

Letter to Professor Feynman

The Letter

Dear Prof. Feynman:

Not another book about your genius! Christ, is there no end? People just can't seem to get enough of that lovable Nobel-Prize-winning physicist who played bongo-drums and was so proud of his ignorance of all things cultural.

Well, it's time that someone made the case for the opposition, and since no one in that gang of lackeys you surrounded yourself with will do it, I'll have to do it myself. (Nietzsche warned us against thinkers who need admirers, but what did Nietzsche know? He was merely a philosopher, and therefore among the lowest of the low in your eyes.)

But I warn you that, unlike those humanities professors you loved to despise, I have spent a fair amount of my life studying mathematics and physics *as well as* the humanities, so you won't be able to brush aside my criticisms on the grounds that I don't understand a logical or scientific argument or that I have no appreciation of mathematical beauty.

Let me begin by saying that I am not calling into question your reputation as a physicist. Although I know your work only through popularizations, I have no reason to question the praise which it receives from all commentators. Furthermore, I have no reluctance in admitting that your *Lectures on Physics* has a permanent place on my bedside bookshelf, right next to Montaigne's *Essays* and the *Encyclopedic Dictionary of Mathematics*. I agree with others that yours is probably the best physics text ever written.

No, it's this public character you created that I'm attacking, this arrogant, opinionated son-of-a-bitch who is so proud of his ignorance of almost everything non-scientific. Let's begin with your own words:

"Cornell had all kinds of departments that I didn't have much interest in. (That doesn't mean there was anything wrong with them; it's just that I didn't happen to have much interest in them.) There was domestic science, philosophy (the guys from this department were particularly inane), and there were cultural things — music and so on. There were quite a few people I did enjoy talking to, of course. In the math department there was Professor Kac and Professor Feller; in chemistry, Professor Calvin; and a great guy in the zoology department, Dr. Griffin, who found that bats navigate by making echoes. But it was hard to find enough of these guys to talk to, and there was all this other stuff which I thought was low-level baloney." — Feynman, Richard P., *Surely You're Joking, Mr. Feynman!* [hereafter referred to as "SYJ"], W. W. Norton & Co., N.Y., 1985, p. 232.

"Domestic science"? My dictionary (Webster's *New Collegiate*, 1981) says this is "instruction and training in domestic management and the household arts (as cooking and sewing)". You can't seriously be asking us to admire you *even more* because you were not interested in studying household arts — "What a genius Feynman was! Why, even domestic science was too boring for him!" — although there have been a few first-class minds who felt that learning to become a gourmet chef was not a waste of time. So I assume that mentioning this subject was just your devastatingly satirical way of indicating your low opinion of the next subject in your list, namely, philosophy. But then why insult us with a weasel disclaimer like "not that there was anything wrong with them", especially as you go on to call these subjects "low-level baloney"? Come on.

Alan Lightman, the reviewer of James Gleick's recent biography of you, dispells any doubts about your true feelings: "In fact, Feynman had little respect for the humanities, which he regarded as slippery and inferior to science, and even less respect for humanists. When he was in

his early thirties, he wrote that ‘the theoretical broadening which comes from having many humanities subjects on the campus is offset by the general dopiness of the people who study these things.’” — Lightman, Alan, “The One and Only”, review [hereafter referred to as “Rev”] of Gleick, James, *Genius: The Life and Science of Richard Feynman*, Pantheon, in *The New York Review of Books*, Dec. 17, 1992, p. 34.

But, as if simply disliking the humanities and saying so weren’t enough, you on at least one occasion resort to an argument which is really low-level:

“Then another guy came into my office. He wanted to talk to me about philosophy, and I can’t really quite remember what he said, but he wanted me to join some kind of a club of professors. The club was some sort of anti-Semitic club that thought the Nazi’s weren’t so bad. He tried to explain to me how there were too many Jews doing this and that — some crazy thing. So I waited until he got all finished, and said to him, ‘You know, you made a big mistake: I was brought up in a Jewish family.’ He went out, and that was the beginning of my loss of respect for some of the professors in the humanities, and other areas, at Cornell University.” — SYJ, p. 169.

In other words, *because* the humanities have at least one anti-Semitic professor, that is sufficient reason for you to lose respect for its professors? And you would like us to believe that there are *no* anti-Semitic mathematicians or physicists anywhere in the whole wide world? Surely you must be joking, Mr. Feynman.

But of all the humanities, it seems that philosophy was the one you detested the most. Lightman says, “Feynman briefly read Descartes and decided that philosophy was soft and that the philosophers were incompetent logicians.” Rev, p. 34. Among the writings of yours he was probably referring to was the following:

“Arlene [the girl who was to become your wife] was having trouble with her homework in philosophy class. ‘We’re studying Descartes,’ she said. ‘He starts out with “Cogito, ergo sum” — “I think, therefore I am” — and ends up proving the existence of God.’

“Impossible!” I said, without stopping to think that I was doubting the great Descartes. (It was a reaction I learned from my father: have no respect *whatsoever* for authority; forget who said it and instead look at what he starts with, where he ends up, and ask yourself, ‘Is it reasonable?’) ‘How can you deduce one from the other?’

“I don’t know,’ she said.

“Well, let’s look it over,’ I said. ‘What’s the argument?’

“So we look it over, and we see that Descartes’ statement, ‘Cogito, ergo sum’ is supposed to mean that there is one thing that cannot be doubted — doubt itself. ‘Why doesn’t he just say it straight?’ I complained. ‘He just means somehow or other that he has one fact that he knows.’

“Then it goes on and says things like, ‘I can only imagine imperfect thoughts, but imperfect can only be understood as referent to the perfect. Hence the perfect must exist somewhere.’ (He’s working his way towards God now.)

“Not at all!’ I say. ‘In science you can talk about relative degrees of approximation without having a perfect theory. I don’t know what this is all about. I think it’s a bunch of baloney.’

“Arlene understood me. She understood, when she looked at it, that no matter how impressive and important this philosophy stuff was supposed to be, it could be taken lightly — you could just think about the words, instead of worrying about the fact that Descartes said it. — Feynman, Richard P., *What Do You Care What Other People Think?* [hereafter referred to as “WDY”], W. W. Norton & Co., N.Y., 1988, pp. 27-28.

I will quote one more of your philosophy anecdotes, and then I’ll tell you why your confidence may not be justified.

“In the Graduate College dining room at Princeton everybody used to sit with his own group. I sat with the physicists, but after a bit I thought: It would be nice to see what the rest of the world is doing, so I’ll sit for a week or two in each of the other groups.

“When I sat with the philosophers I listened to them discuss very seriously a book called *Process and Reality* by Whitehead. They were using words in a funny way, and I couldn’t quite understand what they were saying. Now I didn’t want to interrupt them in their own conversation and keep asking them to explain something, and on the few occasions that I did, they’d try to explain it to me, but I still didn’t get it. Finally they invited me to come to their seminar.

“They had a seminar that was like a class. It had been meeting once a week to discuss a new chapter out of *Process and Reality* — some guy would give a report on it and then there would be a discussion. I went to this seminar promising myself to keep my mouth shut, reminding myself that I didn’t know anything about the subject, and I was going there just to watch.

“What happened there was typical — so typical that it was unbelievable, but true. First of all, I sat there without saying anything, which is almost unbelievable, but also true. A student gave a report on the chapter to be studied that week. In it Whitehead kept using the words ‘essential object’ in a particular technical way that presumably he had defined, but that I didn’t understand.

“After some discussion as to what ‘essential object’ meant, the professor leading the seminar said something meant to clarify things and drew something that looked like lightning bolts on the blackboard. ‘Mr. Feynman,’ he said, ‘would you say an electron is an “essential object?”’

“Well, now I was in trouble. I admitted that I hadn’t read the book, so I had no idea of what Whitehead meant by the phrase; I had only come to watch. ‘But,’ I said, ‘I’ll try to answer the professor’s question if you will first answer a question from me, so I can have a better idea of what “essential object” means. Is a *brick* an essential object?’

“What I had intended to do was to find out whether they thought theoretical constructs were essential objects. The electron is a *theory* that we use; it is so useful in understanding the way nature works that we can almost call it real. I wanted to make the idea of a theory clear by analogy. In the case of the brick, my next question was going to be, ‘What about the *inside* of the brick?’ — and I would then point out that no one has ever seen the inside of a brick. Every time you break the brick, you only see the surface. That the brick has an inside is a simple theory which helps us to understand things better. The theory of electrons is analogous. So I began by asking, ‘Is a brick an essential object?’

“Then the answers came out. One man stood up and said, ‘A brick is an individual, specific brick. *That* is what Whitehead means by an essential object.’

“Another man said, ‘No, it isn’t the individual brick that is an essential object; it’s the general character that all bricks have in common — their ‘brickiness’ — that is the essential object.’

“Another guy got up and said, ‘No, it’s not in the bricks themselves. ‘Essential object’ means the idea in the mind that you get when you think of bricks.’

“Another guy got up, and another, and I tell you I have never heard such ingenious different ways of looking at a brick before. And, just like it should in all stories about philosophers, it ended up in complete chaos. In all their previous discussions they hadn’t even asked themselves whether such a simple object as a brick, much less an electron, is an ‘essential object.’” — SYJ, pp. 69-70.

Yes, yes, we are all impressed, once again, with the power of your brilliant naivete. But if you had ever condescended to do some reading in this discipline which you so love to poke fun at, you would have found out that the idea of judging philosophy according to scientific criteria has been around a long time, and flourished, briefly, in a movement in the 1920’s called “logical positiv-

ism". The movement is now dead, although some people, myself included, feel that it made a lasting contribution to philosophy — or, perhaps it is enough to say — to straight thinking. Like you, the logical positivists would have jumped on the “essential object” and demanded to know how, in scientific terms, one could recognize one.

You admitted that you hadn't read the book, so you had no idea of what the author — a distinguished mathematician and logician, as you certainly must have known — no idea of what the author was trying to do in the book. If this could have been done in mathematical terms, don't you think he would have done so? Therefore it must be that, rightly or wrongly, he felt he was dealing with a subject that lay outside of mathematics.

Now you can say, as many before you have said, that nothing of intellectual importance lies outside of physics and mathematics, using “physics” here to refer to all of the hard sciences. If you really believe that, then in effect you are saying, “Because I am tone deaf, all this talk about the beauty and power of music is bunk,” and the only reply that I or anyone else can make to you is, “But don't you think you should be curious as to why so many people of your intellectual stature nevertheless insist on the beauty and power of music, or, to drop the metaphor, on the intellectual importance of subjects outside physics and mathematics? Why aren't you curious as to why these people can't see the obvious truth that you do see?”

Consider Schrödinger, one of the great pioneers in your own branch of physics, quantum mechanics. He wrote a little book called *Mind and Matter* — a philosophical book, no question about it — which includes the following remarkable passage:

“Let us now turn to Kant. It has become a commonplace that he taught the ideality of space and time and that this was a fundamental, if not the most fundamental part of his teaching. Like most of it, it can be neither verified nor falsified, but it does not lose interest on this account (rather it gains; if it could be proved or disproved it would be trivial).” — Schroedinger, Erwin, *What Is Life?* and *Mind and Matter*, Cambridge University Press, N.Y., 1989, p. 156.

Schroedinger wasn't one of your dopey humanists. He was *at least* as great a physicist as you. Aren't you curious as to why he would write such a thing — what he meant by such a thing?

And Einstein himself, during the years immediately preceding his three great papers of 1905, avidly read and discussed philosophy, at least 19th century German philosophy, in particular, that of Ernst Mach.

“As Einstein said in a letter to a young physicist who had been thwarted in his attempts to add philosophy to his physics courses:

I fully agree with you about the significance and educational value of methodology as well as history and philosophy of science. So many people today — and even professional scientists — seem to me like someone who has seen thousands of trees but has never seen a forest. A knowledge of the historical and philosophical background gives that kind of independence from prejudices of his generation from which most scientists are suffering. This independence created by philosophical insight is — in my opinion — the mark of distinction between a mere artisan or specialist and a real seeker after truth.”

— Smolin, Lee, *The Trouble With Physics*, Houghton Mifflin Company, N.Y., 2007, pp. 310-311.

Or look at some of the great figures from the past. Fermat (1601-1665) — I give the dates because I'm not sure you were even scholar enough to care about when these men lived — Fermat was certainly a better mathematician than you, taking into account the state of mathematical knowledge in his time and yours — and he was a lifelong student of the classics. Descartes (1596-1650), whose faulty reasoning you are so proud of despising, was nevertheless also a better

mathematician than you. Pascal likewise, and yet he spent the final years of his life on another subject you love to hate, namely, theology. During your lifetime, there was Bertrand Russell (1872-1970), a philosopher all of his life, whose contributions to formal logic (the major one, *Principia Mathematica*, written with Alfred North Whitehead, whose *Process and Reality* you didn't bother to open), is one of the milestones of human thought.

But perhaps, like some mathematicians and physicists, you look down on the research in formal logic that has been done in the past hundred years on the grounds that it has contributed next to nothing to the development of *real* mathematics, this despite the fact that several of the century's greatest mathematicians, including David Hilbert and your friend John von Neumann, thought the subject important enough to spend time on, and despite the fact that Gödel's proof that there are mathematical truths that can never be proved, no matter how smart mathematicians become, rattled the cages of I daresay every mathematician when it was first announced in the early Thirties.

Anyway, that is my main argument against your stubborn ignorance and lack of curiosity, namely, how come all these other thinkers — every one of them your intellectual equal and some better than you — how come they thought philosophy and the humanities worthy of their attention?

There are two other arguments I can make, both of which I suspect will carry little weight with you. The first is that much of what can't be expressed in the language of physics and mathematics is nonetheless important. For example, the phenomenon of self-consciousness. (I really don't know how to reply if you say it is unimportant.) If you agree it is important, then give me some verifiable propositions about self-consciousness. Or what about the overwhelming sense of the meaninglessness of life which has tormented so many people in the past hundred years, and which has given rise to an entire philosophical movement, namely, existentialism. Did you have some theorem squirreled away in your desk drawer that no one knows about that will enable us to solve this problem? Do you have the faintest idea of what the problem *is*? I suspect not, given the extraordinary shallowness of the reason you gave up religion, namely, that there is no scientific evidence for the miracles reported in the Bible. Read Sartre's short story, "The Wall", as a start. What about poverty, mental illness, unemployment, the horrors of Vietnam, the starvation, torture, and murder that has been the rule, rather than the exception in so many countries during this century?

By all accounts, including your own, you suffered just one tragedy in your life apart from your fatal illness, namely, the death of your first wife, Arlene. Other than that, you lived without a clue as to the enormous human suffering that has occurred in this age, and here, as elsewhere, you were proud of your ignorance. And thus it is not surprising that you would hold such an extraordinarily limited view of the sources of art:

"We [you and the artist Jirayr Zorthian] 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.'" — SYJ, p. 260. Is it really possible you were that ignorant about art? You continued, "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." — *ibid*.

Unbelievable. And what's this *real world* crap? Other cultures have had views of the world which were equally *real* to them. These views didn't result in scientific accomplishments but that didn't prevent these cultures from surviving for many centuries.

My third argument is less well known. You admitted that some things that people said about

art you initially thought were nonsense, but that you then you changed your mind.

“Other artists I talked to would say things that made no sense at first, but they would go to great lengths to explain their ideas to me. One time I went somewhere, as a part of this scheme, with Robert Irwin. It was a two-day trip, and after a great effort of discussing back and forth, I finally understood what he was trying to explain to me, and I thought it was quite interesting and wonderful.” — SYJ, p. 277.

Why didn't it occur to you that the situation with philosophy, and, indeed, the other humanities, might be similar? In the history of Western philosophy (I wouldn't have to explain all this if you weren't such an ignoramus about this subject) parts of philosophy have branched off into the hard sciences, parts into logic, and this process will probably continue. However, there is a central *aspect* of philosophy which I believe cannot be understood except as literary, i.e., artistic. (Many philosophers will disagree with this, I know.) Philosophy, like all art, “creates worlds”, and to do so it has to use language in a way other than the propositional one found in mathematics and the sciences. Surely, you don't believe that all sentences which “look like” propositions, must be judged as propositions! This is the naivete which Nietzsche, long before you were born, described as letting our grammar do our thinking for us. “Man is free” and “Light is energy” are not *trying to accomplish the same thing*, namely, state a verifiable truth, even though it looks, at first sight, that each sentence is in the same line of work. In philosophy, and the other humanities, it is often the case — even though the authors may not be fully aware of it — that “*x is y*” really means, “*x can be (or should be!) perceived as y*”. If you ask, “Why *y* instead of something else?”, the only answer anyone can give you is the same kind of answer as an art expert would give you if you asked why a given painter chose to paint (a) a given subject, and (b) paint it in the way he did.

So, the “dopiness” which you find in so many of those who study the humanities may be simply their need to use language to try to express things which simply cannot be expressed as propositions. If you had done any reading before opening your big mouth, you would know that this idea has been discussed and debated for many years by people who were and are as bothered as you by the unscientific nature of the humanities.

Your attitude toward politics is much less forgivable. You remember what you said:

“Then there was John Von Neumann, the great mathematician. We used to go for walks on Sunday. We'd walk in the canyons, often with Bethe and Bob Bacher. It was a great pleasure. And Von Neumann gave me an interesting idea: that you don't have to be responsible for the world that you're in. So I have developed a very powerful sense of social irresponsibility as a result of Von Neumann's advice. It's made me a very happy man ever since. But it was Von Neumann who put the seed in that grew into my *active* irresponsibility.” — SYJ, p. 132

“In the early sixties, a lot of my friends were still giving advice to the government. Meanwhile, I was having no feeling of social responsibility and resisting, as much as possible, offers to go to Washington, which took a certain amount of courage in those days.” — SYJ, p. 291.

Von Neumann certainly practiced the irresponsibility he preached, since, as you must have known, he strongly advocated ending the Cold War by an all-out nuclear attack on Russia. But you, *a Jew*, boasting, after the Second World War, of your indifference to all political matters!

The only remaining question is, What were the reasons behind all this phillistine posturing, this need to create the Nobel-prize winning regular guy which had such an appeal to the mass of educated folk? Why this need to make sure the world understood how independent of other people's opinions you were? There's no mystery:

“Feynman hated people who, he felt, used manners and culture to make him feel small.” Rev, p. 35.

This is certainly born out by the grotesque, the *laughable*, reason you gave for giving up your learning of Japanese:

“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.” — SYJ, p. 246

Lightman says, “he was intimidated by athletics, by stronger boys, and by girls, and was afraid that he would be regarded as an intellectual sissy.” — Rev, p. 34. Big, fucking deal: what smart kid has ever *not* had these fears? “Correspondingly, he avoided all pursuits that seemed to him ‘delicate,’ such as poetry, drawing, literature, and music.” — SYJ, p. 34.

And you yourself have written, “The reason why I say I'm ‘uncultured’ or ‘anti-intellectual’ probably goes all the way back to the time when I was in high school. I was always worried about being a sissy; I didn't want to be too delicate. To me, no *real* man ever paid any attention to poetry and such things. How poetry ever got *written* — that never struck me! So I developed a negative attitude toward the guy who studies French literature, or studies too much music and poetry — all those ‘fancy’ things. I admired better the steelworker, the welder, or the machine shop man. I always thought the guy who worked in the machine shop and could make things, now *he* was a *real* guy! That was my attitude. To be a practical man was, to me, always somehow a positive virtue, and to be ‘cultured’ or ‘intellectual’ was not. The first was right, of course, but the second was crazy.” — Rev, p. 81. (What exactly did you mean by that last sentence? That you were right in your belief that being a practical man was a positive virtue, but that your belief that to be cultured or intellectual was not, was a crazy belief? But you persisted in that belief all your life, so why bother mentioning it?)

I'm sure that, over the years, you have found yourself at least grudgingly sympathetic with Göring's famous remark on culture. But I have to tell you that, personally, whenever *I* hear the words, ‘Whenever I hear the word culture, I reach for my gun,’ I reach for *my* gun.

But why would a man who had achieved the highest recognition for his accomplishments that the world can offer, who had the adulation of students and colleagues, a handsome man who had the pick of any beautiful woman he wanted, including the wives of his fellow faculty members — why would such a man need to continue *into old age* his lifelong campaign against culture?

I'll tell you what I think: I think that you were increasingly anxious over the fact that many — probably most — of the physicists of your caliber were, in fact, cultured men, and you were not. They got something out of literature and philosophy and music and painting and the other arts that you did not — *that you were incapable of getting*. You became more and more aware that you were the only tone-deaf musician in the orchestra, and you couldn't stand that. This is why you found it so important to boast of your indifference to what other people thought about you, because the truth is you cared a great deal about what they thought about someone who under-

stood so much about physics, and so little about everything else. I went to school with guys like you, the only difference between them and you being that although they became excellent engineers, they didn't have your genius at physics. But they had that same dumb-shit ignorance of anything that couldn't be treated by numbers or mechanical thinking. Now we have machines that can solve low-level number problems — possibly even some of the ones that you were so adept at solving in your high school math club — and we also have machines that can do low-level mechanical thinking. But we still don't have machines that can perform equivalently well at writing poetry or music or short stories.

Of course, there have been other great scientists and mathematicians who had no appreciation for the humanities and the arts. Newton, for example, thought that poetry was merely “a clever nonsense”. The difference is that *they* didn't much care what the world thought of their shortcomings in these other areas. You did. You couldn't stand the fact that you, the great Feynman, *lacked ability* in something, that certain experiences which others, including your intellectual peers, valued highly (as highly as physics in some cases) — that these experiences were forever closed to you.

You revealed more about yourself than you thought when you wrote on your blackboard, prior to your last trip to the hospital, “What I cannot create I do not understand”. Some people may take this as a measure of your depth. I take it as a measure of your limitations.

And so you made yourself into the the Clown Prince of physics, with that Brooklyn accent, that duh, I'm just a poor dumb Nobel-Prize winning physicist, with its insufferable false humility and those fucking bongo drums. I must admit, they were a stroke of genius. Einstein may have had his violin, but by God Feynman had ... bongo drums. And those goddamn pictures of you in a T-shirt. And just to show all those cultured types that you could, if you really wanted to, not only appreciate art but be a damn good artist yourself, you took up drawing in middle age, and became a good portraitist. And that took care of the arts.

Create a comic character, a down-to-earth guy who has no time for all that culture crap, who is also a Nobel Prize winner, and how could you lose? People think that Nobel Prize + charisma = worthwhile listening to on any subject. Well...

When I first watched the TV documentaries about you, and then read your autobiographical books, I was boundlessly jealous of you. Then it began dawning on me, But here is also a guy who has never been moved in the slightest by the *Mass in B Minor* or the *Triple Concerto* or the *Chromatic Fantasy* or Beethoven's *Ninth* or Brahms' *Fourth*, who has never read Montaigne, or Nietzsche, or Moliere or Dostoyevsky, who has no idea why some people consider “The Inspector General”, or “The Death of Ivan Illitch” or “Disorder and Early Sorrow”, or “A Hunger Artist”, or “Tloen, Uqbar, and Orbis Tertius” among the things that make life worth living. Here is a man for whom the whole of poetry — think of it! — is a closed book, just so much parading of weakness and not getting the point — a man who has no clue as to why “Lapis Lazuli” and “Under Ben Bulben” and the Duino Elegies and “Prufrock” mean as much to some people as some propositions of physics mean to him. Here is a man who has never known why some people feel to the very depths of their souls that Bix Beiderbecke and Louis Armstrong and Count Basie and Charlie Parker and Clifford Brown and Thelonious Monk and many others also gave the world a kind of “Truth”. A man who, as far as we know from his writings, couldn't care less about Buster Keaton or Charlie Chaplin or *The Bridge on the River Kwai* or *Fanny and Alexander* or *Monty Python*; who can't see what all the fuss is about in all those paintings that are *not* religious and *not* an expression of the beauties of science; who, as far as we know, was never stopped in his tracks by

the sight of Michelangelo's "David" or the "Pieta".

And you had the *gall* to remark, in response to an archeologist who didn't understand how Eratosthenes could have measured the distance to the sun without elaborate scientific instruments, "Oh, how ignorant are classically educated people. No wonder they don't appreciate their own time. They are not of it and do not understand it." — WDY, pp. 95-96. Incredible.

You poor bastard, you have paid an enormous price for your genius!

Until I came across you, I had to admit, well, yes, God seems to hand out physics talent to those that will carry it well, even when they are not being physicists. Now, I know that even God makes mistakes. And so, never for a moment forgetting the greatness of your accomplishments in physics, I nevertheless have to say that otherwise, fella, you were a total jerk.

Sincerely,

John Franklin

Additional Thoughts

Feynman's autobiographical books and the two documentaries on him, made me glad, for the first time in my life, to be at home in the humanities. They made me realize how much I *knew* — not in the sense of scientific knowledge, of course — that he didn't know and would have never been able to know. I realized, too, that what I had always taken for granted, namely, that the reason why technical minds scorn the humanities is that the subject matter is too easy, is not at all the case. For the first time in my life I had to admit to myself that, if offered technical genius at Feynman's level at the price of his inability to *get the point* of the humanities and the fine arts (much less develop a profound appreciation of any of them), I would almost certainly turn down the offer.

And yet I must add that, in the years since I wrote the above letter, my opinion of philosophy has decreased to the point that I believe that, apart from its literary merits, and its occasional giving birth to new technical disciplines, and its rarely practiced critical function (as in the writings of Bertrand Russell), it is worthless. Anyone who studies Hegel via a book like Walter Kaufmann's *Hegel* — which in addition to its scholarly excellence, must be accounted a sympathetic treatment of the philosopher — and who has any background in science or mathematics, must be appalled at the fact that this man's writings furnished the basis for a philosophy (Marxism) that once dominated a large segment of the human population. It doesn't seem possible that such muddled thinking presented in a style that seemed aimed at creating the illusion of depth through almost impenetrable obscurity — that such thinking could once have been considered a milestone in human intellectual progress (and still is in some benighted circles that believe that it is irrelevant to ask, "What are our criteria for judging the correctness of these views?").

Letter to Professor Feynman