

## THE ELEANOR ROOSEVELT PROGRAM

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Description: In the interview segment, ER discusses religion and science with atomic physicist and Nobel Prize winner Dr. Robert Milliken.

Participants: ER, Elliott Roosevelt, and Dr. Robert Milliken

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[ER:] One of the pioneers of our day in atomic physics is Doctor Robert A. Milliken, who in 1923 won the Nobel Prize in physics. His views on the world today, while maybe not agreed with by everyone, are certainly worth hearing. It gives me great pleasure to introduce Dr. Robert A. Milliken. Glad to have you here, sir. (0:28)

[Robert Milliken:] Thank you, Mrs. Roosevelt.

[ER:] Dr. Milliken is now serving as vice chairman of the board of trustees of the California Institute of Technology, one of the nations' finest scientific schools. As the result of his efforts, Dr. Milliken devotes much time to two problems of the moment: peace, and the effort to show that there is no gap between science and religion. His belief is that the world is built on two spirits: the spirit of science and knowledge, and the spirit of religion. And his life is an avowal of his philosophy. Dr. Milliken, do you believe that there should be religious training in American high schools and colleges? (1:17)

[Robert Milliken:] I'm not sure that we can reconcile that with the requirements of our constitution. However, there ought to be uh re-religious nurture of all-of all young people, from my point of view. And that, in our state universities, it is accomplished by the churches, uh of all denominations, be in the larger universities and the students take very active parts in many of them in their religious life—

[ER:] I see.

[Robert Milliken:] It's where they get it.

[ER:] Well, do you feel that the approach on a campus to religious questions uh would-- had better be based on scientific reasoning or on spiritual and emotional feeling?

[Dr. Robert Milliken:] Well, anything is, both based merely upon emotional—upon emotion is likely to be bad in its influence. You've got to have a scientific approach or a rational approach in order to accomplish anything worthwhile.

[ER:] Well, do you feel that American youth tends to be more or less religious as time goes on, or not?

[Robert Milliken:] Um the facts, the statistics of the churches are the most amazing uh illustration of the continual increase in the interest in religious things, well of course, from a- from the rational point of view Uh there are at the present moment, according to the religious statistics, uh eighty-two, approximately, eighty-two million people tied in with the churches. That's more than half the population of the total country, including infants.

[ER:] Belong- belong to the churches?

[Robert Milliken:] That, those are the figures of the Federal Council of Churches for this year. A fifty four and two-tenths percent of the total population of the country is in the churches, and they—they have been increasing for one-hundred years at a rapid, much more rapid rate than the population--(3:25)

[ER:] Well, what do you mean by rational approach?

[Robert Milliken:] Uh, the rational approach, I mean that all the religious dogmas have got to be in the bible itself. Must be interpreted in terms of the conditions existing and the points of view existing at the time they were written. The-The bible can't be taken as a scientific textbook, it- it's uh but in-

[ER:] In other words, you have to take into account the knowledge the people had at that time.

[Robert Milliken:] Who wrote it? They had no other way of expressing themselves! (4:11)

[ER:] No. Mhm--[ Robert Milliken: Certainly-] And therefore uh you must uh judge, or rather, you must um accept things at the point at which you have arrived but realize that in future, people may uh change that because they may know more.

[ Robert Milliken:] To some extent but uh science is it has been the modern aspect. Our knowledge of the external world is only about two-hundred or three-hundred years old, the ancients knew almost nothing about it. Eh and uh the--all in all, primitive civilizations and some not-so primitive, like the Greek uh civilization. For example, everything was interpreted in terms of- of an animistic philosophy the--all events were supposed to be--there was a god of the woods, a god of the stream, a god of the uh heavens and they acted like human beings. Those ideas uh correspond to a pre-scientific age, that's all. And uh all the writings, ancient writings, must be so interpreted, whether they're Greek or Roman or whether they're Israelities.(5:30)

[ER:] You must in-- In other words, you really have to interpret everything according to the way that the- the uh according to the surroundings in which the people lived.

[ Robert Milliken:] Right. Uh when they-- those where superstitious ages in a sense perhaps they- they were--they interpreted everything as you know from your reading of your bible, in terms of dreams and uh prophets who were under the influence of certain spirits. In other words, it- it was uh an age of animism. That those ages are gone--the pre-scientific age.

[ER:] That time--um that time is passed.

[ Robert Milliken:] That time is passed.

[ER:] And now, young people-- well now, I'm interested in what you said about the religious trend of the day and the fact that religion is getting to mean more to more people but I don't know, I don't suppose you would have time to read some articles which Max Lerner has been writing on uh the thinking on the campus, along certain things, and he's discovered that uh, Mr. Kinsey's book has been of interest among these young people and he's writing really about the morals and the general trend of thinking, which includes religious thinking, of youngsters on the campus. And I've just been wondering whether a book of that kind is meant for more mature people and not the youngsters. (7:15)

[Robert Milliken:] Well if you're talking about the Kinsey book, I think it- I think it was an uh unscientific thing to bring out that book at the time at which it was brought out because the- uh the investigation was only certain-- half done. Not more than half done and- and- and ought not to have been put out at all, from my point of view.-

[Elliott Roosevelt:] Well, and it uh doesn't it, sir, uh pretend to be a book of scientific study, and yet it was put out for popular consumption, doesn't that uh almost puts it in the classification of uh pseudo-science uh scientific uh book and not a truly scientific endeavor.

[Robert Milliken:] Now Mr. Kinsey would object to that statement, but I would- I would think it would be pretty nearly justified to call it a pseudo-scientific thing. (8:17)

[ER:] Now you come in, in close contact, I suppose, with the young people on your own campus, uh what do you find there in the California Institute of Technology, that they are becoming more religious and thinking more about um uh religion or not?

[Robert Millikin:] I should like to answer that with at a little--at a little angst in terms of um statistics that uh were published in *Fortune*. Uh in October nine hundred and forty six, which showed that four thousand scientists, taken all in the ages between thirty and fifty, uh that is, before, when they're not yet se-senile, and when they are old enough to have a little sense, and uh more than seventy percent of the sci--they were asked three questions. One: do you consider yourself religious in the sense that you belong to one of the church organizations? Two: If not, do you consider yourself religious in the sense that you believe in the existence of a supreme being? Or, third: Do you prefer to call yourself uh non-religious? Seventy percent of all the scientists in those query-- answered in uh one or two were in the categories one or two.

[ER:] That's very interesting that you really found that they did fall in those categories. Well, now they're a little older-

[Robert Millikin:] They're thinking people, that's all.

[ER:] They're thinking people. Well, now that's a very good answer. Well, we'll have to stop for a short time, but then I am just very anxious to ask you another question.

[ Robert Millikin:] All right.

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