

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

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► **To cite this version:**

Manon Auffret. Book Review: Lessons from the Lobster-Eve Marder's Work in Neuroscience - Eve Marder's Work in Neuroscience. 2020, 10.1080/0964704X.2020.1741299 . hal-02562416

**HAL Id: hal-02562416**

**<https://hal-univ-rennes1.archives-ouvertes.fr/hal-02562416>**

Submitted on 15 May 2020

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

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

17 Foreworded by Eve Marder herself and divided into 10 chapters, “*Lessons from the Lobster -*  
18 *Eve Marder's Work in Neuroscience*” explores 40+ years of research on the STG, through the lens of  
19 Marder’s work. This “thought biography”, written in close partnership (but with a certain degree of  
20 independence) with Marder, is based on several materials: Marder’s own recollections, letters, thesis,  
21 published papers (>100), laboratory notebooks (896 of these, starting in 1971), but also interviews with  
22 her colleagues and friends. This book is unusual, with a writing style that ranges from non-specialist, to  
23 entry-level science (and even academic in some of the most technical parts, starting from Chapter 3).  
24 However, the book is enjoyable and tells a fascinating story. Marder’s struggles as a graduate student  
25 and postdoc (Paris, France) will resonate with fellow scientists. Today a multi-award winning  
26 neuroscientist, Marder was turned down by Harvard and Stanford. She endured numerous occurrences  
27 of sexist behavior from male senior colleagues (prior to 1969, many graduate programs had quotas for  
28 women students [1]), endless hours of painstaking lab work, grant and paper rejections, and financial  
29 issues before securing her tenured position. Throughout the book, credit is given to her former students  
30 for contributing to her work and framing new questions. Many of her collaborators “talk about her  
31 profound insight and intellectual leadership with awe”, highlighting Marder’s interpersonal and  
32 mentoring qualities, her concern for her lab team, and her warm professional relationships. Always  
33 “following the data”, driven by an eagerness to learn new techniques, Marder’s approach is characterized  
34 by multidisciplinary and humility. The latter is well illustrated by her remark about Nassim’s book,  
35 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]

36 **References:**

37 [1] Eve Marder, Eve Marder, Current Biology, Volume 17, Issue 1, 2007, Pages R5-R7, ISSN 0960-  
38 9822, <https://doi.org/10.1016/j.cub.2006.11.044>.

39 [2] Eve Marder. “Lessons from the Lobster” details Eve Marder’s research. JULY 12, 2018 BY  
40 DIVSCICOMM [https://blogs.brandeis.edu/science/2018/07/12/lessons-from-the-lobster-](https://blogs.brandeis.edu/science/2018/07/12/lessons-from-the-lobster-details-eve-marders-research/)  
41 [details-eve-marders-research/](https://blogs.brandeis.edu/science/2018/07/12/lessons-from-the-lobster-details-eve-marders-research/)

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