradigm shifts, is at the core of Charlotte Nassim's book. By focusing on Marder's work, Nassim also paints the story of how (neuro)science(s) has changed since the 1960's.

Foreworded by Eve Marder herself and divided into 10 chapters, "*Lessons from the Lobster - Eve Marder's Work in Neuroscience*" explores 40+ years of research on the STG, through the lens of Marder's work. This "thought biography", written in close partnership (but with a certain degree of independence) with Marder, is based on several materials: Marder's own recollections, letters, thesis, published papers (>100), laboratory notebooks (896 of these, starting in 1971), but also interviews with her colleagues and friends. This book is unusual, with a writing style that ranges from non-specialist, to entry-level science (and even academic in some of the most technical parts, starting from Chapter 3). However, the book is enjoyable and tells a fascinating story. Marder's struggles as a graduate student and postdoc (Paris, France) will resonate with fellow scientists. Today a multi-award winning neuroscientist, Marder was turned down by Harvard and Stanford. She endured numerous occurrences of sexist behavior from male senior colleagues (prior to 1969, many graduate programs had quotas for women students [1]),endless hours of painstaking lab work, grant and paper rejections, and financial issues before securing her tenured position. Throughout the book, credit is given to her former students for contributing to her work and framing new questions. Many of her collaborators "talk about her profound insight and intellectual leadership with awe", highlighting Marder's interpersonal and mentoring qualities, her concern for her lab team, and her warm professional relationships. Always "following the data", driven by an eagerness to learn new techniques, Marder's approach is characterized by multidisciplinarity and humility. The latter is well illustrated by her remark about Nassim's book, which she considered to be a "piece of science history": "For me, it is an extraordinary reminder that even scientists who revere data have only partial recollections of their own intellectual paths". [2]

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References:

[1] Eve Marder, Eve Marder, Current Biology, Volume 17, Issue 1, 2007, Pages R5-R7, ISSN 0960-9822, https://doi.org/10.1016/j.cub.2006.11.044.

[2] Eve Marder. "Lessons from the Lobster" details Eve Marder's research. JULY 12, 2018 BY DIVSCICOMM https://blogs.brandeis.edu/science/2018/07/12/lessons-from-the-lobster-details-eve-marders-research/

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