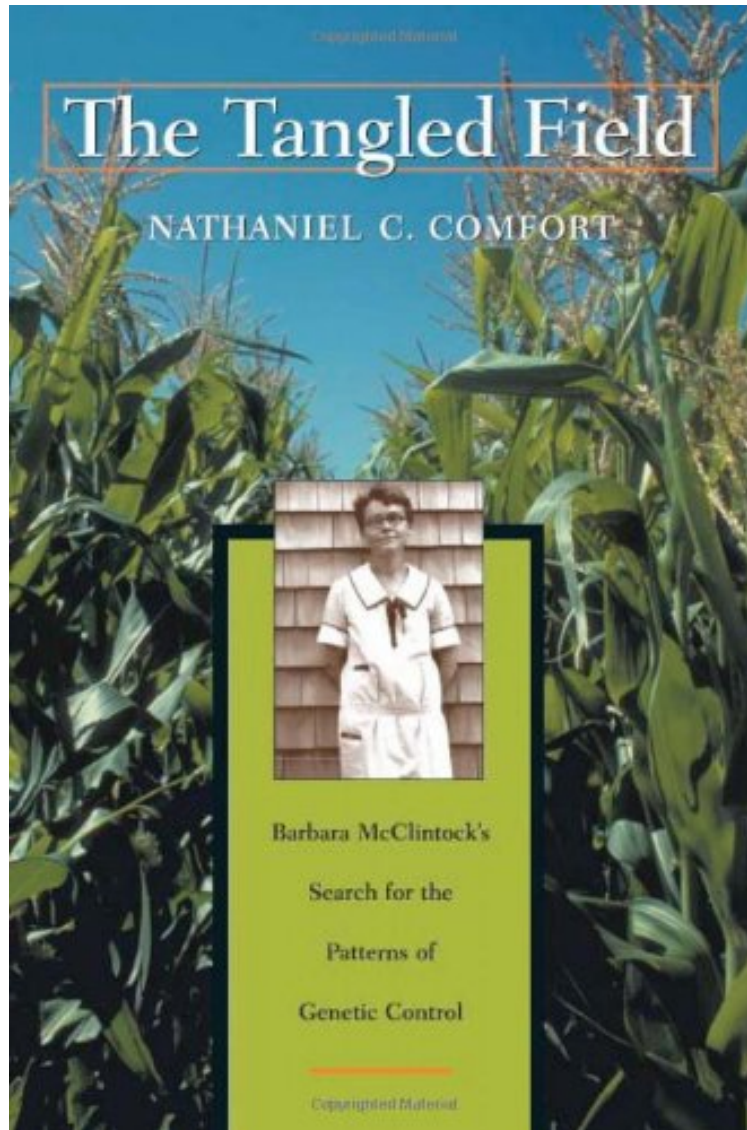


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The Tangled Field: Barbara McClintock's Search for the Patterns of Genetic Control

Nathaniel C. Comfort

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Nathaniel C. Comfort : The Tangled Field: Barbara McClintock's Search for the Patterns of Genetic Control
before purchasing it in order to gauge whether or not it would be worth my time, and all praised The Tangled Field:
Barbara McClintock's Search for the Patterns of Genetic Control:

18 of 20 people found the following review helpful. Great book, incredible geneticist By Eric Lozauskas After just
barely discussing Dr. McClintock's work in my genetics class, I just had to know more. This book is very insightful,

and it discusses her work thoroughly. Her use of corn plants in the discovery of jumping genes (transposable elements). Truly an interesting topic and an incredible geneticist who's discovery has no doubt changed all of genetic research. This book gets a bit more in to detail than people may want for just background information. It includes some diagrams of her work, etc. A great book in all that I will add to my library.

This biographical study illuminates one of the most important yet misunderstood figures in the history of science. Barbara McClintock (1902-1992), a geneticist who integrated classical genetics with microscopic observations of the behavior of chromosomes, was regarded as a genius and as an unorthodox, nearly incomprehensible thinker. In 1946, she discovered mobile genetic elements, which she called "controlling elements." Thirty-seven years later, she won a Nobel Prize for this work, becoming the third woman to receive an unshared Nobel in science. Since then, McClintock has become an emblem of feminine scientific thinking and the tragedy of narrow-mindedness and bias in science. Using McClintock's research notes, newly available correspondence, and dozens of interviews with McClintock and others, Comfort argues that McClintock's work was neither ignored in the 1950s nor wholly accepted two decades later. Nor was McClintock marginalized by scientists; throughout the decades of her alleged rejection, she remained a distinguished figure in her field. Comfort replaces the "McClintock myth" with a new story, rich with implications for our understanding of women in science and scientific creativity.

From Library Journal Barbara McClintock received the Nobel prize in 1983 at age 81 for her work in corn genetics. Evelyn Fox Keller's biography of McClintock, *A Feeling for the Organism*, was published that same year. This current study by the deputy director of the Center for History of Recent Science, George Washington University, argues that Keller's description of McClintock's milieu and, indeed, McClintock's own description of her role in scientific society were often at odds with reality. Comfort suggests that rather than being a loner and maverick who served as a target of bias and narrow-mindedness, McClintock was always well respected and remained a distinguished figure in the scientific community until her death in 1992. The author develops several themes to explain McClintock's life, among them her need for independence and control over her own work. He also goes to great pains to explain the significance of her work at each stage. What he does not demonstrate is whether there really was substantial understanding of her work at the time that it was done. Certainly, after major development in related fields such as molecular biology, her early ideas were more appreciated. Regardless, this is an interesting work that provides insight into McClintock's work and personality. For academic libraries. Hilary D. Burton, Lawrence Livermore National Lab., CA Copyright 2001 Reed Business Information, Inc. From Booklist McClintock was awarded the Nobel Prize in physiology and medicine in 1983 when she was 81 for her groundbreaking work in maize genetics performed decades earlier, and since then, she's been shrouded in myth. Comfort, the first biographer to have access to McClintock's papers, seeks to clarify her complex achievements in unveiling chromosomal behavior, which are not well understood, partly because of her famously quirky rhetorical style, her penchant for working alone, and the sad truth that, ultimately, she failed to fully realize the implications of her dazzling discoveries. Lucid, engaging, and unafraid of controversy, Comfort also dismantles the popular image of McClintock as a mystic and a female pioneer marginalized by male scientists. He portrays instead a highly respected and dedicated professional adamant about maintaining her personal and intellectual freedom, who possessed an astonishing attunement to complexity and pattern and a protean ability to rapidly solve intricate, multidimensional problems. McClintock may have been waylaid in the tangles of her brilliant, paradigm-challenging theories, but she was a unique, jaunty, and hardworking genius whose visionary experiments were essential to the evolution of genetics. Donna Seaman Copyright American Library Association. All rights reserved Nathaniel Comfort has woven the disparate threads of science, biography, feminism, and myth into a powerful narrative that will stand the test of time as the definitive McClintock. As this remarkable story unfolds, Comfort presents her discoveries in their rich historical context and unapologetically describes flaws and fallacies as well as the awe inspiring prophetic power of her experiments with Indian corn. Through painstaking analysis of her original research notes, as well as anecdotes and interviews with close friends and contemporaries, he has dissected her unique but rigorous approach to give an unparalleled insight into one of the great thinkers of her age. At the same time, he provides a poignant and vivid portrait of a surprisingly warm and personable woman instantly recognizable to those who knew and loved her. (Rob Martienssen, PhD, Cold Spring Harbor Laboratory) Barbara McClintock was one of the most fascinating, brilliant and influential geneticists of the 20th century, the century of genetics. Nathaniel Comfort has written an elegant and eminently readable biography that, for the first time, does justice to her science while at the same time separating the reality of her life and work from the myths that grew around her. This is a great book for anyone with an interest in the history of ideas about genes, genomes, development and biological regulation; it is also a great book for anyone with an interest in the interplay of intellect, craftsmanship, intuition and insight, as well as friendship, gender, and personality in the intellectual life of a great scientist. (David Botstein, Stanford University) Barbara McClintock was a well known and outstanding woman scientist. When late in life she won the Nobel Prize, she became the subject of a set of myths, both personal and scientific to which even she contributed. By carefully documenting her science and her life, Nathaniel Comfort shows that she was a Giant in every way for whom

the myths only detracted from understanding her true persona. (Norton D. Zinder, Rockefeller University) Nathaniel Comfort's *The Tangled Field* appears to focus on the scientist Barbara McClintock, but most directly concerns the reputation of her science. Comfort strives to demythologize this supposedly underappreciated, marginalized female corn geneticist. McClintock's mythologizers (including McClintock, Comfort argues) have seen her work on transposition as misunderstood and underappreciated. In contrast, Comfort demonstrates that her research was understood, and was appreciated. Rather, it was McClintock's efforts to promote her work on 'controlling elements' as the key to understanding development that failed to win the acceptance she sought. Well written and unselfconscious, this is important history of science. (Jane Maienschein, Arizona State University) An exceptionally well written account of one of the most important, yet misunderstood, figures in the recent history of science. Comfort provides the first serious, focused study of the development of Barbara McClintock's ideas. In this intellectual biography, he concentrates on what made McClintock an important figure in twentieth century genetics: her science. (Vassiliki Betty Smocovitis, University of Florida) Lucid, engaging, and unafraid of controversy, Comfort also dismantles the popular image of McClintock as a mystic and a female pioneer marginalized by male scientists. He portrays instead a highly respected and dedicated professional adamant about maintaining her personal and intellectual freedom, who possessed an astonishing attunement to complexity and pattern and a protean ability to rapidly solve intricate, multidimensional problems. (Donna Seaman Booklist 2001-06-01) This readable biography of one of the twentieth century's most important geneticists interweaves fact and insight about McClintock as both person and scientist. Her discovery of mobile genetic elements in corn and her efforts to resolve fundamental problems in biology (development, heredity, and evolution) make her...a rare visionary. (Natural History 2001-11-01) In this ambitious biographical study of Barbara McClintock...[Comfort] challenges the standard interpretation of her science and her life...Comfort has reconstructed in great detail, experiment by experiment, McClintock's work on transposons...He spent years deciphering her cramped and faded handwriting in lab notebooks, on seed packets and in letters to her closest friends...*The Tangled Field* will certainly stand as the definitive work on Barbara McClintock's discovery of transposition and her ambition to explain development through controlling elements...Comfort does admirably what he set out to do--answer the many fascinating and troubling questions about McClintock's Nobel Prize-winning research, including why it took almost 40 years not to rediscover Barbara McClintock's work but to reinterpret it. (Carla C. Keirns American Scientist 2002-01-01) Comfort sets out in this intellectual biography of Barbara McClintock to replace the myth of the isolated, misunderstood victim of masculine bias who failed to win immediate recognition for her work with a more nuanced and individuated story that focuses on her actual work, particularly that of her later years. This carefully researched book pays particular attention to McClintock's research notes and previously unpublished correspondence, and it demonstrates a thorough knowledge and understanding of the science involved...[T]his is the first full-length, carefully documented, and scientifically informative study of [McClintock's] life and work, and it is an important contribution to the history of science, particularly of genetics, as well as to feminist science and the history of ideas. (M. H. Chaplin Choice 2001-12-01) Nathaniel Comfort's book enhances McClintock's status as one of the leading geneticists of the twentieth century. Putting aside the myth of the outsider, he describes how her contributions were appreciated by her contemporaries, and shows that she was well supported by colleagues in her search for a congenial work environment...*The Tangled Field* is set to become the definitive biography of Barbara McClintock. (Anne Magurran Times Literary Supplement 2001-11-01)