



## Unlikely Leaders

*Richard Feynman*

### **Liz Parvin:**

My name's Liz Parvin and I'm a senior lecturer here at the Open University, and I'm a physicist, of course. And my main area of physics is now medical physics.

Richard Feynman has been described as one of the ten most famous physicists of all time, perhaps best known for his Feynman diagrams in quantum electrodynamics, and he won a Nobel Prize for Physics. I think the reason I would say he was an unlikely leader is mostly because he was rather an unconventional person.

Feynman was born into a, I think what he would describe as, a Jewish working-class family in New York. His father had made uniforms and always taught the young Feynman that, really, a man in a uniform wasn't anything better than anybody else. And he didn't like to dress up smartly in a suit, and he had a healthy disrespect for people who thought they were very, very important and in high places. That's why I would not describe him as a born leader, if you like.

He played the bongo drums rather well and didn't bother about what other people thought.

When he won the Nobel Prize he kind of said, "Well, so what? I have done the work, I've done the discovery, other people are using it. That, to me, is the prize, not the Nobel Prize."

Feynman was never really interested in being a famous person and in having power.

He certainly did ruffle feathers and he bruised egos, and he really didn't mind what people thought about him.

And that played an important part towards the end of his life when it came to the Inquiry into why the Challenger spacecraft blew up.

He didn't actually want to do this Challenger Inquiry; he always avoided Washington as much as he possibly could.

And eventually, he went and asked his wife. He said, "Look, anybody could do it, they can get somebody else." And what she said was this, she said, "No. If you don't do it there will be twelve people all in a group, going around from place to place together. But if you join the

Commission there will be eleven people all in a group going around from place to place together, while the twelfth one runs around all over the place checking all kinds of unusual things. There probably won't be anything but if there is you'll find it. There isn't anyone else who can do that like you can."

Feynman was, I think, the only person on that Commission who was completely independent; someone with extremely high integrity, and also a refusal just to toe the line and to do what the Chair of the Commission wanted him to do.

And it was he who actually exposed the problem, which was the O-ring seals on the booster rockets, which were not working properly that morning because it was too cold.

And there's a very famous incident at a press conference where Feynman actually asked for some iced water. And he put the piece of the O-ring in the iced water and then, after a few minutes, produced it and said, "Look, this is what happens. The O-ring remains compressed, it's deformed and this is what happened because it was a cold day." And that, really, was the key moment, I think, in the Challenger Inquiry.

I think in science there are quite a few different kinds of leadership. There's the kind of person who makes some great discovery – Galileo, Faraday, Einstein. Then there are people who do become top managers – something like Robert Oppenheimer who led the Manhattan Project, or Carlo Rubbia who was the leader of CERN for many years. Those are perhaps leaders in the more conventional sense.

And then there are the people who leave a legacy for other people, and I think you would call them leaders as well. And Feynman definitely fits into that category.

Richard Feynman's been one of my heroes for a long time. [Laughter].