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AP Language and Composition

June 18, 2012

AP Long form for: *"Surely You're Joking, Mr. Feynman!" Adventures of a Curious Character*

Title**:** *"Surely You're Joking, Mr. Feynman!" Adventures of a Curious Character*

Author: Richard P. Feynman

Subjects: Non-fiction, humorous, anecdotes, science,

THE HISTORICAL AND CULTURAL BACKGROUND OF THE BOOK: The book was written in 1985 so it is fairly contemporary however it depicts events that happened from 1918 until roughly the time in which the book was written. The most important cultural aspects of this time period that affect the book are World War 2 and the Cold War. The scientific advancements of the 20th century set the backdrop for this autobiography as Feynman was at the heart of the atomic race, and theoretical physics during this 20th century. As Feynman lived it became more and more acceptable and common to work as a scientist and solely a scientist and this surely influenced his decisions. Feynman's story is meant to have an impact on young scientists especially the chapter at the end "Cargo Cult Science" that urges young scientists to not become tools of the politicians.

FORM AND STRUCTURE:The chapters are not numbered, rather titled and the reason for this is probably that all of the chapters are each anecdotes and it makes more sense to title each chapter because each anecdote can stand on its own. The book is divided into 5 parts corresponding to the major stages of his life: 1) his early life through undergrad at MIT 2) His

experiences at Princeton as a graduate student 3) his experiences at Los Alamos developing the atomic bomb 4) his life as a professor at Cornell, Caltech and Brazil 5) the rest of his life including his ventures in art and his nobel peace prize. The book is 322 pages and contains an Index, an introduction, a vitals page, a preface. The vitals page contains facts about when he went to which college when he was in Brazil etc. and demonstrates his want to paint an accurate picture of his life. The index page contains the names of all the people he met and what pages they appear on.

POINT OF VIEW: The author is writing an autobiography so obviously he wants people to understand his life. The book is incredibly unbiased towards himself, if anything it's biased the other way. Feynman is so modest that he underplays many of his major accomplishments such as his Nobel prize. A very credible book. The reader finds all the events believable despite their unbelievability given Feynman's tremendous emphasis on honesty and integrity.

THESIS: In this autobiography, Feynman strives to give an accurate, honest, description of his life and explain his philosophy on life and science. The main points of his philosophy that he tries to get across are: being open-minded, practicing science for discovery without agenda and following your heart's passions blindly, without any consideration for other people's cautionings.

DICTION: Feynman's word choices are thoughtful. It seems as though he has given quite a bit of time writing this autobiography. He is very good at describing situations but he is a very straightforward man and not one to exaggerate however some stories necessitate extra adjectives and he obliges such as using sound effects ("Brrrrrrrrr-up" (196)) and curse words. He uses apt, academic words that fit perfectly. For example on page 256 he uses the word "stenotypist" instead of saying "a man who recorded what we said." Feynman also uses words from other

languages especially in the chapters on Brazil. He is a professor and has an excellent vocabulary that he uses extensively. He uses the most specific word possible in a given situation to paint a clear picture, and can describe things in immense technical detail e.g. “The doorstop was a ten-inch hemi-sphere of yellowish metal--gold, as a matter of fact” (118).

Passage 1:

So this guy picked up his frigideira and his metal stick and . . . "brrra-dup-dup; chick-a-chick." Gee whiz! It was wonderful!

The boss said to him, "You go over there and stand next to O Americano, and you'll learn how to play the frigideira!"

My theory is that it's like a person who speaks French who comes to America. At first they're making all kinds of mistakes, and you can hardly understand them. Then they keep on practicing until they speak rather well, and you find there's a delightful twist to their way of speaking--their accent is rather nice, and you love to listen to it. So I must have had some sort of accent playing the frigideira, because I couldn't compete with those guys who had been playing it all their lives; it must have been some kind of dumb accent. But whatever it was, I became a rather successful frigideira player.

One day, shortly before Carnaval time, the leader of the samba school said, "OK, we're going to practice marching in the street."

We all went out from the construction site to the street, and it was full of traffic. The streets of Copacabana were always a big mess. Believe it or not, there was a trolley line in which the trolley cars went one way, and the automobiles went the other way. Here it was rush hour in Copacabana, and we were going to march down the middle of Avenida Atlantica

(page 187)

This passage demonstrates Feynman's anecdotal style of writing. He uses humor and playfulness with words such as "big mess" "dumb accent" "delightful twist" and "metal stick". Feynman's word choices make the anecdotes all the more funny and entertaining. The sound effects ("brrra-dup-dup; chick-a-chick") foreign words ("frigideira") and exclamations ("Gee Wiz") are present in every one of his anecdotes and really bring them to life.

Passage 2:

What happened was this: I happened to know three numbers--the logarithm of 10 to the base e (needed to convert numbers from base 10 to base e), which is 2.3026 (so I knew that e to the 2.3 is very close to 10), and because of radioactivity (mean-life and half-life), I knew the log of 2 to the base e, which is .69315 (so I also knew that e to the .7 is nearly equal to 2). I also knew e (to the 1), which is 2. 71828.

The first number they gave me was e to the 3.3, which is e to the 2.3--ten--times e, or 27.18. While they were sweating about how I was doing it, I was correcting for the extra .0026--2.3026 is a little high.

I knew I couldn't do another one; that was sheer luck. But then the guy said e to the 3: that's e to the 2.3 times e to the .7, or ten times two. So I knew it was 20. something, and while they were worrying how I did it, I adjusted for the .693.

(Page 174)

Sometimes the words are overly technical and can lose the average reader. In the above mess it almost appears that half the characters aren't even letters. Personally I was able to grasp most of this but I have recently taken high school math and I believe that this book is probably more

intended for people with an interest and or understanding of the scientific field. The technical specific writing as above is very characteristic of Feynman. The terms and phrases that denote mathematical objects only make sense if you have used these mathematical devices. As he is a man of science much of his life story involves science and he uses very technical wording which makes sense only if you have a bit of a science background or a recent course in math or science.

Passage 3:

Some of the special problems I had at Los Alamos were rather interesting. One thing had to do with the safety of the plant at Oak Ridge, Tennessee. Los Alamos was going to make the bomb, but

at Oak Ridge they were trying to separate the isotopes of uranium--uranium 238 and uranium 235, the explosive one. They were just beginning to get infinitesimal amounts from an experimental thing of 235, and at the same time they were practicing the chemistry. There was going to be a big plant, they were going to have vats of the stuff, and then they were going to take the purified stuff and repurify and get it ready for the next stage. (You have to purify it in several stages.) So they were practicing on the one hand, and they were just getting a little bit of U235 from one of the pieces of apparatus experimentally on the other hand. And they were trying to learn how to assay it, to determine how much uranium 235 there is in it. Though we would send them instructions, they never got it right.

Feynman at his best can explain complex situations or concepts to the layman using crude non-scientific terms, analogies and apt terms. The extra clarifying words above (the parenthesis, “the explosive one”, “vats”) help paint a picture for every man to understand. Similarly he can use apt wording to describe situations in immense detail when talking about his life. Feynman’s

word choice can be characterized as carefully thoughtfully chosen words that use every bit of their denoted power.

SYNTAX: The sentences are characterized by the anecdotal style. It feels as if the whole story is being told to you by your favorite uncle. The expressions and exclamations and digressions give it a friendly, familial tone. While occasionally the sentences can get dense and scientific the overall feel is something of an adventure. The dialogue is often humorous and contains colloquialisms.

Passage 1:

One day he was teaching me the word for "see." "All right," he said. "You want to say, 'May I see your garden?' What do you say?"

I made up a sentence with the word that I had just learned.

"No, no!" he said. "When you say to someone, 'Would you like to see my garden? you use the first 'see.' But when you want to see someone else's garden, you must use another 'see,' which is more polite."

"Would you like to glance at my lousy garden?" is essentially what you're saying in the first case, but when you want to look at the other fella's garden, you have to say something like, "May I

observe your gorgeous garden?" So there's two different words you have to use. Then he gave me another one: "You go to a temple, and you want to look at the gardens . . ."

I made up a sentence, this time with the polite "see."

"No, no!" he said. "In the temple, the gardens are much more elegant. So you have to say something that would be equivalent to 'May I hang my eyes on your most exquisite gardens?'"

Three or four different words for one idea, because when I'm doing it, it's miserable; when you're doing it, it's elegant.

I was learning Japanese mainly for technical things, so I decided to check if this same problem existed among the scientists.

At the institute the next day, I said to the guys in the office, "How would I say in Japanese, 'I solve the Dirac Equation'?"

They said such-and-so.

"OK. Now I want to say, 'Would you solve the Dirac Equation?'--how do I say that?"

"Well, you have to use a different word for 'solve,' "they say.

"Why?" I protested. "When I solve it, I do the same damn thing as when you solve it!"

"Well, yes, but it's a different word--it's more polite."

I gave up. I decided that wasn't the language for me, and stopped learning Japanese.

(Page 225)

The dialogue is just splendid in this book. In this situation Feynman attempts to learn Japanese but gets frustrated because the language is the exact opposite of his character: polite. Feynman gets himself into these hilarious situations because of his curious nature and his lack of etiquette make for uproarious dialogue. He has selected some great conversations from his life and the rewriting of the dialogue is excellent. His words and his thoughts are great because he is so blunt. The dialogues make up the soul of the book and very often they consist of Feynman arguing with someone, trying to learn something or tricking someone. Hilarity ensues.

Passage 2:

The Brazilian leaf-cutting ants, which are otherwise so marvelous, have a very interesting

stupidity associated with them that I'm surprised hasn't evolved out. It takes considerable work for

the ant to cut the circular arc in order to get a piece of leaf. When the cutting is done, there's a fifty-fifty chance that the ant will pull on the wrong side, letting the piece he just cut fall to the ground.

Half the time, the ant will yank and pull and yank and pull on the wrong part of the leaf, until it gives up and starts to cut another piece. There is no attempt to pick up a piece that it, or any other ant, has already cut. So it's quite obvious, if you watch very carefully that it's not a brilliant business of cutting leaves and carrying them away; they go to a leaf, cut an arc, and pick the wrong side half the time while the right piece falls down.

In Princeton the ants found my larder, where I had jelly and bread and stuff, which was quite a distance from the window. A long line of ants marched along the floor across the living room. It was during the time I was doing these experiments on the ants, so I thought to myself, "What can I do to stop them from coming to my larder without killing any ants? No poison; you gotta be humane to the ants!"

(Page 80)

Feynman loves his science and can go on and on about his experiments or concepts or logic which can be dense. In the above quotation Feynman talks about a particular species of ants and why he finds it fascinating. Feynman loves science and will ramble on the phenomena he finds interesting for paragraph after paragraph in immense detail. This is something that like his technical wording, can cause the reader to tune out but if the reader has an interest in science they will eat it up because here is a man who solved some of Physics great mysteries, he won't

find everything interesting to him but when he does it will most likely be interesting to a lesser mind as well.

Passage 3:

There were a number of things that happened to us because we were supposed to be professional musicians and I wasn't. For example, one of the scenes was about a beggar woman who sifts through the sand on a Caribbean beach where the society ladies, who had come out at the beginning

of the ballet, had been. The music that the choreographer had used to create this scene was made on

a special drum that Ralph and his father had made rather amateurishly some years before, and out

of which we had never had much luck in getting a good tone. But we discovered that if we sat opposite each other on chairs and put this "crazy drum" between us on our knees, with one guy beating bidda-bidda-bidda-bidda-bidda rapidly with his two fingers, constantly, the other fella could push on the drum in different places with his two hands and change the pitch. Now it would

go booda- booda- booda- bidda- beeda- beeda- beeda- bidda-booda-booda-booda-badda-biddabidda-bidda-badda, creating a lot of interesting sounds.

Well, the dancer who played the beggar woman wanted the rises and falls to coincide with her dance (our tape had been made arbitrarily for this scene), so she proceeded to explain to us what she was going to do: "First, I do four of these movements this way; then I bend down and sift through the sand this way for eight counts; then I stand and turn this way." I knew damn well I

couldn't keep track of this, so I interrupted her:

"Just go ahead and do the dance, and I'll play along."

"But don't you want to know how the dance goes? You see, after I've finished the second sifting part, I go for eight counts over this way." It was no use; I couldn't remember anything, and I wanted

to interrupt her again, but then there was this problem: I would look like I was not a real musician!

Well, Ralph covered for me very smoothly by explaining, "Mr. Feynman has a special technique for this type of situation: He prefers to develop the dynamics directly and intuitively, as he sees you

dance. Let's try it once that way, and if you're not satisfied, we can correct it."

Well, she was a first-rate dancer, and you could anticipate what she was going to do. If she was going to dig into the sand, she would get ready to go down into the sand; every motion was smooth

and expected, so it was rather easy to make the bzzzzs and bshshs and boodas and biddas with my

hands quite appropriate to what she was doing, and she was very satisfied with it. So we got past that moment where we might have had our cover blown.

(Pages 298-299)

Feynman's descriptions of the crazy situations he gets in are complete with slang, sound effects foreign words, clever wording and his spirit coming out in his wording. In this situation Feynman is hired to drum for a ballet in San Francisco despite the fact that he's not a

professional musician and can't read a note of music but in typical Feynman fashion he does the job anyways. His selection of detail includes only the interesting funny parts of this story and he is a master at telling the situation of anecdotes as well as the dialogue. With his blunt attitude as a background interior monologue juxtaposed next to these unsuspecting people who don't know they are being tricked hilarity ensues. Feynman, the character got into these situations. But Feynman the writer retells the stories in a captivating entertaining way using obscure details and blunt commentary to make the reader laugh.

EVIDENCE: The author uses primarily anecdotes to achieve the goal of telling his life story in a fair and accurate way and uses these anecdotes as a way to show his ideology and philosophy and how it has been successful for him. The author supports his philosophy of being open minded through his adventuring stories. Feynman's exploits in fields where he doesn't belong (such as playing the frigideira, drawing nude models and learning languages) are successful, entertaining and more importantly support his philosophy that good things happen when you are willing to try new things. The author supports his ethical science theory through the final chapter. The final chapter "Cargo Cult Science" was adapted from a lecture of his and uses a logical argument, complete with a central analogy of the "cargo cults" (people who built landing strips and airports in the hopes that airplanes would land there) to convince the reader that science must be performed with an unbiased eye. The anecdotes achieve the author's primary goal of telling his life story accurately because they allow the reader to draw their own conclusions about his life. The stories are just stories on their own which he tells exactly as they happen, but the collection of his stories makes up a central fair picture of his life.

SIGNIFICANCE OF THE TITLE: The title (*"Surely You're Joking, Mr. Feynman!"*), is a quote

from the wife of a Princeton dean. The quote takes place after the wife asks Mr. Feynman whether he will be taking cream or lemon in his tea during a social meeting. This social error on Mr. Feynman's part is one of many humorous truthful anecdotes and makes an appropriate title for the book because the reader may not believe every one of the outrageous stories. The subtitle (Adventures of a Curious Character) is a reference to his adventuring, curious spirit that is evident in his many ventures.

MEMORABLE QUOTATIONS:

Quotation #1:

But this long history of learning how to not fool ourselves-- of having utter scientific integrity--is, I'm sorry to say, something that we haven't specifically included in any particular course that I know of. We just hope you've caught on by osmosis.

The first principle is that you must not fool yourself-- and you are the easiest person to fool. So you have to be very careful about that. After you've not fooled yourself, it's easy not to fool other scientists. You just have to be honest in a conventional way after that.

I would like to add something that's not essential to the science, hut something I kind of believe, which is that you should not fool the layman when you're talking as a scientist. I am not trying to tell you what to do about cheating on your wife, or fooling your girlfriend, or something like that, when you're not trying to be a scientist, but just trying to be an ordinary human being. We'll leave those problems up to you and your rabbi. I'm talking about a specific, extra type of integrity that is not lying, but bending over backwards to show how you're maybe wrong, that you ought to have when acting as a scientist. And this is our responsibility as scientists, certainly to other scientists, and I think to laymen.

For example, I was a little surprised when I was talking to a friend who was going to go on the radio. He does work on cosmology and astronomy, and he wondered how he would explain what the applications of this work were. "Well," I said, "there aren't any." He said, "Yes, hut then we won't get support for more research of this kind." I think that's kind of dishonest. If you're representing yourself as a scientist, then you should explain to the layman what you're doing--and if they don't want to support you under those circumstances, then that's their decision.

One example of the principle is this: If you've made up your mind to test a theory, or you want to explain some idea, you should always decide to publish it whichever way it comes out. If we only publish results of a certain kind, we can make the argument look good. We must publish both kinds of results.

(Pages 313-314)

This is Feynman's message for all future scientists and his core belief in the field of science. He believes that scientists have become tools for people with agendas and proclaims that true science has no agenda but discovery. Being wrong is sometimes the best thing. To Feynman it shouldn't matter to a scientist if what he finds out was what he expected, he should publish it anyway to constantly improve the field and keep the facts straight. He wants science to be a pure field where observation and conclusions are drawn by the scientists and then, the implication is realized and compared to the rest of the results. One must only observe the results of an experiment and not discard the results because it does not fit their agenda. Feynman carries this ideology with him on every step of his journey and it is the closing chapter of his book because he wishes the reader to consider this view even if they take nothing else away from the entire

book.

Quotation #2:

Los Alamos was a very cooperative place, and we felt it our responsibility to point out things that should be improved. I'd keep complaining that the stuff was unsafe, and although everybody thought it was safe because there were steel rods and padlocks, it didn't mean a damn thing.

To demonstrate that the locks meant nothing, whenever I wanted somebody's report and they weren't around, I'd just go in their office, open the filing cabinet, and take it out. When I was finished I would give it back to the guy: "Thanks for your report."

"Where'd you get it?"

"Out of your filing cabinet."

"But I locked it!"

"I know you locked it. The locks are no good."

(Page 120)

This quote demonstrates Feynman's humorous and playful nature. From removing doors to fooling students younger and elder, Feynman is quite the prankster. Feynman has many stories of him playing tricks on any and everyone throughout the novel and the reader gains the sense that he enjoyed life and didn't take it too seriously.

Quotation #3:

Once I was at a party playing bongos, and I got going pretty well. One of the guys was particularly inspired by the drumming. He went into the bathroom, took off his shirt, smeared shaving cream in funny designs all over his chest, and came out dancing wildly, with cherries

hanging from his ears. Naturally, this crazy nut and I became good friends right away. His name is Jirayr Zorthian; he's an artist.

We often had long discussions about art and science. I'd say things like, "Artists are lost: they don't have any subject! They used to have the religious subjects, but they lost their religion and now they haven't got anything. They don't understand the technical world they live in; they don't know anything about the beauty of the real world--the scientific world--so they don't have anything in their hearts to paint."

Jerry would reply that artists don't need to have a physical subject; there are many emotions that can he expressed through art. Besides, art can be abstract. Furthermore, scientists destroy the beauty of nature when they pick it apart and turn it into mathematical equations.

One time I was over at Jerry's for his birthday, and one of these dopey arguments lasted until 3:00 AM. The next morning I called him up: "Listen, Jerry," I said, "the reason we have these arguments that never get anywhere is that you don't know a damn thing about science, and I don't know a damn thing about art. So, on alternate Sundays, I'll give you a lesson in science, and you give me a lesson in art.

(Pages 236-237)

Feynman is extremely open-minded and many of his anecdotes revolve around him trying new things that are completely out of his field. In this circumstance a conversation leads to him becoming a paid artist during his off-hours. After taking the lessons from Jerry he begins to do nude portraits and eventually ends up showing his art at a gallery under a pseudonym. In many of Feynman's anecdotes his lively spirit is shown as he tries new instruments, new languages, stays at a traditional Japanese hotel and even tries his hand at safecracking. Feynman certainly never

had a fear of failure.

Quotation #4:

The theoretical physicists, on the other hand, could start working right away so it was decided that they wouldn't live in the ranch houses, but would live up at the site. We started working immediately. There were no blackboards except for one on wheels, and we'd roll it around and Robert Serber would explain to us all the things that they'd thought of in Berkeley about the atomic bomb, and nuclear physics, and all these things. I didn't know very much about it; I had been doing other kinds of things. So I had to do an awful lot of work.

Every day I would study and read, study and read. It was a very hectic time. But I had some luck. All the big shots except for Hans Bethe happened to be away at the time, and what Bethe needed was someone to talk to, to push his ideas against. Well, he comes in to this little squirt in an office and starts to argue, explaining his idea. I say "No, no, you're crazy. It'll go like this." And he says, "Just a moment," and explains how he's not crazy, I'm crazy. And we keep on going like this. You see, when I hear about physics, I just think about physics, and I don't know who I'm talking to, so I say dopey things like "no, no, you're wrong," or "you're crazy." But it turned out that's exactly what he needed. I got a notch up on account of that, and I ended up as a group leader under Bethe with four guys under me.

(Pages 94-95)

The above passage is an example of Feynman's brutal honesty and lack of decorum. Feynman talks to world class physicists in insults because he is the most brutally honest person ever. This reflects in all of his stories as he gives honest opinions of some of the people he meets and says things in public that are far from public etiquette. In fact Feynman speaks his mind so

often that the reader may wonder if he even has a sense of etiquette or fear of authority. From calling out professors in Brazil to refusing to save receipts for his business trips to arguing with any and everyone regardless of position Feynman is incredibly forward with everyone and with the reader as he tells his life story.

Quotation #5:

"Professor Feynman?"

"Hey! Why are you bothering me at this time in the morning?"

"I thought you'd like to know that you've won the Nobel Prize."

"Yeah, but I'm sleeping! It would have been better if you had called me in the morning."--and I hung up.

My wife said, "Who was that?"

"They told me I won the Nobel Prize."

"Oh, Richard, who was it?" I often kid around and she is so smart that she never gets fooled, but this time I caught her.

The phone rings again: "Professor Feynman, have you heard . . ."

(In a disappointed voice) "Yeah."

Then I began to think, "How can I turn this all off? I don't want any of this!" So the first thing was to take the telephone off the hook, because calls were coming one right after the other. I tried to go back to sleep, but found it was impossible.

I went down to the study to think: What am I going to do? Maybe I won't accept the Prize. What would happen then? Maybe that's impossible.

I put the receiver back on the hook and the phone rang right away. It was a guy from

Time

magazine. I said to him, "Listen, I've got a problem, so I want this off the record. I don't know how

to get out of this thing. Is there some way not to accept the Prize?"

(Page 278)

Feynman is incredibly modest for all he has accomplished. As said above, he didn't want the Nobel prize and the respect and prestige that came with it. He always merely wanted to blend in and enjoy the things he enjoyed without being recognized. On many occasions over the course of the book he describes a unique incredible thing he did while simultaneously diminishing the accomplishment because he doesn't feel he deserves the recognition he got for it. For example when he amazes people by doing math problems in his head because there is a trick to it he tells the reader it's not impressive because you just have to know this one trick. Feynman's mind allows him to come up with these tricks though and he likely deserves more credit than he allows. He is self-critical and the reader almost becomes more sympathetic to him because of his tremendous modesty.

CRITICISM: The first review I read was an online article that reprinted a *New York Times* book review written at the time the book came out. What I gained from this review was more insight into the psychology of Mr. Feynman and the character traits he possesses that he doesn't necessarily admit to having in the book, but are evident through the anecdotes he tells. The author K.C. Cole highlights that Mr. Feynman is brutally honest, very quirky, attacks problems without bias and keeps an open mind. Cole analyzes the message Feynman wants to get across: science can only continue to move forward if people observe experiments with an open mind;

Feynman feels that if people are expecting and hoping for a result before an experiment is finished then they will not look at the results logically only take the information from the experiment that supports their claim. A deeper understanding of our universe can only be gained from observing the experiment and taking the results for what they are, not what you would like them to be.

Cole, K. C.. "The New York Times: Book Review Search Article." *The New York Times - Breaking News, World News & Multimedia*. N.p., 27 Jan. 1985. Web. 12 Aug. 2012. <http://www.nytimes.com/books/97/09/21/reviews/feynman-joking.html>.

The second review I read was a blog post by a blog titled: “The Curmudgeon’s Attic.” The blog had several other book reviews and seemed like a reputable source. This review added to my understanding of the novel by discussing how Feynman’s character traits led to success and just how unique his mind was. The Curmudgeon makes the argument that Feynman was a brilliant mind for his time in that he was willing to challenge every proven theorem given the right circumstance. Many other great physicists of the time were stuck on whatever problem they were working on because they refused to completely open their minds the way Feynman did. The Curmudgeon also draws attention to Feynman’s integrity and honesty that is such a huge part of him. He just couldn’t keep his mouth shut when he had to and although that may have gotten him in trouble sometimes it also ultimately led to his success. For example when Feynman is at Los Alamos, New Mexico working on the atomic bomb the top scientists would always come to him for advice because he was the only scientist who wasn’t afraid to hurt the world’s most prestigious scientists’ feelings.

The Curmudgeon's Attic. N.p., 3 Jan. 2011. Web. 12 Aug. 2012.

<http://thecurmudgeonsattic.wordpress.com/2011/01/03/book-review-surely-youre-joking-mr-feynman-by-richard-p-feynman-1985/>.

On the following pages are scans of my notes and highlighting of the book reviews I used.

Everest R.

Book Review A

PRANKS OF A NOBEL LAUREATE

Date: January 27, 1985, Sunday, Late City Final Edition Section 7; Page 13, Column 1; Book Review Desk
Byline: By K.C. Cole
Lead:

NY Times

"SURELY YOU'RE **JOKING**, MR. **FEYNMAN**!"

Adventures of a Curious Character. By **Richard** P. **Feynman** with Ralph Leighton. Edited by Edward Hutchings. 350 pp. New York: W. W. Norton & Company. $16.95.

Many science buffs, I'll wager, are going to be unnerved by this book. After all, here is **Richard Feynman** - adjudged by most of his peers to be the world's best theoretical physicist - prancing around like a naughty schoolboy, sniffing his own footprints on all fours to see if he can follow his tracks as well as his dog can, being offered "cream or lemon" at a Princeton tea and blithely accepting both. Mr. **Feynman** presents himself as rude, crude and socially unacceptable. He sticks out his tongue at some of our most cherished scientific institutions, from the atomic bomb project at Los Alamos to the Nobel Prize (which he grudgingly accepted in 1965 only because he thought it would be more trouble not to). In this collection of conversations with his long-time friend Ralph Leighton, he portrays himself as the scientist stripped of his distinguished mantle, the physicist as bongo-playing maniac chatting aimlessly about pedestrian subjects like picking up girls in bars. It's not only unseemly; it's embarrassing. Compared with the distinguished figure of Einstein, this fellow seems a cruel hoax.

shows the playful side of science and the only way to get anywhere: trying things with open minds

Text:

Surely, Mr. Feynman is **joking**. He is putting us on. It is something he very much likes to do. But the reader should beware: one of Mr. Feynman's favorite ploys is to fool people by telling the simple truth. He's often funniest when he's most serious. While the man presented in this book may look distressingly like a cartoon caricature of a great man, in fact there's a message written in these lines.

honest

And very funny lines they are. Mr. Feynman is a storyteller in the tradition of Mark Twain. He proves once again that it is possible to laugh out loud and scratch your head at the same time. He is a master at summing up a complex situation in a few well-chosen words.

By like was moved

C. Cole's most recent book is "Sympathetic Vibrations: Reflections on Physics as a Way of Life." words, just as his famous Feynman diagrams simplify complex

subatomic encounters in a few squiggles and lines. He cuts right to the core, dispensing with the "gorp," as he calls it - "ninny-pinny dopey things." Here is Mr. Feynman describing how he came to be judged "mentally deficient" by the Army: "There are three desks, with a psychiatrist behind each one, and the 'culprit' sits across from the psychiatrist in his BVDs and answers various questions. . . . Then at some point near the end (a psychiatrist) says, 'How much do you value life?' " Mr. Feynman answers: "Sixty-four."

He can mimic any language, including the mumble of the philosophy professor who speaks "wugga mugga mugga wugga wugga." His humor often comes from calling a spade a spade, or a zoological chart a "map of the cat," as the case may be. He sums up an interdisciplinary conference as "worse than a Rorschach test: There's a meaningless inkblot, and the others ask you what you think you see, but when you tell them, they start arguing with you!" Humanities do not fare well here.

You would never guess that while he's up to his tricks he is also up to physics, revealing the nature of the bonds that hold atoms together. But in truth, the way he talks about cracking top secret safes at Los Alamos is not so unlike the way he talks about cracking the secrets of nature.

For example, he is a master at guesswork and has the persistence to outwait, as well as outwit, almost any problem: "I tried all *kinds* of things. I was desperate. . . . I was always practicing my obsession. . . . The only way to solve such a thing is patience!" He knows the value of trying a radically different approach: "If he's been trying the same thing for a week, and I'm trying it and can't do it, it ain't the way to *do* it!"

Picking locks is a form of play for Mr. Feynman. But then, so is his best physics. He writes about a period during which he felt "disgust" for physics, and wondered why: "I used to *enjoy* doing physics. Why did I enjoy it? I used to *play* with it." Within a week, he was watching some guy in the Cornell University cafeteria throwing a plate in the air. He began to work out the equations connected with the plate's wobble. "There was no importance to what I was doing," he writes, "but ultimately there was. The diagrams and the whole business that I got the Nobel Prize for came from that piddling around with the wobbling plate."

Los Alamos is treated mostly as a laughing matter, but Mr. Feynman does manage to make some serious points about the absurdity of censorship and the hazards of secrecy, especially when it comes to keeping people in the dark about their jobs. Such an obsession created a situation that might have resulted in an explosion at the uranium enrichment plant at Oak Ridge because no one was told the exact nature of what they were doing; and it led to ridiculously slow progress by a group of young calculators working on the bomb project. "All that had to be done was to tell them what it was," Mr. Feynman says. The result? "*Complete* transformation!"

MR. FEYNMAN is always barging in where he doesn't belong, bringing his insatiable interest and his obsession to get it right to drawing (and discovering, while he's at it, "what art is really for"), playing drums in a Brazilian samba band, learning Japanese, analyzing his dreams, taking "out-of-body" excursions in John Lilly's sensory deprivation tanks, evaluating science textbooks ("UNIVERSALLY LOUSY!") or figuring out how to get women to go to bed with him.

Many things seem off-key in this book, such as the way being rude to women seems to win their affections, or the way his wife's death gets sandwiched between a tale about tires and a tale about clocks. But in the end, one winds up not only forgiving him, but admiring him: his morality is as unflinching as it is unorthodox. True, the nicest bits are often tucked away like the messages Mr. Feynman liked to hide in those top secret safes he had broken into, and this book reflects only one side of this multifaceted man. But if there's a lot more to Mr. Feynman, fortunately there's also a lot more of Mr. Feynman to read: His "Character of Physical Law" is accessible to anyone; and the "Feynman Lectures on Physics" are well worth going through even for those who will skip 90 percent of the often difficult text.

At his best, Mr. Feynman tells us what science is really all about. He is amazed that we still inhabit such an unscientific world, where faith in witch doctors has been replaced by equally baseless beliefs "such as that we have some knowledge of how to educate." Science turns out to be essentially "a long history of learning how to not fool ourselves."B

has a funny way about him that reader grows to like. His modesty hides some of him

Tells about needing to disregard our prejudices and be honest

stop expecting certain results

fudging data

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Book Review
B

The Curmudgeon's Attic

The Thing As It Is

Book Review: "Surely you're joking, Mr. Feynman" by Richard P Feynman (1985)

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I graduated college the year this book came out. At the time, I knew next to nothing about physics. (Feynman was a Nobel laureate physicist that worked on the Manhattan Project, et al). I knew less about how to think. All I really knew was how to memorize and regurgitate, because that's how you got through college. Had I read this book when it first came out, maybe I'd have had a shorter journey from ignorance to understanding. But maybe not. Given that I thought I knew and understood a lot, I'd have probably dismissed the book and its author as somewhat deranged, and anyways, not useful or relevant to my life goals. I'd have not realized, as I do now, that Feynman reveals, through this string of anecdotes and events in his life (very few of which concern physics), a great deal about how to gain an understanding of the world.

Understanding begins with acknowledging ignorance. That's surely where I would have failed to grasp the lessons of Feynman's life. I'd just graduated *summa cum laude* with an economics degree (admittedly, only from Alabama, but still). Acknowledge ignorance? Me? Rubbish.

I'm glad I didn't read the book back when it came out. Twenty five years of life's humblings have left me feeling very Socratic regarding knowledge and understanding. Socrates was considered the wisest man in the world because he was the only man who didn't think himself wise. That's what the intervening years have done for me. All I know for sure these days is that I know very little for sure. I don't feel wise. I mostly just feel humble.

Feynman had a curious mind. His interests ranged far and wide. Physics buttered his bread, but the world was his oyster. In each endeavor he undertook, he set sail on his quest for understanding in fundamentally the same way–by first acknowledging his ignorance, and then clearing his mind of preconceptions. Only then could he rationally, objectively and amorally investigate the matter, allowing the evidence to carry him wherever it would. From learning to play the *frigideira* (a toy frying pan with a metal stick to beat the rhythm in it) in a Brazilian samba band, to learning how to pick up girls (hint–get them to commit to a romantic tryst *before* you spend any money on drinks), to figuring out how to pick the locks on safes (another hint–most

combinations, like internet passwords today, are easy to guess if you know something about the person that created the combination) he would logically analyze the situation to tease out the cause and effect relationships that could be revealed, and use that information to attack his problem. This is the best one can do in the quest for knowledge and understanding—objective, amoral investigation of cause and effect relationships, with a gimlet eye casting aspersions on all untested conclusions and inferences. Applying logic—the idea of "if this, then that"—is the only hope of ever understanding anything, and Feynman's mind was exquisitely logical. Though he tells next to nothing about the technical intricacies of his work in physics, it can be assumed that he attacked problems in quantum dynamics (for which he eventually won a Nobel Prize) in much the same manner.

It seemed Feynman rarely engaged in rationalization–the daily mental gymnastics in which most folks engage to make the world as it is appear to be somewhat congruent with the world as we wish it to be. Feynman took things at face value, which is the running joke of *Surely you're joking*. Feynman seemed to live something like Jim Carrey's character in the movie *Liar, Liar*, almost unable to lie, even when it would benefit him. Men of less extraordinary talents might, like Carrey's character, find everyday life impossible to negotiate without the occasional rationalization. Feynman's brilliance allowed him to get by with little need of it. He was honest to a fault. He blatantly told his hosts exactly what he felt of their education- by-rote-memorization system after having taught physics to undergraduates in Brazil. He howled and screamed at the pain of reading inept science textbooks while on the book approval committee of the California Board of Education, and then told them exactly where he felt the books failed. He repeatedly dismissed as "fakers" all the phonies he met that were more interested in getting ahead than in doing what was right. Feynman had the heart of a lion with the wit of a hyena when navigating the shoals between objective reality and perceptual delusions. It'd be hard to imagine a soul such as Feynman uttering something as ridiculous as he was "100% certain that he could contain inflation were it to arise" as the head of the Federal Reserve recently did. He would more likely have said he didn't have any idea whether inflation could be contained, because there wasn't even any decent agreement as to what inflation looked like. In other words, Feynman would have made a lousy politician for the same reasons that made his life so admirable and extraordinary.

Reading Feynman's book after having just completed Keith Richards' autobiography, *Life*, I found a remarkable number of parallels between the two men. Neither seemed too impressed by themselves or what they had accomplished. They both shunned notoriety. Richards bemoaned Jagger's knighthood as antithetical to everything the Rolling Stones were about. Feynman spent an hour on the phone to a *Time* reporter (off the record) on the morning he was informed of having won the Nobel Prize, trying to figure a way around having to accept it. For each man, shunning notoriety and fame seemed grounded in the desire to be as free as possible to pursue life on their own terms. Each man seemed to possess a quiet confidence, steadfastly believing in their innate ability to solve problems as they arose. Neither man appeared to have had a master plan for their lives–just a general direction in which to proceed, content that allowing for bit of play in the traveled route might better allow their unique talents to flourish. Both were great men, possessed of extraordinary talents relative to their peers. Each knew themselves better far than anyone else knew them, and far better than most people know themselves. Yet through a lifetime of accomplishment, each failed to be much impressed by what they had done. They just did. They didn't read nor internalize their press clippings.

, cargo-cult

Feynman's concluding chapter is a diatribe against pseudo-science, the sort of nonsense spouted by people using science as a vehicle for personal aggrandizement and gain, more frequently — Commercial encountered in the humanities (like economics) than in hard science; but his point that scientific integrity requires that scientists understand themselves and their own biases and perceptions resonates today. Good science, i.e., true understanding, cannot be gained by sacrificing one's soul, or as he puts it: man of integrity: don't hide, don't expect, observ

So I have just one wish for you—the good luck to be somewhere where you are free to maintain the kind of integrity I have described, and where you do not feel forced by a need to maintain your position in the organization, or financial support, or so on, to lose your integrity. May you have that freedom.

I wish he'd have pointed out instead that truly courageous men can attain such freedom regardless of their circumstances, and that in the end, the excuses we tell ourselves for not having done so will ultimately all fail. But the book is a fabulous read—both educational and entertaining—a feat not often achieved, not unlike the manner with which Feynman lived his life. \ Feynman would've succeeded any where because of his willingness to speak out

Written by The Curmudgeon

January 3, 2011 at 7:48 pm

Posted in Books and Book Reviews, Science

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WHY YOU CHOSE THIS BOOK: As I searched for a nonfiction book to read over the summer I searched the list provided in the packet as well as the bestselling nonfiction books lists on Amazon.com and the *New York Times* website. I also took into account books that had been recommended to me and I came up with the following list: *Unbroken* by Laura Hillenbrand, *Confessions of an Economic Hit Man* by John Perkins, *Class Matters* by numerous correspondents of *The New York Times*, *Imagine: How Creativity Works* by Jonah Lehrer, *Manufacturing Consent: The Political Economy of the Mass Media* by Edward S. Herman and Noam Chomsky, and finally *"Surely You're Joking, Mr. Feynman!" Adventures of a Curious Character* by Richard P. Feynman. I checked out a couple of these books from the library, others I researched online by looking at amazon reviews and excerpts from online. After considering these books I ended up deciding on *"Surely You're Joking, Mr. Feynman!" Adventures of a Curious Character* because I realized it was the only humorous book on my list and during the summer it would be much more enjoyable and quite a bit less stressful to read a book with humor. The fact that it tied into physics as well was great as I will be taking AP Physics next year.