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## Pursuit of Genius

Flexner, Einstein, and the Early Faculty  
at the Institute for Advanced Study

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**Steve Batterson : Pursuit of Genius: Flexner, Einstein, and the Early Faculty at the Institute for Advanced Study** before purchasing it in order to gage whether or not it would be worth my time, and all praised Pursuit of Genius: Flexner, Einstein, and the Early Faculty at the Institute for Advanced Study:

0 of 0 people found the following review helpful. The birth and early years of a truly unique intellectual communityBy Robert MorrisI recently re-read and now review a special book in which Steve Batterson focuses on the creation and

development of the Institute for Advanced Study in Princeton (NJ). Briefly, it was founded in 1930 by Abraham Flexner, together with philanthropists Louis Bamberger and his wife, Caroline (Carrie) Bamberger Fuld. According to Batterson, From the beginning the faculty identified and hosted scholars who had already received their doctoral degrees. These visitors, who became members, typically remained at the Institute for a year. Fifty years later, I was a member and marveling at Flexners legacy...There were neither classes to teach nor service duties to perform. It was an environment totally devoted to the enhancement of research. In his autobiography, Flexner recalls: "I was working quietly one day when the telephone rang and I was asked to see two gentlemen who wished to discuss with me the possible uses to which a considerable sum of money might be placed. At our interview, I informed them that my competency was limited to the education field and that in this field it seemed to me that the time was ripe for the creation in America of an institute in the field of general scholarship and science, resembling the Rockefeller Institute in the field of medicine developed by my brother Simon not a graduate school, training men in the known and to some extent in methods of research, but an institute where everyone faculty and member took for granted what was known and published, and in their individual ways, endeavored to advance the frontiers of knowledge. Not everyone was pleased with what the Institute became within a few years: "When I was at Princeton in the 1940s I could see what happened to those great minds at the Institute for Advanced Study, who had been specially selected for their tremendous brains and were now given this opportunity to sit in this lovely house by the woods there, with no classes to teach, with no obligations whatsoever. These poor bastards could now sit and think clearly all by themselves, OK? So they don't get any ideas for a while: They have every opportunity to do something, and they're not getting any ideas. I believe that in a situation like this a kind of guilt or depression worms inside of you, and you begin to worry about not getting any ideas. And nothing happens. Still no ideas come. Nothing happens because there's not enough real activity and challenge: You're not in contact with the experimental guys. You don't have to think how to answer questions from the students. Nothing! Richard Feynman, Surely You're Joking, Mr. Feynman!, 1985 Batterson devotes the final chapter, Fast Forward, to those years, citing the issues that Feynman raised. He also shares this observation by Institute astrophysicist John Bahcall: Everyone who gets to the Institute as a permanent professor gets here because he's done in all cases two important things. Otherwise you don't get here. It's very hard to do more than two important things in the sciences. Or even do one. So often your best work is done before you get here permanently. Whatever flaws the Institute has had, the fact remains that the collective genius was probably unsurpassed, even by the great universities in Europe (notably Heidelberg) and the UK (All Souls College, Oxford). Wexler certainly deserves a great deal of credit for the stature that the Institute gained and continues to possess but it should also be noted that Adolph Hitler played a significant role during Wexlers search for superior talent in the 1930s. Theoretical physicist Albert Einstein, for example, immigrated to the United States to escape Nazi persecution. With regard to its impact, consider these achievements cited by Wikipedia: From the day it opened the IAS had a major impact on mathematics, physics, economic theory, and world affairs. In mathematics forty-one out of fifty-seven Fields Medalists have been affiliated with the Institute. Thirty-three Nobel Laureates have been working at the IAS. Of the sixteen Abel Prizes awarded since the establishment of that award in 2003, nine were garnered by Institute professors or visiting scholars. Of the fifty-six Cole Prizes awarded since the establishment of that award in 1928, thirty-nine have gone to scholars associated with the IAS at some point in their career. IAS people have won 20 Wolf Prizes in mathematics and physics. Its more than 6,000 former members hold positions of intellectual and scientific leadership throughout the academic world. Pioneering work on the theory of the stored-program computer as laid down by Alan Turing was done at the IAS by John von Neumann, and the IAS machine built in the basement of the Fuld Hall from 1942 to 1951 under von Neumanns direction introduced the basic architecture of all modern digital computers. The IAS is the leading center of research in string theory and its generalization M-theory introduced by Edward Witten at the IAS in 1995. The Langlands program, a far-reaching approach which unites parts of geometry, mathematical analysis, and number theory was introduced by Robert Langlands, the mathematician who now occupies Albert Einstein's old office at the institute. Langlands was inspired by the work of Hermann Weyl, Andr Weil, and Harish-Chandra, all scholars with wide-ranging ties to the Institute, and the IAS maintains the key repository for the papers of Langlands and the Langlands program. The IAS is a main center of research for homotopy type theory, a modern approach to the foundations of mathematics which is not based on classical set theory. A special year organized by Institute professor Vladimir Voevodsky and others resulted in a benchmark book in the subject which was published by the Institute in 2013. Theoretical physicist J. Robert Oppenheimer served as the third Director of the Institute from 1947 until 1966, thus far the longest tenure of any Institute Director. Prior to his Directorship, in 1942, Oppenheimer was appointed to the Manhattan Project, and he oversaw the construction of the Los Alamos laboratory, where he gathered the best minds in physics to work on the problem of creating an atomic bomb. While Director of the Institute, Oppenheimer was simultaneously Chairman of the General Advisory Committee of the Atomic Energy Commission from 1947 through 1952, overseeing all atomic research and development in the United States. He once observed, There must be no barriers to freedom of inquiry. There is no place for dogma in science. The scientist is free, and must be free to ask any question, to doubt any assertion, to seek for any evidence, to correct any errors. Thank you, Steve Batterson, for making it possible for so many people to return in time to the establishment and subsequent development of an

intellectual community unlike any other, one whose values Oppenheimer affirms in his observation.<sup>4</sup> of 4 people found the following review helpful. A Solid Introduction to the Institute for Advanced Study By Ronald H. Clark I had long been interested in the Institute for Advanced Study at Princeton as well as Einstein, so this book seemed a natural. While as it turned out Einstein does not figure that prominently in the book, on the score of being an invaluable history of the IAS, the book is all one could hope for. The Institute has been in existence for 75 years, but most of this book's attention is devoted to the early stages of its creation and development under the direction of Abraham Flexner, the distinguished guru of medical education in this country in the early 20th century. Louis Bamberger and his sister, Caroline Bamberger Fuld, department store owners in Newark (flush with cash from having sold out to Macy's), decided to create a New Jersey educational institution of some sort around 1929. Fortunately, they were brought together with Flexner, who had worked extensively with the Rockefeller Foundation's General Education Board, and who developed into the idea man as to how their wishes could be implemented. The book carefully recounts Flexner's ideas on how the Institute could be created and what its goals should be; naturally, Flexner served as the first Director from 1930-1939. The first school Flexner sought to develop was Mathematics, which is examined in great detail by the author who is a math professor. For the most part, math jargon is absent from the discussion. How the first math superstars were recruited and locating the Institute at Princeton (rather than Newark) are the subjects of an interesting discussion. Eventually, the author moves on to the other schools, such as Economics and Humanities, and recounts their formation and development as well. But these discussions are never as extensive as that of mathematics. I was surprised to see Felix Frankfurter pop up as an advisor to Flexner and a trustee. Several brief chapters update the history of the Institute to the present, including the involvement of such key figures as J. Robert Oppenheimer, Lewis Strauss (before they became deadly enemies), and George Kennan. Well written, with excellent notes and references, the author has clearly benefitted from access to Institute records and some important interviews. All and all, a very interesting read about a critical intellectual resource of this nation.

"The Institute for Advanced Study occupies a unique position among institutions of higher learning. An account of its early years is long overdue, so the appearance of the present volume, during the 75th anniversary of the Institute's founding, is most welcome. Batterson has mined the Institute's archives to provide a detailed and unvarnished account of the backstage conflicts and intrigue that attended the Institute's growth and determined its future. Those unfamiliar with the Institute will learn how one man's vision shaped a couple's philanthropy and created a haven for scholars in the midst of the Great Depression. Equally, those who have had the privilege of Institute membership will enhance their appreciation of the intellectual leaders who made their own Institute experiences possible." ---John W. Dawson, Jr., author of *Logical Dilemmas: The Life and Work of Kurt Gdel*

" ""Batterson's detailed rendition of Abraham Flexner's negotiations with a number of the most eminent mathematicians of the 1930s will delight anyone who has ever served on a faculty search committee. Despite some reversals, Flexner successfully recruited Albert Einstein, Oswald Veblen, Hermann Weyl and John von Neumann, all Europeans, and James W. Alexander and Marston Morse, both Americans. Batterson includes descriptions of each man's achievements and importance to the field of mathematics, as well as the social context in which recruitment activities took place, including rising anti-Semitism in Germany, and anti-Semitism in the United States, including Princeton." -Sarah Boslaugh, MAA s, October 2006 The book is based primarily on a meticulous study of the institutes documentary records Batterson tells a fascinating story -John Stachel, NATURE, January 2007 ""Pursuit of Genius is a night-table book, an enjoyable read . . . The book is a story, not a history . . . Many will enjoy reading the connections between the Institute and mathematicians, such as George Birkhoff, Einstein, Kurt Godel, Felix Klein, John von Neumann and Hermann Weyl." -Donald Cook, Mathematiacl s, May 2007 ""This is the best book that has yet been written about the Institute The history of the first nine years is unexpectedly melodramatic, full of quarrels and misunderstandings, power struggles and deceptions." -Freeman Dyson, IAS, June 2007 ""This interesting book ... shows the life and scientific activities and contributions of intellectual leaders from the institute as well as political, economic, and personal situations, conflicts, and intrigues that influenced and determined the future of the institute ... The book can be recommended to anyone who is interested in mathematics and its history." -EMS, November 2007 Institute for Advanced Study occupies a unique position among institutions of higher learning. An account of its early years is long overdue, so the appearance of the present volume, during the 75th anniversary of the Institute's rounding, is most welcome. Batterson has mined the Institute's archives lo provide a detailed and unvarnished account of the backstage conflicts and intrigue that attended the Institute's growth and determined its future. Those unfamiliar with the Institute will learn how one man's vision shaped a couple's philanthropy and created a haven for scholars in the midst of the Great Depression. Equally, those who have had the privilege of Institute membership will enhance their appreciation of the intellectual leaders who made their own Institute experiences possible." -L'Enseignement Mathmatique, October 2006"From the Inside FlapThis book offers a long-overdue account of the early years of the Institute for Advanced Study in Princeton, New Jersey. This is the story of one mans vision of founding a higher-education institution that operates outside of the standard university model, a place without the pressures of teaching

commitments, service obligations, or financial considerations an environment focused on fostering genius through research. About the Author Steve Batterson earned his BA from the College of William and Mary in 1971. In 1972 he was awarded an MA from Northwestern University, where he also earned a PhD in mathematics in 1976. He is the author of *Stephen Smale: The Mathematician who Broke the Dimension Barrier*. He is currently an Associate Professor in the Department of Mathematics and Computer Science at Emory University in Atlanta, GA.