

a qualitative science, except one must be cautious here in one's arguing, since there are semantic traps.

I want to pause here very briefly to indicate the importance of this point. Heisenberg's philosophy is generally the one, in a very watered-down way, to which the social scientist turns. The recent history of the social sciences--I am oversimplifying here a great deal and I would no doubt be cut off at the knees by a social scientist; but I can still run fast on my knees--basically it seems to me what the social scientists have done is to say, "Aha! Look at physics, what it has done by finding quantifiable entities and using mathematics. So, what we, the social scientist, must do is to quantify what we can and use mathematics."

I would suggest that precisely those things which are most uninteresting about mankind are what you can quantify--height, weight, et cetera. And this is where I think the social scientists have gone wrong, for they have followed this definition of science. Whereas, if you take the idea of science as a view of human behavior, if you will, which can be tested, and not necessarily mathematically and quantifiably tested, then I think one opens up a much richer field to the social scientist. To be sure, he will not be able to wear his white coat anymore and use computers, but I think this is a small price to pay for some little knowledge about mankind.

In any case, here one has the escape from the quantifiable which seems to be one of the dogmas of modern science. It is a curious mixture too, of the aristocratic and the democratic. It is aristocratic in this sense; that not everyone has the creative idea; the vision; the Einstein who sees the unity of the universe; the Faraday who perhaps saw a field theory where other people were using particle theory, et cetera. There are only a few of these transcendent geniuses who can, in fact, penetrate farther than their colleagues, see physical reality in a somewhat different way, and report back to stimulate new researches in terms of a totally new interpretation. And if we have time in the question period I would like someone to ask me a question on what do I mean by interpretation. Then I will answer.

Here is the aristocratic element. Yet, you see it is also democratic in this sense; that once the vision is reported, once a Faraday says, "I do not believe an action at a distance, but there must be some medium through which forces act," then the laboratory worker can check this. He can, in fact, devise the experiments which may decide between particle physics or field physics.