



HAL
open science

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

Manon Auffret

► **To cite this version:**

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

HAL Id: hal-02562416

<https://univ-rennes.hal.science/hal-02562416>

Submitted on 15 May 2020

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

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

3
4 **Manon Auffret** - Univ Rennes, EA 4712 - Comportement et noyaux gris centraux

5
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/)

42 **Reviewer:** Dr Manon Auffret (PharmD, PhD)

43 Affiliations: Behavior & Basal Ganglia Research Unit (EA 4712), University of Rennes 1, Rennes,
44 France ; Institut des Neurosciences Cliniques de Rennes (INCR), Rennes, France

45 Address:

46 EA 4712 “Comportement et Noyaux Gris Centraux”, Campus de Villejean - Bât. 40L27

47 2 Rue Henri le Guilloux,

48 35033 Rennes Cedex, France

49 Mail: manon.auffret@univ-rennes1.fr / auffret.manon@gmail.com