

Pacific Circle Newsletter

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Book Reviews

David Grémillet. *The Ocean's Whistleblower: The Remarkable Life and Work of Daniel Pauly*. Translated by Georgia Froman. Vancouver: Greystone Books, 2021. 408 pp. \$29.95 (e-book), ISBN 978-1-77164-755-7; \$29.95 (cloth), ISBN 978-1-77164-754-0.

Reviewed by Aaron van Neste (Harvard University) Published on H-Sci-Med-Tech (December, 2022) and commissioned by Penelope K. Hardy

What motivates a scientist to break from tradition and chart their own path? That is the question explored in David Grémillet's incisive biography *The Ocean's Whistleblower: The Remarkable Life and Work of Daniel Pauly*. Pauly is perhaps the closest thing to a celebrity fishery scientist. His work has brought international awareness to the overfishing crisis and created essential databases and close-knit networks of fisheries scientists from the global South dedicated to solving problems neglected by northern scientists. Labeled an "iconoclast" by the *New York Times*, Pauly had to navigate racism and geographic bias as well as the institutional conservatism and industry support of the fisheries science establishment.[1] Published by the environmental trade press Greystone Books and birthed out of three years of intensive conversations with Pauly and his friends, family, and colleagues, Grémillet's book serves as a fascinating introduction and passionate tribute to a scientist whose relevance is only increasing in an era of escalating risk to marine biodiversity and global nutrition. Georgia Froman's translation from Grémillet's native French nimbly conveys scientific concepts in an accessible manner for non-specialist audiences.

Grémillet has written an impressively thorough and well-researched summation of Pauly's sprawling career. Driven by a herculean work ethic and an irrepressible willingness to question existing knowledge and institutions inherited from his early Marxist activism, Pauly's career is marked by an uncanny, almost Forrest Gump-like ability to shape the major events of the fisheries world over the past half-century. His early career research in Ghana, Indonesia, and the Philippines called out the complicity of governments in overdeveloping industrial fisheries and neglecting the artisanal ones that actually employ and feed local populations. He discovered a new method of calculating the growth rate of tropical fish, long neglected in the global North; was involved in the development of the widely used ecosystem analysis software, Ecopath with Ecosim; and compiled an open-access statistical database called Fishbase of every fish species in the world. Pauly's groundbreaking work with Deng Palomares and Isabel Tsukuyama on the Peruvian anchoveta--the largest single-species fishery in the world--reinterpreted the early 1970s anchoveta collapse as a failure of management to account for the impacts of overfishing on stock resilience. In the 1990s, he discovered that China had been greatly exaggerating its catch to the UN Food and Agriculture Organization;

this led to the realization that global landings had been declining for over a decade and industrial fisheries were unsustainable in the long term, "[tearing] a hole in the persistent myth of infinite ocean resources" (p. 253). Pauly developed the concept of "shifting baselines," the idea that each generation of environmental scientists accepts as a baseline the conditions that existed at the beginning of their careers and evaluates change based on that, rather than (for instance) the conditions their grandparents' generation would have viewed as a baseline. As Grémillet writes, "the result is a gradual accommodation of the creeping disappearance of resource species" (p. 257). Pauly identified that intensive fishing has been typically depleting larger, higher trophic-level organisms first, prompting "fishing down the food web" until the predicted "rise of slime," when all that remains will be jellyfish (p. 275). His recent work with The Sea Around Us Project at the University of British Columbia in Vancouver has promoted the expansion of marine protected areas, crackdowns on illegal fishing, and a more equitable distribution of fishing rights and benefits.

What inspired Pauly's willingness, "in a scientific community shackled by economic interests," to dare "tell the public about doom of fish populations even at the risk of angering many of his colleagues"? Grémillet's answer is simple: Pauly was never truly welcomed into that community to begin with, and "exclusion gave him all the courage he needed" (p. 404). Born in 1946 to a French single mother and an African American soldier, Pauly was unofficially taken in by a Swiss family who promised to babysit him for a few months; when his mother attempted to get him back, the family threatened to report her to the police for child abandonment. Instead, Pauly suffered years of physical and psychological abuse, exploitation, and neglect. "As soon as I was old enough to work," Pauly reminisces, "I was seen as a resource" (p. 13). This Thénardier-esque upbringing left Pauly with little but a fierce brilliance and determination to succeed and an equally fierce passion for controversy and distaste for authority. Expelled from his first high school, young Daniel ran away to Germany, where he worked at a Lutheran hospital and then a paint factory while taking night classes for the exams to go to university. He survived the omnipresent casual racism of 1960s Europe and America and multiple run-ins with the law, became interested in atheism and communism and participated in the student protests of 1968, and finally became reunited with both his parents, all before entering college and before Grémillet ever mentions the word "fish."

During his travels in West Africa and Southeast Asia, especially at the International Center for Living Aquatic Resources Management in the Philippines, Pauly was seen not as a representative of the white international elite but as a comrade and advocate. He refused to get a job in the United States or Europe, as he did not want to raise his children in such a deeply racist environment: "When I'm in the US, I always feel like I'm holding my breath" (quoted, p. 246). Pauly also emerges as a genuine feminist--a rarity for men of his generation. His influential critiques of how the gender of scientists influences their interpretation of biological phenomena cite feminist scientists and science studies scholars Evelyn Fox Keller and Bettyann Kevles, demonstrating a breadth of scholarship beyond that typical of male fisheries scientists.[2] Grémillet shows that Pauly also walked the walk: when a new institutional director tried to cover up an attempted rape of one of Pauly's assistants, Pauly and other colleagues led a rebellion, and Pauly eventually left the organization.

Throughout the biography, Grémillet is refreshingly open about his methodology. With the support of Pauly and a number of his friends and acquaintances, the author was able to track down dozens of old colleagues, teachers, cousins, and even the other children of Pauly's "adoptive" family, and soon found himself "up to my ears in unusually sprightly septua- and octogenarians" (p. 22). His interviews and oral histories with this kaleidoscope of individuals create a collage of Pauly's life that sometimes verges into a project of even more ambitious scope: telling the story of the global twentieth century. The life and early career of a scientist can be episodic, and Grémillet views Pauly's peripatetic life bouncing from one nation and project to the next as an opportunity to give a broad overview of mid-century global geopolitics and social struggles. He navigates the story from the racism experienced by Pauly's cousins in North Carolina to the brutality of the Suharto regime in Indonesia to the rapid development of Manila in the 1980s. Pauly's coworkers, friends, and acquaintances pop with unusual color, as Grémillet introduces us not just to their contributions to our protagonist's life but also their backgrounds and ambitions, families, and even childhood pets.

Grémillet is a biological oceanographer, and his historical contextualization of the field might leave those interested in the history of science wanting. His overview of fishery science does not engage with the historiography of the field. It would have been useful for Grémillet to put Pauly in conversation with critiques of maximum sustainable yield and other classic fishery science models as political constructs with limited scientific credibility, because Pauly, for all his iconoclasm, nonetheless finds them useful as reference points.[3] In Grémillet's telling, it sometimes seems as if history did not exist until Pauly arrived. At one point, Grémillet suggests that scientists had not looked seriously at the biology of feeding the world through fishing until Pauly and Villy Christensen attempted to do so in the 1980s, even though this was an obsession among fisheries scientists going back at least to the end of World War II. He attempts to attribute the concept of a fishery collapse to Pauly when it predates his work by at least a century, and credits him for shattering the myth of inexhaustible marine resources when in fact that peculiarly resilient myth has been shattered and rebuilt dozens of times since the nineteenth century.

At the end of the book, readers may be left wondering: What future does Pauly actually want for the ocean? Pauly's conservationism has been focused on properly managed fisheries, and he has argued that the basic theories of fisheries science, long under scientific and, recently, popular critique, are sound and would work if they were only enforced.[4] At the same time, Pauly has also compared industrial fishing to a global Ponzi scheme, has written that he would like to be remembered as the person "who showed that the effect of fisheries on marine life is equivalent to that of a large meteor strike on terrestrial life" (p. 321), and has suggested recently that a large-scale decommodification of fish similar to that which has occurred with cetaceans may be environmentally and ethically necessary, transforming marine organisms "from commodities to coinhabitants." [5] Are these seemingly contradictory perspectives actually compatible? Is there a pragmatic ambiguity with which the contradictions of a conservationist but not eliminationist fishery policy can be viewed? Grémillet suggests that for all his reputation as a firebrand, Pauly is at heart a pragmatist. He is

most concerned with management problems affecting fish-dependent communities in poor countries, and he is unwilling to let the perfect be the enemy of the good, or precision the enemy of utility. He sees fisheries science as a crisis discipline, equivalent to conservation biology, that needs to take bold swings that other scientists might criticize. *The Ocean's Whistleblower* is a fitting tribute to that philosophy.

Notes

[1]. Carol Kaesuk Yoon, "Scientist at Work: Daniel Pauly; Iconoclast Looks for Fish and Finds Disaster," *New York Times*, January 21, 2003.

[2]. Daniel Pauly, *On the Sex of Fish and the Gender of Scientists: A Collection of Essays in Fisheries Science* (Dordrecht: Springer Science & Business Media, 1994).

[3]. Carmel Finley and Naomi Oreskes, "Maximum Sustained Yield: A Policy Disguised as Science," *ICES Journal of Marine Science* 70, no. 2 (March 1, 2013): 245-50; Jennifer Hubbard, "In the Wake of Politics: The Political and Economic Construction of Fisheries Biology, 1860-1970," *Isis* 105, no. 2 (2014): 364-78.

[4]. Daniel Pauly and Rainer Froese, "MSY Needs No Epitaph--but It Was Abused," ed. Emory Anderson, *ICES Journal of Marine Science* 78, no. 6 (September 2021): 2204-210, <https://doi.org/10.1093/icesjms/fsaa224>; Daniel Pauly, "What Netflix's *Seaspiracy* Gets Wrong about Fishing, Explained by a Marine Biologist," *Vox*, April 13, 2021, <https://www.vox.com/2021/4/13/22380637/seaspiracy-netflix-fact-check-fishing-ocean-plastic-veganism-vegetarianism>.

[5]. Jennifer Jacquet and Daniel Pauly, "Reimagining Sustainable Fisheries," *PLOS Biology* 20, no. 10 (October 17, 2022), <https://doi.org/10.1371/journal.pbio.3001829>.

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Selected Bibliography of Recent Publications: Articles

Isis 113:4 (December 2022)

“Focus: Using Chinese Local Gazetteers for the History of Science”

Shellen X. Wu, “Introduction: Redrawing the Map of Science in Modern China” and “Using LoGart of Uncover a New Spatiality of Science in China”

Peter B. Lavelle, “Placing the Science of Agriculture in Early Twentieth-Century China”

Jiajing Zhang, “The Art of Compromise: New Maps in Local Gazetteers of the Late Quin Dynasty”

Fellowships, Awards and Prizes

Royal Society Early Career Research Award

This award consists of a cash prize and publication in the Society’s Journal and cash prizes for the runner-up and honorable mentions. Applicants should submit a previously unpublished essay of no more than 12,000 words based on original research. It can relate to any aspect of the history of science, technology and medicine in any historical period. The deadline for submission is February 28, 2023.

Further information at <https://royalsocietypublishing.org/rsnr/essay-award>.

Annals of Science Prize for 2023

This prize is awarded by the Annals of Science to the author of an original, unpublished essay in the history of science, technology, and medicine not currently under consideration for publication elsewhere. The prize is intended for those who are currently doctoral students, or have earned their doctorate within the past four years. The deadline is January 31, 2023.

Please send submissions to Mordecai Feingold at feingold@caltech.edu

Applications for ICHO Travel Fellowships for Oceans HSTM

The International Commission of the History of Oceanography (ICHO) invites applications for fellowship support from scholars studying the history of the Marine Sciences, broadly conceived. Funds can be used to support travel for archival research or conference participation, and other travel in support of ocean-centric scholarship will be considered. Please send a cover letter describing the proposed research or presentation, a budget justifying the amount requested up to US\$500, a 2-page c.v., and the names of two colleagues who can be contacted as references. Please save and send all of that information as one PDF file.

Please send the application file to Franziska Torma at franciska.orma@rcc.lmu.de

IUHPST Essay Prize in History and Philosophy of Science

The International Union of History and Philosophy of Science and Technology (IUHPST) invites submissions for the 2023 Essay Contest. The Commission invites essays of 5,000 to 10,000 words written in English addressing the question: “How can history and philosophy of science, technology, and medicine help us to understand and evaluate the role of values in science?” All entries should consist of work not previously published.

Entries should be submitted in PDF format by email to the Chair of the Joint Commission, Dr. Agnes Bolinska at bolinska@mailbox.sc.edu by January 15, 2023.

“First Research Article” Fellowship Program

Max Planck Institute for the History of Science, Berlin

September 1, 2023 – February 29, 2024

The Max Planck Institute is offering two fellowships for outstanding graduate students. Applicants should demonstrate their commitment to a research topic related to the History of Science, Technology, and Medicine, or Science and Technology Studies and a need to work with an international community to prepare and publish their first single-authored research paper in the English language. Eligible students should be in good standing through February 29, 2024, and should have completed the archival research for their work and can devote six months to writing and preparing an article in English for journal publication.

Applicants should send the following in English through the online portal:

<https://recruitment.mpiwg-berlin.mpg.ed/position/23330824>

1. Official proof of enrollment and good standing in an accredited graduate program from your PhD thesis or confirmation by your University.
2. Brief description of the dissertation.
3. CV and list of publications.
4. Title, abstract and outline of intended essay (maximum of 750 words).
5. English writing sample.
6. Letter of recommendation from one supervisor.

Please submit the above no later than February 15, 2023.

BSHS Outreach and Engagement Project Grant

The British Society for the History of Science's Outreach and Engagement Committee offers grants of up to £500 to support engagement and outreach projects in the history of science, technology and medicine. Project grants are awarded three times per year, and the deadline for the next round is Friday 17 February 2023.

Project grants are intended to support initiatives that encourage engagement with the history of science, technology and medicine by non-academic audiences. For example, eligible projects might include supporting the costs of holding a public event, the creation of a public display, or the translation of research into educational resources. We particularly encourage projects that use innovative formats and reach audiences that might be new to the history of science, technology and medicine.

Further information, and a downloadable application form, can be found at: <https://www.bshs.org.uk/grants/outreach-and-engagement-project-grants>

Upcoming Conferences

Biennial ANZSHM Conference

12-15 July 2023

Health & Medical Science Building, University of Adelaide

The Australian and New Zealand Society of the History of Medicine (ANZSHM) invites participants to its 18th Biennial Conference with the theme of "Second Opinions." Grants for postgraduate students and early career researchers are available. For further information, please visit: www.anzshm2023.com or ncosta@ncevents.com.au