

# ALBERT EINSTEIN (1879-1955)

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## FOREWORD OF THE PRESIDENT OF THE HEBREW UNIVERSITY OF JERUSALEM

The book presented here should give the reader a view, admittedly limited, of one of the most universal symbols of the twentieth century, one of the greatest intellects of all ages. Albert Einstein has become a myth, a symbol, a paradigm of scientific revolution. But the personal papers of Einstein which are stored at The Hebrew University's Jewish National & University Library reveal that there is much that is hidden behind the myth.

Paradoxically, Einstein's image as reflected by this book is far from two-dimensional. Einstein's theory of relativity constitutes one of the most profound revolutions in the human perception of the world in which we live, and represents one of the most significant contributions to human knowledge. Another revolution in scientific thought, arguably even more profound, is that of quantum mechanics. Einstein's ongoing struggle with the theory of quantum mechanics increasingly isolated him from the mainstream of scientific thought and could have turned him into a tragic figure. But despite this, none of the creators of quantum mechanics has been as mythified in the public eye as Einstein.

What was so special about the figure of Einstein that it captured the collective imagination of the twentieth century? Our Einstein Archives provides some of the answers. It reveals to us a complex, multifaceted person, a man of contradictions and paradoxes. This brilliant intellect, unfettered by the chains of existing paradigms, created through his special and general theories of relativity one of the most far-reaching breakthroughs in the history of human thought. At the same time he was so adamant in his convictions that he was unwilling to

accept the other revolution in twentieth century science, the theory of quantum mechanics.

Although a dedicated pacifist, Einstein felt compelled to advocate the development of nuclear weapons in light of the threat of a Nazi bomb as part of the horrible destructive capacity of the German war machine.

Although he did not believe in the concept of a personal God, he was a lifelong atheist deeply influenced by his Jewish identity, by a concept of peoplehood and the unique role of the Jewish people in the unfolding saga of human civilization.

Even in his relations with The Hebrew University one finds the same contradictions. One of its founding fathers, Einstein was at one time one of its most severe critics, joining with Chaim Weizmann in challenging the lines of development and leadership expressed by Judah L. Magnes, the then head of the institution. Despite this, he chose The Hebrew University as the permanent repository for his personal and scientific manuscripts, papers and correspondence.

I believe that these tensions reveal the complexity of the real Albert Einstein and explain perhaps, at least in part, why he and no other person became such a symbol of the twentieth century.

Prof. Menachem Magidor  
President  
The Hebrew University of Jerusalem

## PREFACE OF THE CURATOR OF THE ALBERT EINSTEIN ARCHIVES

The publication of *Albert Einstein – The Persistent Illusion of Transience* marks a new and outstanding accomplishment in the varied activities of the Albert Einstein Archives. When the original version, *Albert Through the Looking Glass*, dating from 1998, came close to being sold out during the course of the year 2005, I realized that there was a definite need for a new English-language edition and I brought up the idea of producing the present volume. Nine years after the first publication we are happy to have a successor in the form of a revised and expanded version with an up-to-date design. This volume comes as a welcome addition to a series that, at this time, includes German, French and Spanish editions.

We are pleased that we can now offer a book that emphasizes Einstein's contacts with the United States, the United Kingdom and Australia. While the 2002 version of "The Einstein Scrapbook" highlighted Einstein's relationship with the North American continent, this is the first time the Archives has published chapters on Einstein's interaction with the British and the larger Anglophone world. Some of its material has already been displayed in local exhibitions in England and Australia in previous years, but has now been adapted for this book.

The bulk of the workload fell on Barbara Wolff for which she deserves our gratitude and full recognition. This book would not have come into being if not for the groundbreaking work of my predecessor Ze'ev Rosenkranz, who started it all. His contribution is still a substantial part of this book. My earnest appreciation goes to Hai Tsabar of Magnes Press for his part in this successful collaboration. My heartfelt thanks go to them and to all those who have assisted us in realizing this project.

Einstein's relationship to the English language was not an easy one. His heavy German accent in English was famous. He had a hard time getting used to spoken English and never felt comfortable with written English. In 1944, after living for ten years in the United States, he mentions this problem in a letter to his friend, Max Born: "But I cannot write in English, because of the treacherous spelling. When I am reading, I only hear it and am unable to remember what the written word looks like." Einstein had indeed never been taught English at school and his Swiss matriculation certificate of 1896 shows marks for all subjects, except one: English Language and Literature.

As the curator of the Albert Einstein Archives I am glad to present to you this book that will surely take its appropriate place among the many publications about Einstein that are currently available to the interested reader.

Dr. Roni Grosz  
Bern Dibner Curator  
Albert Einstein Archives  
The Hebrew University of Jerusalem

## PREFACE OF THE FORMER CURATOR OF THE ALBERT EINSTEIN ARCHIVES

More than a half century after his death, Albert Einstein's countenance is one of the most recognizable images on this planet. Therefore, it is particularly apt that this volume be available to a global audience.

Einstein burst onto the world stage when he was forty years old. In November 1919, British astronomers announced the verification of his general theory of relativity. From that moment on, journalists began reporting Einstein's every public utterance, every minute detail of his travel itineraries around the globe, and every published attempt at further developing his scientific theories.

Einstein's iconic standing has only increased since his death in 1955. His celebrity status reached a peak at the very end of the twentieth century when TIME Magazine selected him as "Person of the Century". The year 2005 – designated the international Einstein Year – saw a virtual frenzy of Einstein-related activities, celebrating the centenary of his *annus mirabilis*, his miracle year in 1905, when over the course of merely six months, from March to September, Einstein published four landmark papers which shook the foundations of modern physics. The recent unsealing of a large amount of family correspondence, which had been closed to public view, has brought about an even greater interest in Einstein's private life.

Albert Einstein was a multi-faceted human being. Throughout his life, he was engaged in a broad spectrum of diverse activities, many of which are reflected in this book.

We are all familiar with the public image of Albert Einstein – the aged, absent-minded professor in a worn-out sweater with unruly hair and soulful eyes. But who was the man behind the popular myth and the public façade? What was Albert Einstein really like as a person? How do we reconcile the multifarious images we have of Einstein: the delicate and slow-developing child; the brash and

overconfident adolescent and young man; the middle-aged, at times diffident, individual thrust onto the world stage; the theoretical physicist who revolutionized modern physics at a young age, yet became increasingly isolated from the scientific community in his later years; the loyal scientific colleague who had to navigate the precarious waters of academia; the radical pacifist who became a figurehead of the international peace movement; the German Jew of Swabian origin who adopted both Swiss and American citizenships; the devoted and warmhearted friend; the difficult (and at times exasperating) husband; the doting father who placed arduous demands on his sons; and the romantic lover? One of the most authentic ways to gain a closer insight into the real historical figure of Albert Einstein is to examine the historical documents he produced and left behind.

The purpose of this volume is to present the reader with choice documents and images which reflect the diversity of Einstein's life and work. The material is drawn from Einstein's personal papers and photograph collection and augmented by additional material mainly from the Albert Einstein Archives.

In selecting the archival material for the original edition, I have been guided by my close familiarity with Einstein's personal papers. It was, admittedly, a very personal selection – the chosen items are cultural artifacts to which I developed a special relationship. Yet the reproduced material represents some of the most significant items in Einstein's personal papers. Ultimately, I sought to incorporate a wide variety of materials in order to present the entire scope of the private and public selves of Albert Einstein.

Ze'ev Rosenkranz  
Historical Editor  
Einstein Papers Project  
The California Institute of Technology

This book has a rather long history. It owes its first edition, under the title *Albert Through the Looking-Glass*, to the former curator of the Albert Einstein Archives. The *Looking-Glass* was, so to speak, an expanded by-product of an exhibition which, under the curatorship of Ze'ev Rosenkranz, had opened in 1995 at the Jewish National and University Library in Jerusalem. Outside of Israel the distribution of the book was rather limited, while enhanced versions of the exhibition were soon to be seen on four continents.

As the International Year of Physics 2005 approached, it became obvious that a German edition of *Albert Through the Looking-Glass* should be planned. By that time, Ze'ev Rosenkranz had left the Albert Einstein Archives and I took on the task to tend to this publication. It turned out to be much more difficult than expected, as none of the publishers I contacted were ready to produce such an expensive book.

It was by fortunate coincidence that the director of the Historical Museum in Bern, Peter Jezler, and his team, planning a comprehensive exhibition on Einstein, first in Ulm, Germany, and later in Bern, Switzerland, took to the book project and assumed the risk and responsibility. Together we published the substantially enhanced German version with a completely new design in March 2004, followed by an even more elaborated French edition in 2005.

The success which these beautifully designed volumes achieved encouraged us to envision additional editions in different languages yet with the same appealing design and inspired by the same idea. Like the traveling exhibitions, each volume would be augmented by documents and texts that would particularly concern the readers of the respective language.

Thus the new English version contains additional material illustrating Einstein's connection with Great Britain and Australia, as well as with the United States.

Other new items come from a collection of family letters released only recently and published here for the first time.

*Albert Einstein – The Persistent Illusion of Transience* does not claim to be an ultimate comprehensive portrait of Albert Einstein. I hope, though, that this lack will be compensated for by the authenticity of the documents from which Albert Einstein speaks to the reader directly. Just as Ze'ev Rosenkranz's selection of documents for the original edition was a personal one, so my compilation of old and new documents is not free of personal preferences. The freedom to be creative has certainly contributed to the pleasure I had in composing this book.

I am especially indebted to Hananya Goodman who, in extensive sessions, with great patience converted my German-English raw material into impeccable English texts, and to Rama Hermony who was exceptionally responsive to all my ideas regarding the graphic design of this volume.

Barbara Wolff  
Albert Einstein Archives  
The Hebrew University of Jerusalem

# TIMELINE 1879→1955

**1879**

Born March 14 at 11:30 AM in Ulm, Germany

**1880**

Einstein family moves to Munich

**1885–1888**

Pupil at Catholic elementary school in Munich  
Private lessons in Judaism at home

**1888–1894**

Pupil at Luitpold-Gymnasium, Munich

**1894**

Parents move to Milan  
Six months later, Einstein leaves Gymnasium without completing his schooling and joins his family in Italy

**1895–1896**

Pupil at cantonal school in Aarau, Switzerland  
Renounces his Württemberg citizenship, thereby also renouncing his German citizenship

**1896–1900**

Student at the School for Mathematics and Science Teachers at the Polytechnic (later the Federal Institute of Technology), Zurich

**1901**

First scientific paper is published in the *Annalen der Physik*  
Acquires Swiss citizenship



Munich, 1893



Bern, 1903



Bern, 1905

**1901–1902**

Temporary teaching position at school in Schaffhausen and Winterthur, Switzerland

**1902**

Daughter [“Lieserl”] born to Einstein and Mileva Marić in her hometown in Hungary. Appointed as technical expert third class at the Swiss Patent Office in Bern

**1903**

Marriage to Mileva Marić in Bern  
Joins with Conrad Habicht and Maurice Solovine to discuss ideas in their “Akademie Olympia”

In a letter from Einstein to Mileva “Lieserl” is mentioned for the last time

**1904**

Son Hans Albert born in Bern

**1905**

Einstein’s *annus mirabilis*: completes papers on light quanta Brownian motion, and special theory of relativity

**1906**

Receives Ph.D. from Zurich University  
Promoted to technical expert second class at the Swiss Patent Office

**1907**

Discovers the principle of equivalence

**1908**

Appointed lecturer at Bern University

**1909**

Appointed Associate Professor of theoretical physics at Zurich University  
Resigns from Patent Office



Prague, 1912

**1910**

Second son Eduard born in Zurich

**1911**

Predicts bending of light

**1911–1912**

Professor of theoretical physics at German University of Prague

**1912–1914**

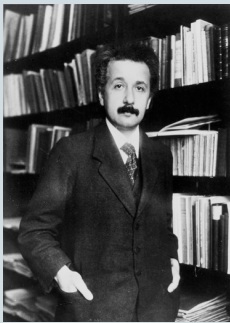
Professor of theoretical physics at the Federal Institute of Technology, Zurich

**1913**

Appointed member of the Royal Prussian Academy of Sciences and professor at Friedrich Wilhelm University (without teaching obligations)

**1914**

With wife and sons goes to Berlin  
Separates from Mileva, who returns with both children to Zurich  
Signs anti-war “Manifesto to Europeans”



Berlin, 1916

**1915**

Joins pacifist “New Fatherland League”  
Completes logical structure of the general theory of relativity

**1916**

Publication of the general theory of relativity

**1917**

Writes first paper on cosmology  
Appointed Director of Kaiser Wilhelm Institute for Physics in Berlin

**1917–1920**

Suffers from a liver ailment, a stomach ulcer, jaundice and general weakness – his cousin Elsa takes care of him

**1919**

Divorces Mileva Marić  
Marries his cousin Elsa  
Kurt Blumenfeld stimulates Einstein’s interest in Zionism  
Bending of light observed during solar eclipse in West Africa and Brazil  
Announcement at joint meeting of Royal Society and Royal Astronomical Society that Einstein’s theories have been confirmed by eclipse observations  
Sensational headlines in *The Times* and *The New York Times*:  
Einstein becomes a world figure



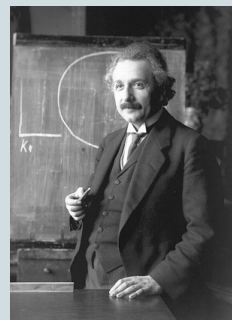
Leiden, 1920

**1920**

Mass meeting against the general theory of relativity in Berlin mainly motivated by anti-Semitism  
Appointed special visiting professor at Leiden University

**1921**

First visit to the U.S. with Chaim Weizmann: fund-raising tour for the future Hebrew University  
Lectures at Princeton University on theory of relativity



Vienna, 1921



L.L.  
L

# Geburtsurkunde.

Nr. 120

Wien am 17. März 1877.

Der hier unterzeichnete Stadtbeamte erklärt hier, bei  
Vorhandenheit von \_\_\_\_\_

\_\_\_\_\_ d. Gesch.

der hierunterzeichneten Frau \_\_\_\_\_

geborene am 17. März 1877 \_\_\_\_\_

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\_\_\_\_\_ d. Gesch. geboren, vom Vater \_\_\_\_\_

\_\_\_\_\_ d. Gesch. geboren,

geborene am \_\_\_\_\_

\_\_\_\_\_ d. Gesch.

zu \_\_\_\_\_ d. Gesch.

am \_\_\_\_\_ d. Gesch. im \_\_\_\_\_ d. Gesch. bei Geburt

geborene mit einem an, geboren am \_\_\_\_\_ d. Gesch. &

am \_\_\_\_\_ d. Gesch. bei der Geburt geboren, haben

keine Ansprüche geltend machen können, welche \_\_\_\_\_ d. Gesch. demselben

\_\_\_\_\_ d. Gesch. geborene haben

\_\_\_\_\_ d. Gesch.



↑ Einstein's father, Hermann Einstein, a kind-hearted man, unsuccessful merchant, fond of German literature.



↑ Einstein's mother, Pauline Einstein, née Koch, a strong personality and a talented pianist.



↑ Albert Einstein (5 years old) with his sister Maja (3 years old), 1884

« The merchant Hermann Einstein, residing at Ulm, Bahnhofstraße B, No. 135, of the Jewish faith, reported that his wife, Pauline Einstein, née Koch, of the Jewish faith, who lives with him at his Ulm residence gave birth on March 14, 1879 at 11:30 in the morning to a child of male sex who was given the first name Albert. »

↔ Birth certificate, Ulm, issued on March 15, 1879