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## Life Out of Sequence

A Data-Driven History of Bioinformatics

HALLAM STEVENS



304 pages | 19 halftones, 3 line drawings | 6 x 9 | © 2013

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Thirty years ago, the most likely place to find a biologist was standing at a laboratory bench, peering down a microscope, surrounded by flasks of chemicals and petri dishes full of bacteria. Today, you are just as likely to find him or her in a room that looks more like an office, poring over... [Read More](#)



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## Review Quotes

### **Michael Fortun, Rensselaer Polytechnic Institute | Science**

“[A] sharp and lucid work of history and anthropology of science. . . . [Stevens’s] clear and refined prose should extend the book’s readership beyond its disciplinary audiences in the social studies of science, to welcome scientists into this reading of their field’s past and present. . . . Stevens provides a highly readable telling of how bioinformatics took shape, how it works within technological and conceptual limits that change over time, and how individual, and mostly unsung, scientists made it happen. . . . An effective and enjoyable remolding of oversimplified ‘data-to-truth’ histories of science, *Life Out of Sequence* draws out the reciprocal impressions made by data systems and living systems on each other—and on the sense scientists make of life.”

### **Carla Nappi | New Books in Science, Technology, and Society**

“A rich and fascinating ethnographic and historical account of the transformations wrought by integrating statistical and computational methods and materials into the biological sciences. . . . The histories of biology, computing, database technology, and bioinformatic imaging all play a role in this wonderfully transdisciplinary story.”

### **D. Papamichail, College of New Jersey | Choice**

“Stevens presents engaging ethnographic fieldwork throughout the book. . . . An interesting read for life and computational scientists seeking a deeper understanding of the interdisciplinary connections of their domains.”

### **BioScience**

"Readers benefit from the book’s extensive source material, as well as from dozens of interviews with scientists who have widely divergent views on bioinformatics."

### **Hannah Landecker, University of California, Los Angeles**

“What happens to biology with computerization? Hallam Stevens’s compelling ethnographic and historical narrative shows how the nature of the biological experiment has changed with the increasing use of the tools of information technology in life science and biomedicine. *Life Out of Sequence* traces rearrangements in the relationship between the virtual and the material as scientists work increasingly on databases rather than cells or bodies. As the book takes on the mirrored questions of the work of life and the life of work in front of the computer in the lab, the reader is brought into the world of bioinformatics, and comes to understand that this is not just a subfield of scientific activity, but a space in which the nature of knowledge production in life science is undergoing fundamental and rapid change.”

### **Steven Shapin, author of *The Scientific Life***

“What is it like to do biology when the indispensable scientific instrument has become the computer, when biological objects are transformed into computer-compatible data, and when the manipulation of data replaces the manipulation of organisms and their parts? *Life Out of Sequence* is a vivid account of how the flow of massive amounts of data has fundamentally changed both the questions biologists ask and the answers they recognize. It is essential reading for anyone wanting to understand the world that biologists have made for themselves and that they are making for the rest of us.”

*For more information, or to order this book, please visit <https://www.press.uchicago.edu>*