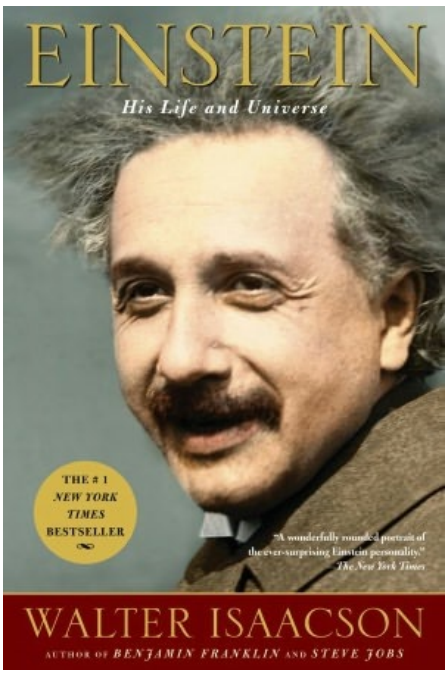

Einstein: His Life and Universe

Walter Isaacson

Einstein: His Life and Universe

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Einstein: His Life and Universe Walter Isaacson
Einstein was a rebel and nonconformist from boyhood days, and these character traits drove both his life and his science. In this narrative, Walter Isaacson explains how his mind worked and the mysteries of the universe that he discovered.

Einstein: His Life and Universe Details

Date	:	Published April 10th 2007 by Simon Schuster
ISBN	:	9780743264730
Author	:	Walter Isaacson
Format	:	Hardcover 551 pages
Genre	:	Biography, Nonfiction, Science, History, Physics

From Reader Review Einstein: His Life and Universe for online ebook

Brendon Schrodinger says

So I 've had a love/hate with Einstein for a few years now. I recognised the great work that he did regarding General and Special Relativity, the Photoelectric Effect and Brownian Motion - brilliant stuff.

But why does Einstein get wheeled out for every portrayal of a great scientist? Why does everyone feel the need to quote the guy regarding religion, education, happiness, sociology....everything? This really annoyed me - and I guess it still does.

In an education lecture a few weeks ago the lecturer gave an Einstein quote on learning. And it immediately got my hackles up. Did Einstein even teach? I guess as an academic he must have taught someone. And I had to look it up. It seems his undergrad degree was in physics and education. Ok, maybe an education quote might be legit from this guy.

So this prompted my to pull this volume from my to-read bookshelf (might be bigger than this, shhhhh) and open it up. And damn did I learn a lot about the details of his life. The book was for most part engaging and fascinating. It helped fill in a lot of details on what I already knew about the events in physics and chemistry from the late 19th to mid 20th century.

Non-science people: I found this very accessible - not too much jargon at all. But the wonderful Diane said there was a bit of ultra-tough physics in here, however nothing you couldn't skip.

So, how do I stand on Einstein quotes now? Well I'm more open to appropriate ones. The guy was very intelligent in matters of physics and math. So make it rain with equations and thought experiments.
Teaching quotes: although he did undergrad education, he was later renowned for being a shit boring teacher. No- fail on the education front.
Any other quotes: although he was intelligent in other subjects, he was no genius in them. Quit it with the psychology, sociology quotes.

Actually, the guy spent most of his life trying to refute quantum mechanics. And look at it now. God plays so much dice that Las Vegas is embarrassed.

Alyazi says

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brian says

here's a letter a young einstein wrote to his pal.
the 1st paragraph: more waugh than egghead, eh?
and that 2nd paragraph?
those 'papers'?
"a modification of the theory of space and time"?
holy shit.

Dear Habicht,

Such a solemn air of silence has descended between us that I almost feel as if I am committing a sacrilege when I break it now with some inconsequential babble. So, what are you up to, you frozen whale, you smoked, dried, canned piece of soul? Why have you still not sent me your dissertation? Don't you know that I am one of the 1.5 fellows who would read it with interest and pleasure, you wretched man? I promise you four papers in return.

The first deals with radiation and the energy properties of light and is very revolutionary, as you will see if you send me your work first. The second paper is a determination of the true sizes of atoms. The third proves that bodies on the order of magnitude 1/1000 mm, suspended in liquids, must already perform an observable random motion that is produced by thermal motion. The fourth paper is only a rough draft at this point, and is an electrodynamics of moving bodies which employs a modification of the theory of space and time.

and later in life he wrote this gorgeousness:

The most beautiful emotion we can experience is the mysterious. It is the fundamental emotion that

stands at the cradle of all true art and science. He to whom this emotion is a stranger, who can no longer wonder and stand rapt in awe, is as good as dead, a snuffed-out candle. To sense that behind anything that can be experienced there is something that our minds cannot grasp, whose beauty and sublimity reaches us only indirectly: this is religiousness. In this sense, and in this sense only, I am a devoutly religious man.

just for fun, let's compare/contrast with:

I very seriously doubt that Einstein himself really knows what he is driving at. The outcome of this doubt and befogged speculation about time and space is a cloak beneath which hides the ghastly apparition of atheism. - Cardinal William Henry O'Connell

and later, witnessing the rise of hitler, albert shot off this email to FDR:

Hey Frank,

c-squared ya dipshit, c-squared!
That's a whole lotta motherfuckin' bango django.
so we should figure out how to bake that cake
before the other guys do and blow out our candles, yo!

Love
Bertie

the last one, not really.
but it's a close approximation.

Laurel says

I decided to read this book primarily because of my fiance's interest in Einstein's life and theories. I thought it might help me to actually have a somewhat intelligent reply on the rare occasion he starts talking physics (don't tell him I said so, but he is much smarter than I am). :)

I felt a bit daunted by the length of it at first (700 pages, or 22 hours on 18 CDs), but the book is engrossing from the start. The periodic and quite detailed descriptions of Einstein's theories and research were a bit (okay, maybe way) over my head at times, but that didn't in any way damper my enjoyment of the book. When I did understand the physics, I found it all rather fascinating. I especially enjoyed learning the details of Einstein's life, relationships, struggles and philosophies. In fact, much to my surprise, there were times I had trouble putting this book down. Isaacson creates a vivid and engaging portrait of who Einstein was as a whole -- both the brilliant and the quirky -- and gives us a wonderful glimpse into how this man's amazing mind led to some of the most incredible scientific discoveries in history. Very well-written and meticulously researched.

Bonnie says

My brother-in-law recommended this biography in 2007. It is one of the most incredible books I've read in a long time. There are eleven pages of sources alone! This book is meticulously researched, beautifully written, fascinating, inspiring, and wonderful on every level. It's 551 pages long, and I so did not want this book to end!

Isaacson immerses us in a detailed, in depth probing of Einstein's life – personal, intellectual, scientific, political, and cultural - against a backdrop of the history of the time – 1879-1955. Extensive quotations from Einstein's correspondence, essays, and personal papers lend the richness of authenticity. Explanations of scientific theories are clear and restated many, many times in different ways. They seem comprehensible as one reads them, though I would be hard-pressed to explain any of Einstein's "thought experiments," theories, or the revolutionary nature of theoretical physics in my own words now.

Einstein believed deeply in intellectual freedom and he was a nonconformist first and foremost.

The author's words speak for themselves:

"For the remaining ten years of his life, his passion for advocating a unified governing structure for the globe would rival that for finding a unified field theory that could govern all the forces of nature. Although distinct in most ways, both quests reflected his instincts for transcendent order. In addition, both would display Einstein's willingness to be a nonconformist, to be serenely secure in challenging prevailing attitudes." (p. 488)

"Admittedly, he was a somewhat contrarian citizen. But in that regard he was in the tradition of some venerable strands in the fabric of American character: fiercely protective of individual liberties, often cranky about government interference, distrustful of great concentrations of wealth, and a believer in the idealistic internationalism that gained favor among American intellectuals after both of the great wars of twentieth century." (p. 506)

I feel as if I should re-read this book in order to copy down the many brilliant quotes from Albert Einstein's letters and talks.

In a letter to his son, Eduard, in 1930 he wrote, "Life is like riding a bicycle. To keep your balance you must keep moving." I LOVE that!

Advice offered to his step-daughters in 1922 on how to live a moral life: "Use for yourself little, but give to others much." (p. 393)

In response to an interviewer's question about how Einstein got his ideas he said, "I'm enough of an artist to draw freely on my imagination. Imagination is more important than knowledge. Knowledge is limited. Imagination encircles the world." (p. 387)

When asked if he believed in immortality he stated, "No. And one life is enough for me." (p. 387) !

From his credo "What I Believe" written in 1930:

"….The most beautiful emotion we can experience is the mysterious. It is the fundamental emotion that stands at the cradle of all true art and science. He to whom this emotion is a stranger, who can no longer wonder and stand rapt in awe, is as good as dead, a snuffed-out candle. To sense that behind anything that can be experienced there is something that our minds cannot grasp, whose beauty and sublimity reaches us only indirectly: this is religiousness. In this sense, and in this sense only, I am a devoutly religious man." (p. 387)

Read this book and fall in love with this extraordinarily inspiring mensch!

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Jason Koivu says

Einstein: His Life and Universe is but a mere pinch of Einstein's theories mixed in with a modest helping of his life. The brevity was too my taste as I was only in the mood for a tiny taste of Einstein bio. Too much of the genuis' theory is liable to give me brain-freeze, so this was perfect. And done just the way I like it, tight and to the point.

Jamie says

A while back I had tried to read Walter Isaacson's biography on Benjamin Franklin, but just couldn't get through it because the author mired everything down in pointless details. Despite that, I decided to give his more recent book about famed theoretical physicist Albert Einstein a try. If it turned out to be boring, I'd just drop it. Turned out, I loved it.

What I loved about Isaacon's book here is the way it delicately balances three aspects: the life of Einstein from a strictly biographical angle, the examination of his scientific works like special and general relativity, and the discussion of how Einstein impacted and viewed the scientific zeitgeist of the early 20th century -- particularly within the field of physics. I could see how someone setting out to write this book might want to focus on just one or two of these facets, but that would really be missing a huge opportunity. Each member of this trio of topics interacts with each other, and Isaacson finds ways to discuss two or more of them within the same passage. We get interesting little tidbits about Einstein's personal life and character, but we see how those things impacted the way he pursued his scientific work and thinking, and how that body of work turn defined (or, later, ran counter to) the entire field of physics. Seeing how all these pieces intersected and linked was fascinating.

It's all pretty well written, too. We get neat little anecdotes about Einstein like how contrary to popular belief he never failed math, or how he married his cousin, had four citizenships, or how --SPOILER ALERT-- the coroner who performed his autopsy stole his fricking brain and kept it in a jar for years while periodically giving out pieces of it to friends. I'll admit that when Isaacson would go off on a lecture about special or general relativity my eyes would glaze over while trying to follow his discussion of say four-sided triangles in non-Euclidean space or whatever, but at least some of the time it was written at a level I could follow, at least conceptually. Enough to understand the impact it had on the field, at least until Einstein's own theories were supplanted by quantum theory. If I have any criticism of the book, it's that while Isaacson does an admirable job of placing Einstein's achievements within the context of scientific discoveries at that time, what he fails to do is give us much perspective on how much --if anything-- the modern science of today owes to Einstein and his theories. What did Einstein get wrong, and what parts of his theories have been

crowded out by the inevitable march of scientific progress? Dunno. Didn't say.

All in all, though, I found the book fascinating and would recommend it. I think I may go back and give the Ben Franklin book another shot.

Chrissie says

The book wasn’t amazing, but the man certainly was. Don’t get me wrong; I really liked the book, and it is one I would recommend to all those readers who want to meet an intelligent, wonderful, honest, humble person. I am not calling him great for what he did for science, but for the kind of person he was. He will appeal to those of you who like non-conformists, people with imagination and curiosity. He is one of those few adults who manage to keep alive a child’s delight in the world around them.

Now there is a lot of physics in this book, and there are sections that went over my head. This annoyed me. Although it is not a criticism of the author, but rather a criticism of myself, IF the author had managed to make clear for me more of the scientific theories, I would have to call the book amazing. General and special relativity, gravitation and quantum mechanics they do all belong in this book, they should not be removed. I understand more than when I began, but I have far to go. Einstein saw and figured out his answers to the questions he was trying to solve through “thought experiments“. He would imagine a physical happening in his head, be it an elevator in free-fall or a bug crawling around a branch, and he would ask himself what would happen and how does the bug see the world around him. These thought experiments are Einstein’s, not the author's, and they are the easiest way to understand the laws of physics which Einstein discovered.

Others criticize how Einstein treated his family. He was who he was, and I don’t see him as worse than anybody else. He did love his family. All people do not express love in the same way.

Is there humor in the book? Yes, mostly in some of the things Einstein said.

You get history too. McCarthyism and Stalinism and Nazism. What role did he play? What was his role exactly in the development of atomic weapons, and more importantly how did he see the world afterwards. He thought there should be a world organization that controlled all atomic weapons. Was he naïve? Could this have ever worked? All of this is discussed.

Religion is discussed too. According to Einstein, it is the absence of miracles that proves the existence of divine providence. It is the laws of nature that so magnificently explain the world around us and that inspire awe. His belief in science was very close to his religiosity. They are one and the same thing.

Einstein in a nutshell: creativity and imagination and curiosity require non-conformity which requires the nurturing of free minds which requires tolerance and finally humility. Einstein was a kind, unpretentious, humble man. I really, really liked this book. I wish I could speak with Einstein himself. Even though he was great he would have talked to me. He was never showy or saw himself as the extraordinary person that he was.

Another interesting question: was he in his soul German or Swiss or American? I mean, in spirit. Or was he a citizen of the world?

I listened to the audiobook narrated by Edward Herrmann. The narration was clear and at a perfect speed. The science sections were hard. For those of you who are reading this to better understand physics, maybe it is better to read the paper book, where it is easier to stop and THINK! Oh, I forgot to say this – when Einstein got the Nobel Prize, which by the way was not for relativity, he explained his scientific theories over and over. When asked if others understood, most admitted they didn't. This made me feel a lot better when I found myself becoming confused. I read the book to meet the man, and I really enjoyed it.

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Lee says

You'll know Albert like your own grandfather after reading this. This book covers the complete life of Albert Einstein, from his childhood (he never did fail a math test) and early attraction to science and math to his love life, his children, his education, his employment, his many great theories and discoveries, his relationship with all of his famous peers, his rise to public fame, his sincere beliefs in freedom from oppression, 2 world wars, his role with the bomb, and his life in the US. And through it all is modest, humble private life. Einstein: His Life and Universe by Walter Isaacson

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Ahmad Sharabiani says

Einstein : his life and universe, Walter Isaacson
How did Einstein's mind work? What made him a genius? Isaacson's biography shows how his scientific imagination sprang from the rebellious nature of his personality. ...
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E = mc2
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Michael Finocchiaro says

On the suggestion of my friend Al, I acquired and recently finished the recent Einstein biography by Walter Isaacson. He also wrote one on Franklin which I will read soon as well. As for the Einstein biography, it is about 550 pages long follow by 90 pages of footnotes and references and 50 pages of index. It covers his life and attempts to explain some of his theories. I found that the first half about his childhood and momentous discoveries in 1905 was exciting. I hadn't realized that most of his most critical insights came within months of each other and several years before they could be fully understood or exploited. The photoelectric effect (proving the existence of atoms) Brownian motion, special relativity, and the equivalence of matter and energy were all there. It took him another 10 years to get from the special theory to the general theory of relativity. Interesting to note as well was the innate marketing in Einstein to simplify formulas to their more palatable essence: the five symbols in E=mc2 being so incredibly benign looking but in fact harboring atom-shattering power. Isaacson often takes time to demonstrate how Einstein was constantly in wonder at the universe around him and convinced that there was some relatively simple rules hiding there waiting to be discovered by some distant omniscient deity. His further quest for general relatively was similarly passionate reading particularly in the race with a Swedish mathematician David Hildbert to find the final formula. It is a bit harder to remember and understand than the special theory but contains the famous cosmological constant that bugged him ever after.

The book kind of slows down and loses a little focus after this initial rush. It drifts from Eintein's Zionism, to his peace activism, events in his personal life, his emigration to the US, etc. The author organized the books on common themes rather than using a chronological account. I am more a fan of the latter (such as the 2-volume Faulkner biography by Blotner that remains my favorite) so this one left me a little wanting. As for the math, I would have appreciated a few more details on Einstein's derivations and so forth but perhaps that's just the nerd in me. I'll need to get Hawking's "On the Shoulders Of Giants" for that approach I think.

Overall, it is an interesting introduction to Einstein's life and highly readable. Certainly not the best biography I ever read but not the worst either.

Diane says

One of my favorite picture books that I saved from childhood is called *Albert Einstein* by Ibi Lepscky. It's the story of Albert as a child, showing him as quiet and absentminded, and preferring to play the violin rather than roughhouse with other boys in the neighborhood. It also tells the story of when Albert had a fever and had to stay in bed, his father gave him a compass. Albert became fascinated by the needle and asked so many thoughtful questions about the magnetic fields and the poles of the earth that his father, who could not answer them all, realized how smart his son was.

"Albert was indeed a child different from all others. His gaze, which everyone thought to be absentminded, really reflected a very busy mind, a mind that was exploring places where nobody else could follow. It was the mind of a genius."

My mother, who was a mathematics professor and who was quite smart herself, gave me this book and frequently read it with me. It inspired in me a deep awe for Albert Einstein, one that has carried through to

adulthood.

Walter Isaacson seems to have the same reverence for Einstein — there is an underlying fondness and admiration in this biography. "His tale encompasses the vast sweep of modern science, from the infinitesimal to the infinite, from the emission of photons to the expansion of the cosmos. A century after his great triumphs, we are still living in Einstein's universe ... His fingerprints are all over today's technologies. Photoelectric cells and lasers, nuclear power and fiber optics, space travel, and even semiconductors all trace back to his theories. He signed the letter to Franklin Roosevelt warning that it may be possible to build an atom bomb, and the letters of his famed equation relating energy to mass hover in our minds when we picture the resulting mushroom cloud."

At more than 600 pages, the book covers Einstein's entire life, with an emphasis on his "miracle year" of 1905, and his activities during both world wars. There isn't a lot about his childhood in Germany, but I was happy to see there was some truth in the story of his father bringing him a compass when he was sick in bed.

> He later recalled being so excited as he examined its mysterious powers that he trembled and grew cold. The fact that the magnetic needle behaved as if influenced by some hidden force field, rather than through the more familiar mechanical method involving touch or contact, produced a sense of wonder that motivated him throughout his life. "I can still remember that this experience made a deep and lasting impression on me ... Something deeply hidden had to be behind things."
>
> After being mesmerized by the compass needle's fealty to an unseen field, Einstein would develop a lifelong devotion to field theories as a way to describe nature.

Now before I wax too rhapsodic about this book, I need to warn my fellow readers that there is some serious physics-speak in here. I was listening to this on audio (read by the wonderful actor Edward Herrmann) and the chapters that discussed Einstein's scientific theories were difficult to follow. Fortunately, those confusing sections did not overwhelm the book, and there were plenty of interesting biographical details to share. Here are some of my favorites:

> "Among the many surprising things about the life of Albert Einstein was the trouble he had getting an academic job. Indeed, it would be an astonishing nine years after his graduation from the Zurich Polytechnic in 1900 — and four years after the miracle year in which he not only upended physics but also finally got a doctoral dissertation accepted — before he would be offered a job as a junior professor."
>
> Einstein and his first wife, Mileva Maric, had a daughter named Lieserl, who was born out of wedlock and was purportedly given up for adoption. "Einstein did not tell his mother, sister, or any of his friends about the birth of Lieserl. In fact, there is no indication that he *ever* told them about her. Never once did he publicly speak of her or acknowledge that she even existed. No mention of her survives in any correspondence, except for a few letters between Einstein and Maric, and these were suppressed and hidden until 1986, when scholars and the editors of his papers were completely surprised to learn of Lieserl's existence." [It is not known what happened to Lieserl.]

The old line that Einstein did his best work when he was working as a Swiss patent clerk is true. "He soon learned that he could work on the patent applications so quickly that it left time for him to sneak in his own scientific thinking during the day. 'I was able to do a full day's work in only two or three hours ... The remaining part of the day, I would work on my own ideas ... Whenever anybody would come by, I would cram my notes into my desk drawer and pretend to work on my office work.'"

"Einstein's 1905 burst of creativity was astonishing. He had devised a revolutionary quantum theory of light, helped prove the existence of atoms, explained Brownian motion, upended the concept of space and time, and produced what would become science's best known equation. But many people seemed not to notice at first. According to his sister, Einstein had hoped that his flurry of essays in a preeminent journal would lift him from the obscurity of a third-class patent examiner and provide some academic recognition, perhaps even an academic job. 'But he was bitterly disappointed,' she noted. 'Icy silence followed the publication.'" [He soon got his fame and recognition.]

With the outbreak of war, Einstein had become, for the first time, an outspoken public figure, advocating internationalism, European federalism, and resistance to militarism ... The chain reaction that pushed Europe into war in August 1914 inflamed the patriotic pride of the Prussians and, in an equal and opposite reaction, the visceral pacifism of Einstein, a man so gentle and averse to conflict that he even disliked playing chess. "Europe in its madness has now embarked on something incredibly preposterous ... At such times one sees to what deplorable breed of brutes we belong."

Throughout his life, Einstein would sometimes appear aloof toward his sons, especially Eduard, who suffered from increasingly severe mental illness as he grew older. But when they were young, he tended to be a good father. "When my mother was busy around the house, father would put aside his work and watch over us for hours, bouncing us on his knee," Hans Albert later recalled. "I remember he would tell us stories — and he often played the violin in an effort to keep us quiet."

Einstein's first marriage was an unhappy one, and to convince Mileva to divorce him, he promised her his money from the Nobel Prize, which he was convinced he would someday win. She finally agreed to a divorce settlement, and Einstein was awarded the Nobel in 1921.

Einstein's theory of relativity burst into the consciousness of a world that was weary of war and yearning for triumph of human transcendence. Almost a year to the day after the end of the brutal fighting, here was an announcement that the theory of a German Jew had been proven correct by an English Quaker [Arthur Eddington]. "Scientists belonging to two warring nations had collaborated again!" exulted the physicist Leopold Infeld. "It seemed the beginning of a new era."

Einstein's second wife was a cousin he had known since childhood, Elsa Einstein. He wrote her passionate letters, saying: "I have to have someone to love, otherwise life is miserable. And this someone is you."

The rise of German anti-Semitism after World War I produced a counterreaction in Einstein: it made him identify more strongly with his Jewish heritage and community ... Eventually, Einstein came around to the cause [of Zionism]. "I am, as a human being, an opponent of

nationalism," he declared. "But as a Jew, I am from today a supporter of the Zionist effort."

Einstein was visiting the United States when Hitler took power, and he realized he could not return to his home country. "Because of Hitler, I don't dare step on German soil."

What happened in Germany in 1933 was not just a brutality perpetrated by thuggish leaders and abetted by ignorant mobs. It was also, as Einstein described, "the utter failure of the so-called intellectual aristocracy." Einstein and other Jews were ousted from what had been among the world's greatest citadels of open-minded inquiry, and those who remained did little to resist.

Einstein eventually settled in Princeton, New Jersey, and would spend the rest of his life there. He was given a corner office in a university hall, and was asked what equipment he needed. "A desk or table, a chair, paper and pencils. Oh yes, and a large wastebasket, so I can throw away all my mistakes."

[At Princeton] Einstein soon acquired an image, which grew into a near legend but was nevertheless based on reality, of being a kindly and gentle professor, distracted at times but unfailingly sweet, who wandered about lost in thought, helped children with their homework, and rarely combed his hair or wore socks. "I have reached an age when, if someone tells me to wear socks, I don't have to," he told a neighbor.

Occasionally, he would take rambling walks on his own, which could be dicey. One day someone called the Institute and asked to speak to a particular dean. When his secretary said that the dean wasn't available, the caller hesitantly asked for Einstein's home address. That was not possible to give out, he was informed. The caller's voice then dropped to a whisper. "Please don't tell anybody," he said, "but I am Dr. Einstein, I'm on my way home, and I've forgotten where my house is."

When he first arrived in Princeton, Einstein had been impressed that America was, or could be, a land free of the rigid class hierarchies and servility in Europe. But what grew to impress him more — and what made him fundamentally such a good American but also a controversial one — was the country's tolerance of free thought, free speech, and nonconformist beliefs. That had been a touchstone of his science, and now it was a touchstone of his citizenship.

In one of his most revealing remarks about himself, Einstein lamented, "To punish me for my contempt of authority, Fate has made me an authority myself."

[After learning that the Nazis has raided his house in Germany, he made a prescient comment.] "If and when war comes, Hitler will realize the harm he has done Germany by driving out the Jewish scientists."

Einstein later regretted his role in the development of nuclear weapons. "Had I known that the Germans would not have succeeded in producing an atomic bomb, I never would have lifted a finger."

At the end of the 1940s, when it was becoming clear to him that the effort to control nuclear weaponry would fail, Einstein was asked what the next war would look like. "I do not know how the Third World War will be fought, but I can tell you what they will use in the Fourth — rocks."

Einstein walking on Princeton's campus

There are so many more interesting stories and details in this book, and I went through dozens of Post-Its to mark passages. This is the second book by Walter Isaacson I've read, the other being *Steve Jobs*, and he is a talented writer and biographer. I especially appreciate his skill at weaving quotes and anecdotes into the narrative. For example, this is a typically elegant and amusing paragraph from Isaacson:

> Einstein's new marriage was different from his first. It was not romantic or passionate. From the start, he and Elsa had separate bedrooms at opposite ends of their rambling Berlin apartment. Nor was it intellectual. Understanding relativity, she later said, "is not necessary for my happiness."

Even though I listened to an audiobook, I was happy I had requested a print copy from the library to peruse, because the book is filled with charming photographs of Einstein. His eyes could positively twinkle, and that shock of hair was rarely tamed. I really enjoyed most of this book, and if I had been more studious and applied myself, I probably could have made better sense of the heavy chapters on physics. But there is a reason I ended up in the humanities and not the sciences, and I shall continue to admire Mr. Einstein's work from a distance.

Favorite Quotes:
"When I am judging a theory, I ask myself whether, if I were God, I would have arranged the world in such a way."

"I have no special talents, I am only passionately curious."

Luís C. says

Einstein and Nuclear Energy

Albert Einstein's Theory of Relativity

Albert Einstein regarded as the scientific history of the twentieth century. Einstein proposed the famous equation E = mc2. This equation proved to be revolutionary for future studies in nuclear physics, but in those days the means to prove experimentally were not available. Thus, the energy E m represents the mass, both interconnected by the speed of light c. This equation related to mass conversions of energy, therefore, it could be assumed that the two entities were different manifestations of the same thing.

Bohr atomic model

The Danish physicist Niels Bohr developed a hypothesis in 1913 according to which electrons were distributed in distinct layers (or quantum levels) some distance from the nucleus. Thus, the electronic configuration of the various elements was constituted.
For Bohr electrons spun in fixed orbits from which no radiation is emitted. Thus the old concept of the atom as indivisible, inert, and simply buried, and the hypothesis of a complex structure later would appear to be complicated to generate manifestations of energy.

The Manhattan Project

In 1939, at the beginning of World War II, Albert Einstein recommended that US President FD Roosevelt go ahead with the atomic bomb development project. Einstein explained that, thanks to the research conducted by Enrico Fermi and Leo Szilard in the United States, and Frédéric Joliot and his wife Irene Joliot-Curie in France, it was almost certainly faster to unleash a nuclear chain reaction that would unleash a large amount of energy. This will also allow the construction of a new class of pumps.
Einstein also mentioned the scarcity of uranium reserves in the United States and that this mine-mineral was in former Czechoslovakia and the Belgian Congo. A collaboration between scientists and industry was proposed to develop the atomic bomb mentioned above as soon as possible.
He reported that Germany had suspended the sale of uranium from the Czech mines, which the Reich had resumed. This could mean that scientists at the Kaiser Wilhelm Institute would approach experiments in the field of nuclear fission, too.
Albert Einstein's fear of nuclear war was the result of his in-depth knowledge of the progress of research in this field. He had to emigrate to the United States in 1933 from Germany at the beginning of the persecution of the Jews.

Full Article Here: read:http://pt.energia-nuclear.net/que-e-a...