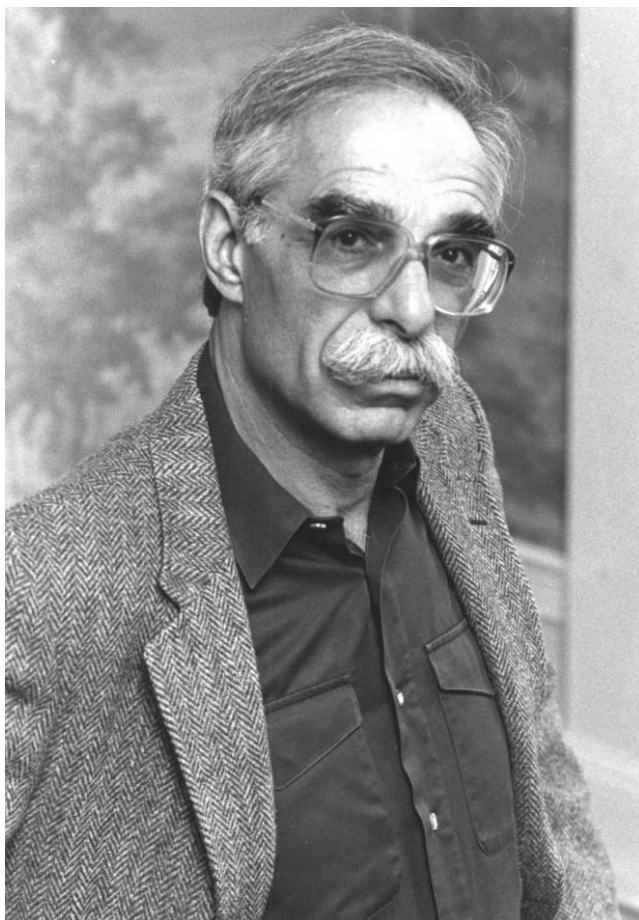


MARTIN JESSE KLEIN, 25 JUNE 1924–28 MARCH 2009

Martin Klein, ca. 1986. Photograph taken by T. Charles Erickson, Yale University Office of Public Information.

Martin Jesse Klein, Professor Emeritus at Yale University, died in his sleep on 28 March 2009 at his home in Chapel Hill, North Carolina. His work on the history of nineteenth- and twentieth-century physics has been of major importance for our understanding of the work of physicists such as Boltzmann, Gibbs, Planck, Einstein, Ehrenfest, and Bohr and has inspired a generation of historians of physics.

Martin was born in New York City on 25 June 1924. His parents, Adolph and Mary Neuman Klein, were both schoolteachers. After his graduation from Jesse Monroe High School in the Bronx at the age of fourteen he obtained bachelor's degrees in math and in physics at Columbia Univer-

sity (in 1942 and 1944, respectively) and a Ph.D. in physics from MIT in 1948. His supervisor was Laszlo Tisza. During the war years he was also involved in acoustical research for the U.S. Navy.

When Martin joined the Department of Physics of Case Institute of Technology in 1949, he seemed poised for a distinguished career in theoretical physics. But as early as 1953 the history of physics aroused his interest: during a stay at the Institute for Advanced Study in Dublin he discovered the work of the Austrian physicist Paul Ehrenfest, successor of the great Hendrik Lorentz in Leiden. This was the start of a life-long fascination with the person and the work of Ehrenfest, which led to a series of publications

and, in 1970, to the highly acclaimed first volume of a biography. A second volume, which would detail the difficult last phase of Ehrenfest's life and his dramatic death by suicide, was never finished.

Martin's involvement with Ehrenfest became more intense when a Guggenheim Fellowship allowed him to spend a year at the Instituut-Lorentz of the University of Leiden in 1958/1959. He had already met Ehrenfest's widow during a visit to Leiden in 1956, and with her support he embarked on the preparatory work for the biography. As a first step, he prepared an edition of Ehrenfest's *Collected Papers*.

From that point on his transition from physics to history of physics went rapidly, and from 1962 almost all of Martin's publications deal with historical topics. In those initial years he wrote in particular on Planck, Einstein, and the development of quantum theory. These first papers were truly groundbreaking: the work on Planck presented a meticulous, step-by-step analysis of Planck's early papers that shed important new light on the meaning of the quantum hypothesis and Planck's use of it; the papers on Einstein showed that it was Einstein who really clarified Planck's hypothesis and who grasped its enormous consequences for the further development of physics. This work by someone unknown in the field made such an impression that it earned him an appointment as Professor of History of Physics at Yale University in 1967 and subsequent appointments as Eugene Higgins Professor of History of Physics and as Professor of Physics a few years later. In those years he also developed a strong interest in the work of Josiah Willard Gibbs, the famous Yale physicist. Others whose work he analyzed were Boltzmann, Van der Waals, Schrödinger, and, of course, Einstein and Ehrenfest.

In those days the Department of History of Science and Medicine at Yale was a unique institution. The combined presence of Asger Aaboe, Derek de Solla Price, Bernard Goldstein, Larry Holmes, and Martin Klein, each a luminary in his own field, made the department one of the best in the world, covering the whole discipline from ancient to modern times. For me, an occasional visitor, it was always a joy to listen to the discussions, attend the colloquia, and participate in the social activities (such as the Friday afternoon celebrations, which sometimes took place on other days as well, after the day in question had been "declared a Friday"). It is still unbelievable that the graduate program was abolished and the institute disbanded in 1977.

In 1988 Martin became Senior Editor of the *Collected Papers of Albert Einstein*, at a mo-

ment when the Einstein Project was going through a difficult phase. At the time, I was a member of the editorial team, which was located at Boston University. Martin took his responsibilities very seriously: he made frequent visits to Boston and was always available for consultation. It was a joy to work with him. During the first years of his tenure, through hard and dedicated work, the project regained its momentum, which led to the publication, in rapid succession, of Volumes 3–6 of the *Collected Papers* in 1993–1996. When Martin left, in 1998, the project was back on course.

Through his work on Ehrenfest, Martin developed especially strong ties with the Netherlands. He visited many times, both informally and formally. In 1974 he was Van der Waals Visiting Professor at the University of Amsterdam, and in 1993 he inaugurated the Pieter Zeeman Visiting Chair of History of Physics, also in Amsterdam. On both occasions he gave a series of lectures, which unfortunately remain unpublished. He also acquired a good working knowledge of the Dutch language, although he never mastered another typical Dutch skill: riding a bicycle in Amsterdam city traffic.

Martin's work is characterized by great erudition, a polished style, and particular attention to detail. Through a combination of sensitivity for the personalities of the physicists he studied and a talent for finding as yet unexplored points of view, he clarified the development of their work. He used his sources, published as well as unpublished, with great care and was a master in using brief quotations to bring out a point with special emphasis. His discussions of the work of the scientists he studied always presented new insights and made the reader aware of their personalities, as well as their work. When Dan Siegel and I were looking for a title for the *Festschrift* we were putting together for Martin's seventieth birthday, we quickly decided on *No Truth Except in the Details*.¹ We adapted a quotation from Stendhal's novel *Lucien Leuwen*, which Martin himself had used in one of his papers: "Plus de détails, plus de détails, disait-il-à son fils, il n'y a de originalité et de vérité que dans les détails." It is precisely Martin's use of details, his refusal to separate the scientist from the work, his talent for bringing out new, revealing aspects, that makes his work so unique. Less unique for Martin's generation of historians of physics, but unfortunately unique nowadays, is his mastery of the technical details of physics itself, without which any serious effort at historical analysis is incomplete. In that respect Martin's death emphasizes to what extent the history of science has entered a new era.

Martin's erudition and attention to detail were also very much part of his lecturing style. It is appropriate and fitting to characterize his great talent as a lecturer with the words Arnold Sommerfeld used to praise Paul Ehrenfest: "Er trägt meisterhaft vor" ("He lectures masterfully").

It is in the Ehrenfest book that Martin's characteristics as a historian of science come out most clearly. The book is organized in an unusual way: chapters on Ehrenfest's life are interspersed with chapters presenting technical analyses. In this way justice is done to Ehrenfest as a person as well as a scientist; it also makes the book accessible to nonspecialists. This format may not work for every biography of a scientist, but in the case of Ehrenfest it elevated the genre to a new level.

As a historian of science, Martin received many honors. He was a member of the National Academy of Sciences, the American Academy of Arts and Sciences, and the Académie Internationale d'Histoire des Sciences. He was a fellow of the American Physical Society and the American Association for the Advancement of Science, and the first recipient, in 2005, of the Abraham Pais Prize

for History of Physics of the American Physical Society. As a friend and colleague he was full of warmth. He loved good company, preferably during a nice meal with a good glass of wine. Martin had a fine sense of humor and was a great storyteller. He also mixed a mean martini. He is survived by four daughters: Rona, Sarah, and Nancy, from his first marriage, to Miriam Levin; and Abby, from his second marriage, to Linda Booz. His third wife, Joan Blewett, died in 2006. Martin Klein will be missed by many.

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NOTES

1. A. J. Kox and Daniel M. Siegel, eds., *No Truth Except in the Details: Essays in Honor of Martin J. Klein* (Dordrecht: Kluwer, 1995). This volume also contains a bibliography of Martin's writings up to 1993.

A. RUPERT HALL, 26 JULY 1920–5 FEBRUARY 2009 MARIE BOAS HALL, 18 OCTOBER 1919–23 FEBRUARY 2009



A. Rupert Hall and Marie Boas Hall.