



EINSTEIN

ENDSTEIN

UND ULM

Stadt Ulm

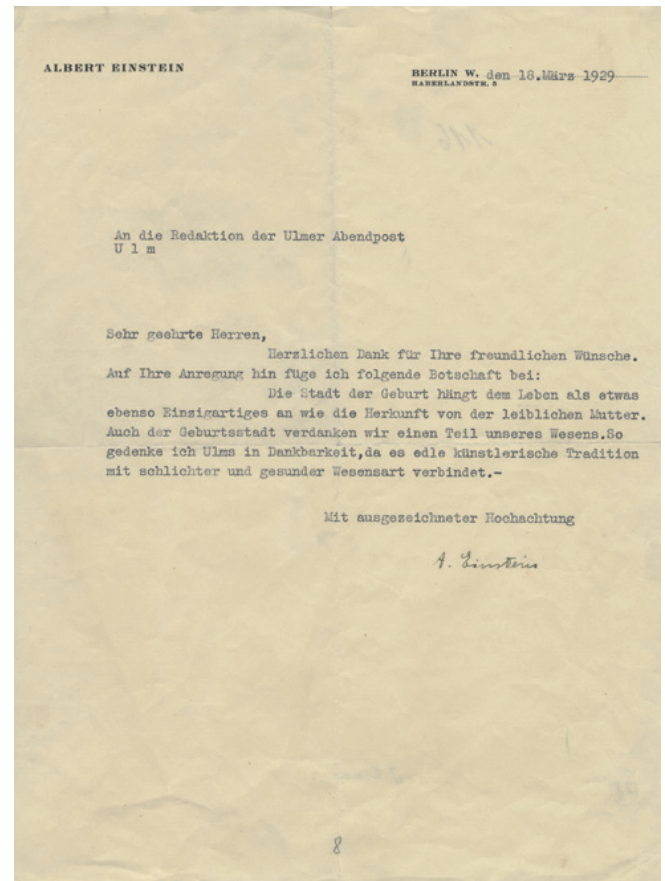
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NTAIN**GENIUS**HUMANIST

Albert Einstein. More than just a name. Physicist. Genius. Science pop star. Philosopher and humanist. Thinker and guru. On a par with Copernicus, Galileo or Newton.

And: Albert Einstein – from Ulm!

The most famous scientist of our time was actually born on 14th March 1879 at Bahnhofstraße 20 in Ulm. Albert Einstein only lived in the city on the Danube for 15 months. His extended family – 18 of Einstein's cousins lived in Ulm at one time or another – were a respected and deep-rooted part of the city's society, however. This may explain Einstein's enduring connection to the city of his birth, which he described as follows in a letter to the Ulmer Abendpost on 18th March 1929, shortly after his 50th birthday:



"The birthplace is as much a unique part of your life as the ancestry of your biological mother. We owe part of our very being to our city of birth. So I look on Ulm with gratitude, as it combines noble artistic tradition with simple and healthy character."

The “miracle year” 1905 – Einstein becomes the founder of the modern scientific world view

Was Einstein a “physicist of the century”? There’s no doubt of that. In his “miracle year” (annus mirabilis) of 1905 he published 4 groundbreaking works alongside his dissertation. Each of these was worthy of a Nobel Prize and turned him into a physicist of international standing: the theory of special relativity, the light quanta hypothesis (“photoelectric effect”), for which he received the Nobel Prize in 1922, the confirmation of the molecular structure of materials through “Brownian motion”, and the theory of mass-energy equivalence.

Each of these works represented a completely new approach in its respective area of physics – and together resolved all the problems, enigmas and contradictions of classical physics. A phenomenal achievement, unique in modern science, which he accomplished in his evenings off – the 26-year-old Einstein was employed full-time at the Patent Office in Bern - at that time. With pencil and paper and none of the apparatus of a university, without assistants, labs or specialist libraries.

Einstein’s physics problems also occupied numerous other major scientists at the start of the 20th century. None of his colleagues, however, were similarly successful in considering the variety of natural phenomena as having a uniform connection, deriving general principles from this and translating the “unity of nature” into mathematical formulae.



Thus, Albert Einstein became the founder of the modern scientific world view.

This concept of a world view was the focus of scientific work at the beginning of the 20th century. Ultimately, it was thought that the solution to the sub-problems in physics would lead to an all-encompassing explanation of the world, a “world formula” so to speak. Einstein devoted himself like no other to this integrated approach. His General Theory of Relativity of 1916 was an important step in this process. During the final 20 years of his life, he was working on unified field theory. The aim was to formulate a theory that would describe gravitation and other interactions, especially electromagnetism, in a unified way. Einstein did not manage to achieve this before he died. That he even attempted it, says something about his dedication to science.

To say that Einstein was ahead of his time would be a massive understatement. Want an example? Believe it or not, 99 years passed – in science and time – before scientists succeeded in measuring gravitational waves in 2015, finally proving what Einstein knew back in 1916.

Genius and humanist

Was Einstein a nerd? As a scientist, yes! He focussed on theories and physical worlds that none of his contemporaries were able to unlock.

As a man, however, his interests were extremely broad. Einstein showed an early interest in philosophy and was passionate about literature and music. He was not gregarious in the proper sense, but he did enjoy the company of other people. Nowadays we would probably call him an intellectual or a humanist.

Einstein also transferred his scientific theory – that all phenomena in nature are connected and only take effect as a whole – to social and political questions. He formulated ideas on systems of government and economics, commented on ethical and philosophical issues, and repeatedly and publicly denounced nationalist, racist and militaristic tendencies. Einstein was a profoundly moral person, who took science's responsibility towards humanity very seriously. Research for research's sake, with no ethical foundation, was unthinkable for him. This led him to a moral dilemma in 1939. He feared Nazi Germany would build an atomic weapon following Otto Hahn's successful discovery of nuclear fission



the year before. With a heavy heart, Einstein the pacifist decided to sign a letter to US President Franklin D. Roosevelt urging him to start a nuclear programme in the USA. Contemporary sources reveal that Einstein himself was not actively involved in the development of the bomb – he nevertheless felt the weight of the shared moral responsibility until the end of his life.

Albert Einstein's life's work is of incalculable value in improving our understanding of our world. At the same time, he also fought passionately to improve life on Earth. That was his fundamental distinguishing feature as a scientist. This exemplary combination of scientific brilliance and morality is certainly a big factor in his enduring popularity to this day.

Does that fully explain the Einstein phenomenon? Of course not. Albert Einstein had so many facets, so many talents and abilities. The complete picture only comes from understanding the whole. Only the whole. Just like Einstein's general idea of physics and our world. Coincidence? Perhaps.





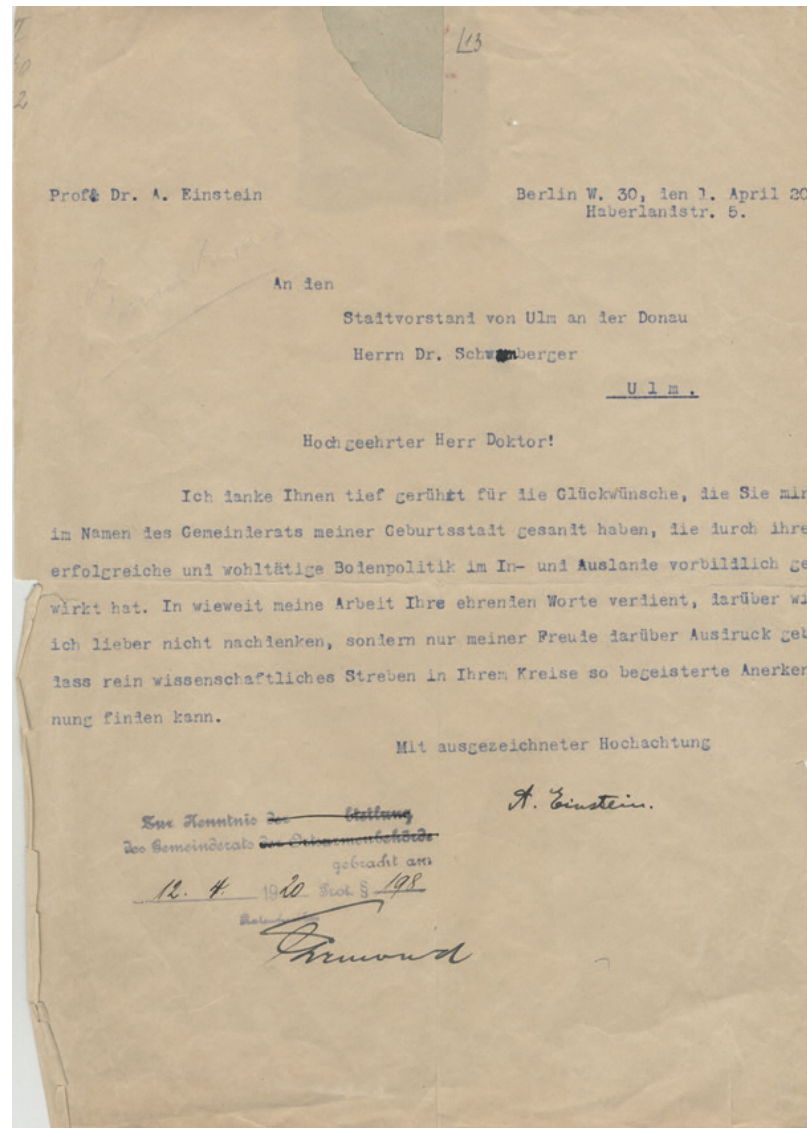
02

Ulm and Albert Einstein –
Albert Einstein and Ulm

You could describe Albert Einstein's relationship with Ulm as reserved but polite. Which is not very surprising: as is well known, Einstein only lived here for 15 months and had no memory of his time in Ulm. Reserved too, because he generally did not make much of worldly honours. When Ulm sent him the "Felicitations of the City" in 1920 – two years before he was awarded the Nobel Prize – Einstein responded in a thank-you letter, praising Ulm's

*"successful and benevolent land policy", which is seen as
"exemplary nationally and internationally".*

So the first interaction between the city and its most famous son "did not go badly".



Sehr geehrter Herr Oberbürgermeister!

Besten Dank für die freundlichen Glückwünsche meiner Geburtsstadt Ulm. Dass diese ein bisschen spät gekommen sind, schadet wahrlich nichts, denn die fünfzig Jahre sind, wie ich Ihnen versichern kann, seitdem nicht fortgelaufen. Von der nach mir benannten Strasse habe ich schon gehört. Mein tröstlicher Gedanke war, dass ich ja nicht für das verantwortlich sei, was darin geschieht.-

Mit ausgezeichnetener Hochachtung

A. Einstein.

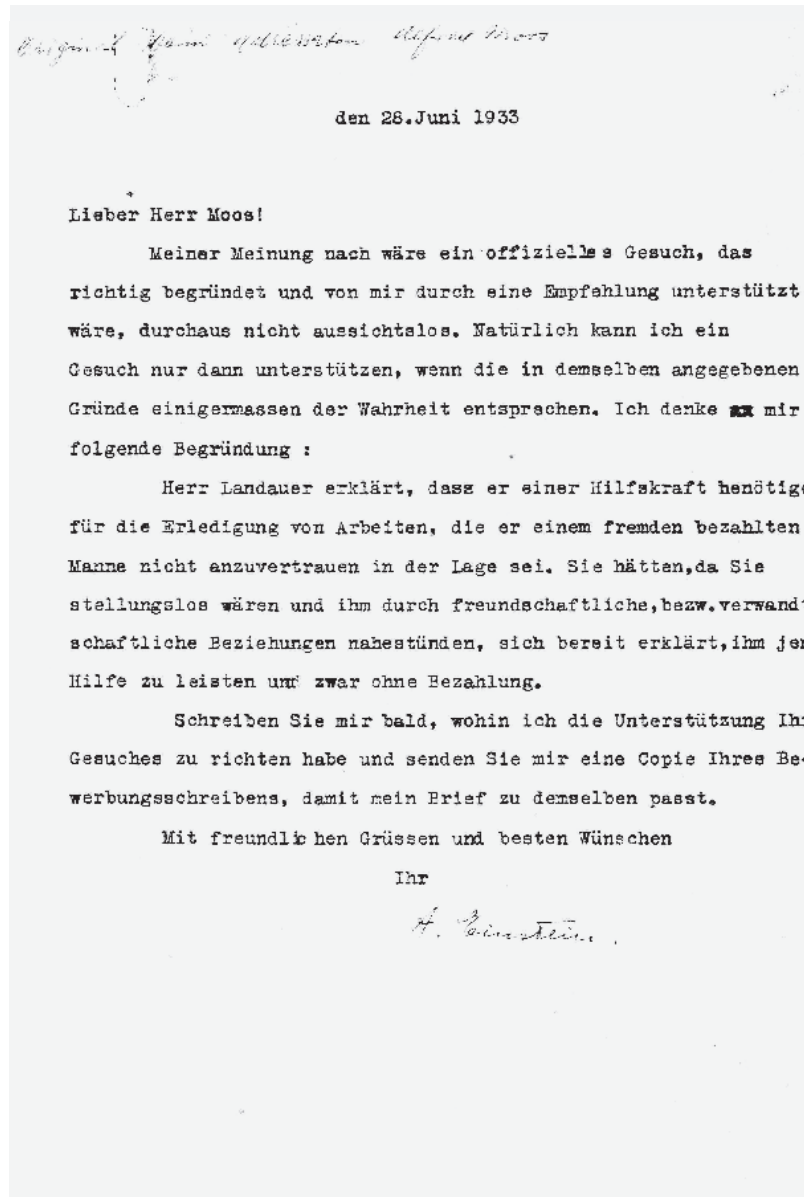
The Nobel Prize winner also reacted well and with characteristic humour when Ulm wrote on the occasion of his 50th birthday, informing him that one of Ulm's streets had been named after him:

"I have already heard about the street named after me. My consoling thought is that I'm not responsible for what happens in it".

Nazi seizure of power in 1933 – everything changes

This polite, if rather superficial interaction, came to an abrupt end in 1933. The National Socialists seized power in Germany. The Jewish Albert Einstein had already warned of these fascistic leanings and chose not to return from a lecture tour of the USA, where he had been teaching at Princeton for three months a year since 1930. He published the following declaration in March 1933:

“As long as I have the opportunity, I will only reside in a country ruled by political freedom, tolerance and equality of all citizens before the law. Political freedom means the freedom to express political opinion in spoken and written words. Tolerance means respecting all forms of an individual's opinion. These conditions are not met in Germany at present. People who have contributed a great deal to fostering international relations, some of them leading artists, are being persecuted there. Like every individual, the social organism can suffer from psychological illness, especially in difficult times. Nations tend to survive such an illness.”



I hope that healthy conditions will soon prevail in Germany and that great men like Kant and Goethe will not only be celebrated from time to time, but that the principles they taught will also find their way into public life and public consciousness".

The Nazi rulers in Ulm reacted: Einsteinstraße was renamed "Fichtestraße" the very same month. Albert Einstein was stripped of his German citizenship the following year.

While the conflict between Einstein and his birthplace was more or less restricted to political issues at first, the problems faced by the Jews in Germany became more existential over the next few years. The boycott of Jewish businesses began in 1933, followed by the "Nuremberg Laws" (race laws) in 1935 and the "Kristallnacht" pogrom night in 1938. The unimaginable horror to which these developments would ultimately lead, the Holocaust, was not apparent to all those affected at the time, however. And yet, a large number of Einstein's relatives in Ulm did turn to him in the years preceding the outbreak of World War II asking for help. Einstein did what he could,

Knollwood
Saratoga Lake N.Y.
den 5. Juli 1940

Lieber Carl:

Gegenwärtig soll man niemand zur Abreise aus Deutschland ermutigen, besonders wenn es sich um illegale Einwanderung nach Palästina handelt. Erstens nämlich wird man unterwegs abgefangen, zweitens sind die Grenzen Palästinas hermetisch verschlossen. Seit der Abendung des Briefes von Alfred Mose haben sich ja die Verhältnisse soart verändert, dass dem Inhalt des Briefes kein Gewicht beizulegen ist. Es muss auch in Betracht gezogen werden, dass Palästina gegenwärtig mehr bedroht ist als Deutschland, ja selbst palästinensische Juden mehr bedroht sind als deutsche Juden in Deutschland. Man muss jetzt die Entwicklung der Dinge abwarten. Sollte sich die Situation so verändern, dass Abwanderung nach Palästina möglich und ratsam ist, kann Dein Bruder auf meine Hilfe rechnen. - Teile dies alles vorsichtig Alfred Mose mit, vorsichtig d.h. so, dass es die englische Zensur vermutlich passieren wird.

Ich freue mich, dass Ihr einigermassen hier habt Duns fassen können. In dem ich der Hoffnung Ausdruck gebe, dass wenigstens Amerika die schwere Gefahr wird abwenden können, grüsst Euch freundlich

Euer

A. Einstein

supplying immigration sponsorships and letters of recommendation, which helped many family members to leave Germany safely before the catastrophe began. For Lina Einstein, Bertha Hofheimer, Marie Wessel, Hugo Moos and Julius Moos – all cousins of Albert Einstein – there was no salvation, however. They were murdered by the Nazis.

The post-war period – attempted reapprochement

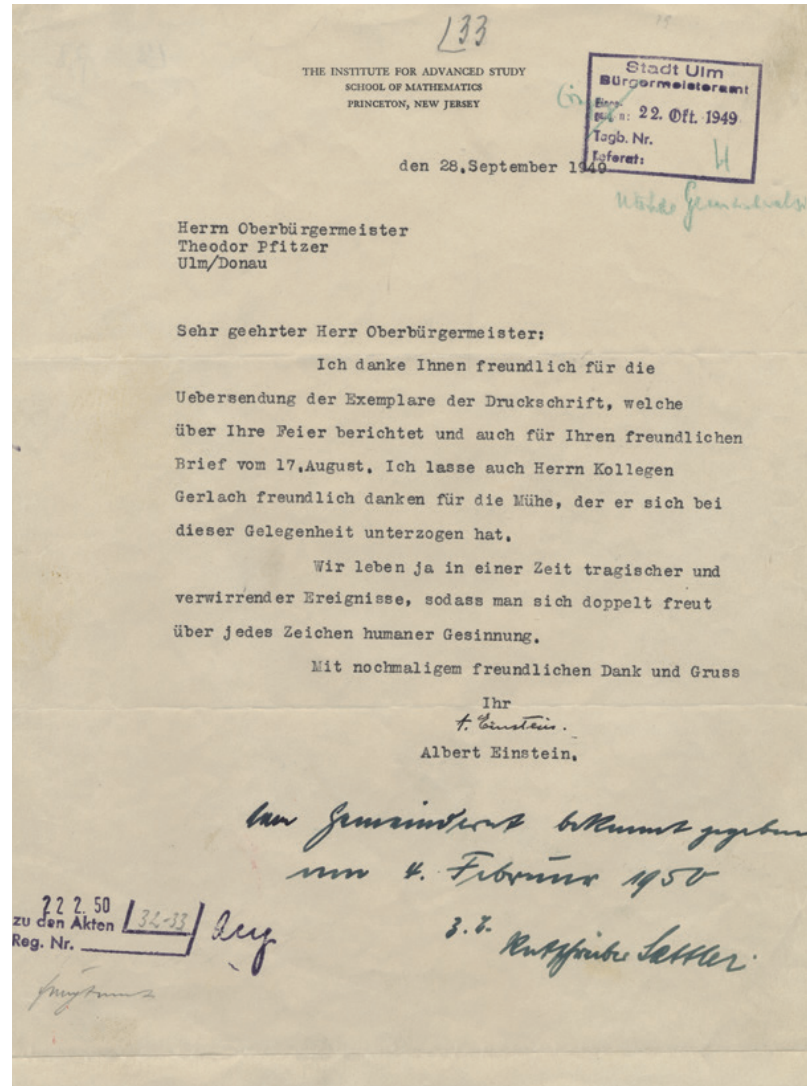
The streets were renamed shortly after the end of the War, in July 1945, in an attempt to erase the legacy of National Socialism from the city. Fichtestraße once more became Einsteinstraße. Einstein is said to have heard of this a year later, remarking in jest: “They should pick a neutral name like “weather vane street” – that would better suit the political nature of the Germans and would not need to be changed over the course of time”.

Ulm’s city governments made repeated attempts to improve relations with Albert Einstein over the following years. Was this to compensate for guilt? Perhaps a subconscious desire for absolution? Or was it an honest attempt finally to do the right thing again after 12 years of incomprehensible crimes? It was probably a combination of all these conceivable reasons. From today’s perspective it may seem surprising that Einstein was willing to resume communication with the city so soon after the Holocaust. But he did. He always responded to the birthday wishes the city sent each year. He did refuse to accept honorary citizenship though, referring to the crimes committed by the Nazis against his fellow Jews. However, he did this in a personal, confidential letter to the Lord Mayor, sparing Ulm’s leaders a public rebuke.

When he wrote to thank the then Lord Mayor Theodor Pfizer for sending him a brochure about the city's celebrations for his 70th birthday, he struck a tentatively conciliatory tone:

"We are living in a time of tragic and bewildering events, which makes it twice as nice to see any sign of human kindness".

It is also true that Einstein never returned to Ulm though. It is not hard to understand why.





Far left: the EinsteinHaus, home to the Ulmer Volkshochschule (adult education centre).
Left: the memorial designed by Max Bill.
Below: the Einstein fountain at the Zeughaus.

Today – Einstein's traces in Ulm

Ulm has not forgotten Albert Einstein. Public buildings, memorials and pieces of art tell his story at multiple locations around the city.

The EinsteinHaus, for example – home to the Ulmer Volkshochschule (adult education centre). Einstein's advocacy for individual independence and world peace, his humanity and scientific achievements exemplify the spirit of the education centre. There has been an exhibition on the first floor with pictures depicting Einstein's life since the Einstein Haus opened in 1968.

Max Bill – founding director of the Ulm School of Design (HfG) – also worked to preserve the memory of the great physicist. The monument he designed can be found close to the house in which Einstein was born. The twelve vertical stones symbolise the hours of daytime, while the twelve horizontal stones represent the hours of the night.



Other memorials to Einstein in Ulm include the fountain at the Zeughaus (armoury), the Einstein sparrow and the stained glass window in the Minster.

But is the picture complete? Is it enough for someone of such historical importance as Albert Einstein? Ulm has actually found it difficult to do justice to its most famous son. But is that surprising? How are we to honour the legacy of a significant figure of contemporary history without running the risk of glorifying ourselves?

We always talk about “only” 15 months that the brilliant physicist spent in Ulm. To what extent is Albert Einstein from Ulm?

People in Bern, where Einstein once worked, have had to ask themselves similar questions. Likewise the people in charge of Princeton University, where he taught, and those of Hebrew University in Jerusalem, who administer his estate. They have all found an answer in their own way. And Ulm will find this answer too. Perhaps with an Albert Einstein exhibition in the “Engländer” house, where Einstein’s grandmother Helene lived.

Whatever the answer turns out to be: the legacy of the man who explained the relationship between space and time is not tied to a specific place or city! His legacy is found in people’s minds.

And yet Ulm has an obligation. This is where he was born. This is where his family lived. We must tell his story. So that many generations to come after us may appreciate it. In Ulm – the place where it all began on 14th March 1879.



The house where Albert Einstein was born, formerly Bahnhofstraße 20. It was severely damaged during World War II and is no longer here.

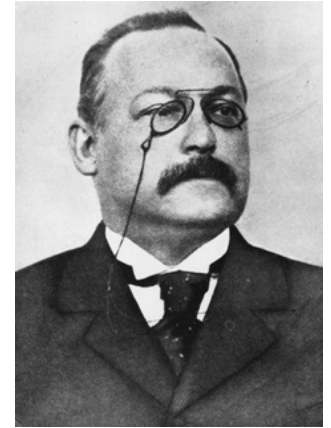


03

The Einstein family in Ulm –
respected members of
civil society

The far-flung Einstein family originally came from Kappel and Buchau, where the grandparents of the famous physicist lived. Married couple Abraham and Helene Einstein had six children in Buchau between 1841 and 1855: August Ignaz, Jette, Heinrich, Hermann, Jakob and Friederike. After her wedding to Kosman Dreyfuss, Jette was the first member of the Einstein family to move to Ulm in 1864. She was soon followed by her parents and most of her siblings, including Hermann Einstein. At least from the time of his marriage to Pauline Koch, a native of Cannstatt, he worked as a trader in the Israel und Levi bedspring business at Weinhof 19. The individual family members quickly established contacts in their new home town and involved themselves in its society. When the Jewish community donated the figure of Jeremiah for the Protestant church on the 500th anniversary of the laying of the Minster's foundation stone in 1877, Hermann Einstein, August Einstein and his brother-in-law Kosman Dreyfuss were all involved in the fund-raising campaign. Kosman Dreyfuss was even on the committee specially appointed for the purpose. The Einstein family in Ulm was connected by marriage to the families of Dreyfuss, Hofheimer, Wessel, Steiner, Hirsch and Moos.

Albert Einstein, the first child of Hermann and Pauline Einstein, was born at Bahnhofstraße 20 on 14th March 1879. The young family left Ulm in 1880 for Munich, where their daughter Maja was born the following year. Albert Einstein's Ulm chapter came to an end at this point except for visits to relatives and his cor-



The parents Pauline and Hermann Einstein. Albert Einstein can be seen on the left with his younger sister Maja.

respondence with the city. Not so for the numerous relatives of the subsequent Nobel Prize winner, as at least four of his aunts and uncles lived here and 18 of his cousins were born in Ulm. The vast majority of them grew up in Ulm and spent their adult lives in the city. Kosman Dreyfuss, the husband of Albert Einstein's aunt Jette, was appointed the president of the Israelite Board of Elders (Israelitisches Vorsteheramt) just a few years after his arrival in Ulm. He was also given the honour of accepting the keys to the Synagogue from the builders. The family of Adolph and Friederike Moos were also respected citizens of the city. Lina Einstein, one of the three daughters of the couple August and Bertha Einstein, had a difficult lot. Her parents and her two sisters passed away in the space of just a few years. Lina Einstein remained unmarried and was in receipt of welfare from the Jewish community from 1933 onwards. Following a failed attempt to emigrate, she was deported to Theresienstadt on 22nd August 1942 and then to Treblinka, where she was murdered in a gas chamber immediately after her arrival.



The "Engländer" at Weinhof 19. Albert Einstein's father worked here as a dealer in the Israel & Levi bedspring business.

Lina Einstein is commemorated with a Stolperstein on Marktplatz.

den 23. Oktober 1941

Lieber Vetter:

Unter den obwaltenden Umständen sehe ich leider keine Möglichkeit, die Reisen aus Deutschland heraus zu bekommen. Es ist oben zu lange gewartet worden.

Es freut mich außerordentlich, dass Ihr alle in Lande Pass gefasst habt. Ich weiss, dass es im Anfang hart ist, aber keinen verlorst es nach Europa zurück, der ein paar Jahr dagewesen ist.

Mit freundlichen Grüßen und Wünschen

Dein

Albert

Albert Einstein personally tried to help his relatives during this period of persecution and wrote numerous letters of recommendation. Many family members managed to leave Germany thanks to such "Affidavits of Support" or by other means. For Lina Einstein, Bertha Hofheimer, Marie Wessel, Hugo Moos and Julius Moos – all cousins of Albert Einstein – there was no salvation, however. Albert Einstein had left Germany in 1933 and remained in the United States following a lecture tour. By 20th March 1933, the street in Ulm named after him had already been renamed Fichtestraße. He was stripped of his German citizenship shortly after this.

Alfred Moos extends the hand of reconciliation

Just one Jew returned voluntarily to Ulm after the Second World War ended: Alfred Moos, the great-nephew of Albert Einstein. Moos had been politically active in his youth, initially joining the SPD as a law student. He later moved to the communist "Red Student Group". Moos had already left Germany by 1933 with Albert Einstein's assistance. He moved to London at first, before emigrating to Palestine.

Why did he return to Ulm in 1953? In describing his motives he said: "I have never lost my belief in a better and fairer world of peace. A desire for atonement and reconciliation has brought me back to Ulm". The city honoured his lifelong work for peace and freedom by granting him the Citizen's Medal in 1988. And in 2007, ten years after his death, a street was named after Moos. Alfred-Moos-Weg runs through the Alter Friedhof cemetery, past the old Jewish cemetery and leads to Friedensstraße ("peace street"). It is hard to imagine a more fitting memorial to his life's work.

Alfred Moos at a demonstration in 1982.



Traces of Einstein in Ulm



1
Einstein Monument
Bahnhofstraße 20

A red granite memorial now stands on the site of the house where Albert Einstein was born, which was destroyed during the Second World War. Artist Max Bill's design uses 24 rectangular stones. Twelve of them represent the hours of the day, while the other twelve represent the hours of the night. They are intended to symbolise time. They are arranged to resemble a house. The monument is currently under wraps to protect it during building work.

2
Einsteinhaus with
photo exhibition
Kornhausplatz 5

The building of the Ulmer Volkshochschule (adult education centre) bears the famous physicist's name. A photo exhibition on the first floor depicts moments from his life. It is free to enter during the building's opening hours:
Monday to Friday
from 8am to 10pm,
Saturday
from 8am to 6pm,
Sunday closed.

3
Einstein Fountain
Am Zeughaus

The bronze fountain designed by sculptor Jürgen Goertz comprises three elements: The base of a rocket serves as a pedestal, representing technology, the conquest of space and the nuclear threat. In contrast, the snail shell above symbolises nature, wisdom and wariness of human technology. Einstein's head pops out of the shell with mischievous eyes and a cheeky stuck-out tongue.

4
Engländer
Weinhof 19

Albert Einstein's father Hermann was the co-owner and manager of a bedspring business in the "Engländer" house. Einstein's grandmother Helene lived on the 1st floor until 1880. The house is known as the "Engländer" to this day, because it used to be home to the "zum König von England" hostel.

5
Stained glass window
in the Minster
Münsterplatz

Einstein is shown along with four other major scientists on the "Window of Promise" in Ulm Minster: Copernicus, Kepler, Galileo and Newton. His famous formula $E=mc^2$ is also part of the design. The Jeremiah Statue was donated in 1877 by the Jewish community to commemorate the 500th anniversary of the laying of the foundation stone. The Einstein family, including Einstein's father, also participated in the fund raising.

6
Memorial for Ulm's
murdered jews
Weinhof 2

The memorial in front of the New Synagogue was designed by sculptor Michael Croissant. The outline of the column forms a Star of David. 141 names are engraved on the stone slab at the base – they are the names of Ulm's Holocaust victims, including Einstein's cousins Lina Einstein, Marie Wessel and Hugo Moos. A service is held at the memorial every year on 9th November.

7
Stolperstein for
Lina Einstein
Marktplatz 14

Lina was Albert Einstein's cousin and lived on Herdbruckerstraße in Ulm. Einstein was very fond of her. When the situation became increasingly dangerous for Jews under the Nazi regime, Einstein, who was in the USA, tried to get Lina an exit visa. He did not succeed. In 1942 Lina was taken to the Treblinka extermination camp and murdered there. Her stolperstein reminds us of this horror.

Biography

1879

Albert Einstein was born on 14th March in Ulm, the son of a Jewish businessman.

1880

The family moves to Munich where he later attends the Luitpold Gymnasium.

1894

The 15-year-old Einstein leaves Germany without any school-leaving qualifications, and travels to join his parents in Milan.

1896

Einstein completes his secondary school diploma in Aarau, Switzerland, and begins to study mathematics and physics in Zürich.

1901

Einstein acquires Swiss citizenship.

1902

Through the mediation of a friend, Einstein finds a job at the Swiss Patent Office in Bern, where he works the next seven years as an assistant examiner. Parallel to this, he graduates.

1903

Einstein marries his former fellow student, Mileva Maric, and together they have three children

1905

In his annus mirabilis ("miracle year"), the 26-year-old finishes his dissertation and publishes three further groundbreaking pieces of work: the explanation of the photoelectric effect (for which he would later receive the Nobel Prize), the Special Theory of Relativity including the well-known equation $E=mc^2$, and explanation of the Brownian motion.

1908

Post-doctorate at the University of Bern.

1913

At the instigation of several well-known physicists, Einstein is invited to work in Berlin where, freed from any teaching obligations, he can devote his time to research activities. He takes up the post in 1914.

1915

Einstein completes the General Theory of Relativity. As a co-signatory to the "Manifesto to the Europeans", he is in favour of the preservation of the European culture.

1917

Director of the newly-founded Kaiser Wilhelm Institute for Physics in Berlin.

1919

Einstein divorces Mileva. The solar eclipse on 29th May impressively confirms the prediction of the General Theory of Relativity which states that gravity curves space and thus deflects light. Einstein becomes famous overnight. Marries his cousin, Elsa Lowenthal Einstein.

1921

Albert Einstein receives the Nobel Prize for Physics for the discovery of the »Law of the Photoelectric Effect« – not for the Theory of Relativity.

1933

The National Socialists take power. Einstein hands in his German passport, and never again sets foot on German soil.

1939

Einstein co-signs a letter to President Franklin D. Roosevelt in order to draw his attention to the possibility of a nuclear threat. However, he did not participate in the development of the atomic bomb.

1955

Albert Einstein dies in Princeton.

"Problems can never be solved with the same way of thinking in which they were created."

Albert Einstein

"Through Albert Einstein's work, the horizon of mankind has been immeasurably widened, at the same time as our world picture has attained, through Einstein's work, a unity and harmony never dreamed of before."

Niels Bohr
Nobel Prize in Physics

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