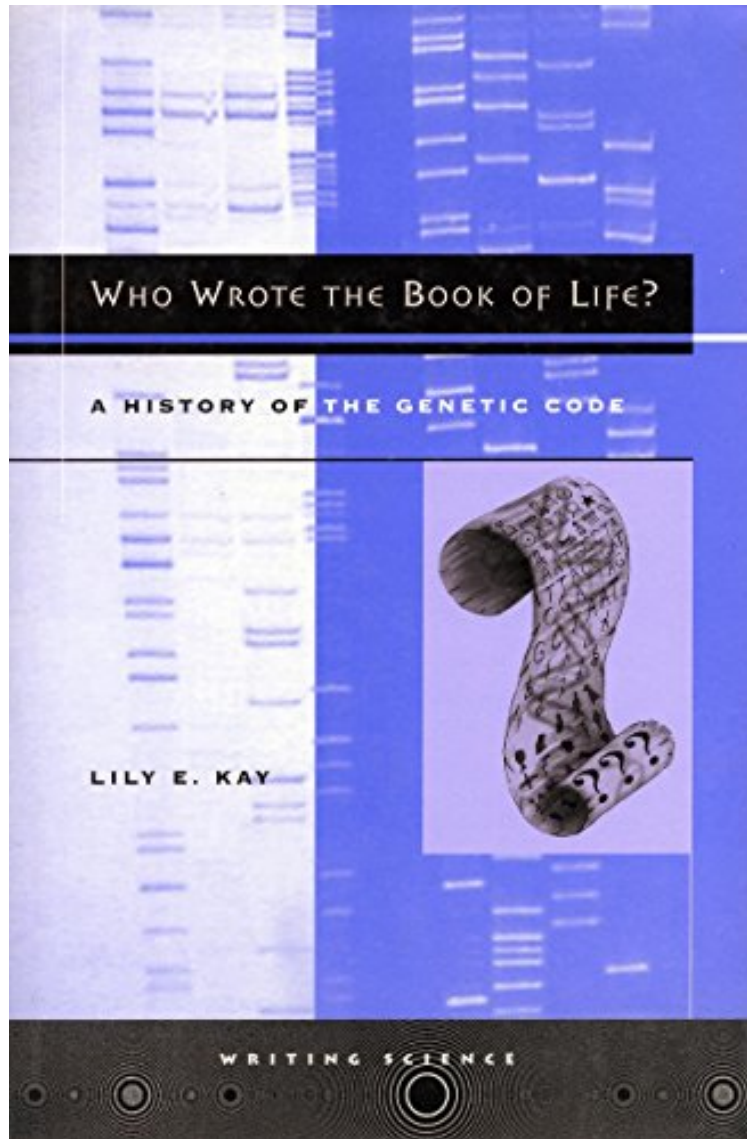


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Who Wrote the Book of Life?: A History of the Genetic Code (Writing Science)

Lily E. Kay

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#1367480 in Books Stanford University Press 2000-03-01 Original language: English PDF # 1 9.00 x 1.20 x 6.00l, 1.26 #File Name: 0804734178472 pages | File size: 45.Mb

Lily E. Kay : Who Wrote the Book of Life?: A History of the Genetic Code (Writing Science) before purchasing it in order to gage whether or not it would be worth my time, and all praised Who Wrote the Book of Life?: A History of the Genetic Code (Writing Science):

9 of 10 people found the following review helpful. A valuable account of how the genetic code was discovered. By David C. Bossard This is a valuable historical account of how the genetic code was discovered, written by a person

who revels in historical details. What a sadness that the author, Dr. Lily E. Kay passed away in 2000: such a talented writer; too soon, far too young. See the Wikipedia entry about her, especially the wonderful video which gives real insights into how she "reconstructs" history. In that video, she says, "I do not think that any one actor [probably including herself - hmsc] in a historical account has the privileged Archimedean vantage point from which to tell 'the true story.'... [B]e content with an imperfect grasp of events and actors, even of nature." So, she invites us to read her reconstruction with a bit of reserve. But granting that, and the likelihood of occasional slights, oversights and outright errors, I found the discussion fascinating. My only real objection is that it is too long ("too many notes" as Mozart was famously told). I would love to see a book on the same subject, updated to the present, engagingly written, but only half as long. The book describes just how the universal genetic code encapsulated in dna, was discovered. The puzzle was to explain how a long sequence of just 4 nucleotides could specify the generation and folding of proteins based on 20 amino acids. The final solution - a (nearly) universal coding in which combinations of 3 nucleotides determine the amino acids - was found in the 1960s, and Dr. Kay describes the push to this discovery as a frenetic race between many competing interests. I particularly like her description of how some of the discoveries were made -- although some of the details were still left out: in this regard, Craig Venter's book, *A Life Decoded: My Genome - My Life* is a bit more satisfying because it goes into more of the details that I find interesting -- but perhaps his was a somewhat simpler (!) task. The start of the book discusses the information theoretical underpinnings that (perhaps) prepared the way for the discovery of the genetic code, but, unless I missed it in my reading, I hoped for but did not find a comparable theoretical discussion of the actual code after the complete picture was put in place. I would have liked to see something on the chemical necessity or contingency of the resulting code, and of the role of the occasional code redundancy, use in error correction, more on the concept of a "primitive" doublet code as a precursor to the triplet code, etc. Also, something on the occasional deviations from the "universal" code table (either use of amino acids outside of the standard 20, or occasional use of a different coding scheme). But in the end, this is an excellent book -- and deserves a well-written, shorter companion that perhaps emphasizes less the personalities involved and gives a somewhat more complete and up to date account. I recommend it to anyone who is curious about how the "central dogma" of biology was discovered.

This is a detailed history of one of the most important and dramatic episodes in modern science, recounted from the novel vantage point of the dawn of the information age and its impact on representations of nature, heredity, and society. Drawing on archives, published sources, and interviews, the author situates work on the genetic code (1953-70) within the history of life science, the rise of communication technosciences (cybernetics, information theory, and computers), the intersection of molecular biology with cryptanalysis and linguistics, and the social history of postwar Europe and the United States. Kay draws out the historical specificity in the process by which the central biological problem of DNA-based protein synthesis came to be metaphorically represented as an information code and a writing technology and consequently as a book of life. This molecular writing and reading is part of the cultural production of the Nuclear Age, its power amplified by the centuries-old theistic resonance of the book of life metaphor. Yet, as the author points out, these are just metaphors: analogies, not ontologies. Necessary and productive as they have been, they have their epistemological limitations. Deploying analyses of language, cryptology, and information theory, the author persuasively argues that, technically speaking, the genetic code is not a code, DNA is not a language, and the genome is not an information system (objections voiced by experts as early as the 1950s). Thus her historical reconstruction and analyses also serve as a critique of the new genomic biopower. Genomic textuality has become a fact of life, a metaphor literalized, she claims, as human genome projects promise new levels of control over life through the meta-level of information: control of the word (the DNA sequences) and its editing and rewriting. But the author shows how the humbling limits of these scriptural metaphors also pose a challenge to the textual and material mastery of the genomic book of life.

"The entire book is fascinating and well written, unfolding more as a grand epic of the ways in which scientists work and think, rather than as a standard philosophical or historical treatise. The book is also an invaluable resource due to its exhaustive notes and reference sections. Highly recommended for all interested readers, undergraduates and up." (Choice) "[Who Wrote the Book of Life] offers a convincing and historically rich analysis of the origins and ongoing negotiations involved in the production of the genetic code. . . . Kay is doing the work of mapping cultural shifts through tracing discursive circles of influence not an easy task. The book has many strengths." (Canadian Journal of Communication) "Who Wrote the Book of Life? is, in general, carefully researched and technically accurate. It is a veritable treasure trove of quotations, citations and interesting information relating to its historical period." (American Scientist) From the Inside Flap This is a detailed history of one of the most important and dramatic episodes in modern science, recounted from the novel vantage point of the dawn of the information age and its impact on representations of nature, heredity, and society. Drawing on archives, published sources, and interviews, the author situates work on the genetic code (1953-70) within the history of life science, the rise of communication technosciences (cybernetics, information theory, and computers), the intersection of molecular biology with cryptanalysis and linguistics, and the social history of postwar Europe and the United States. Kay draws out the historical specificity in the process by which

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