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Science and the Open Channel

Through all ages men have tried to fathom the meaning of life. They have realized that, if some direction or meaning could be given to our actions, great human forces would be unleashed. So, many answers have been given to the question of the meaning of it all. But they have been of all different sorts, and the proponents of one answer have looked with horror at the actions of the believers in another. Horror, because from a disagreeing point of view all the great potentialities of the race were being channeled into a false and confining blind alley. In fact, it is from the history of the enormous monstrosities created by false belief that philosophers have realized the apparently infinite and wondrous capacities of human beings. The dream is to find the open channel.

What, then, is the meaning of it all? What can we say to dispel the mystery of existence? If we take everything into account, not only what the ancients knew, but all of what we know today that they did not know, then I think that we must frankly admit that *we do not know.* But, in admitting this, we have probably found the open channel.

This is not a new idea; it is the idea of the age of reason. This is the philosophy that guided the men who framed the democracy under which we live. The idea that no one really knew how to run a government led to the idea that we should arrange a system by which new ideas could be developed, tried out, rejected or retained, and more new ideas brought in —a trial-and-error system. The value of this method was realized as a result of the fact that science was already showing itself to be a successful venture at the end of the 18th century. Even then it was clear to socially minded people that the openness of the possibilities offered an opportunity, that doubt and discussion were essential for progress into the unknown. If we want to solve a problem that we have never solved before, we must leave the door to the unknown ajar.

We are at the very beginning of time for the human race. It is not unreasonable that we grapple with problems. There are tens of thousands of years in the future. Our responsibility is to do what we can, learn what we can, improve the solutions and pass them on. It is our responsibility to leave the men of the future a free hand. In the impetuous youth of humanity, we can make grave errors that can stunt our growth for a long time. This we will do if we say we have the answers now, when we are so young and ignorant; if we suppress all discussion, all criticism, saying, "This is it, boys, man is saved!" and thus doom man for a long time to the chains of authority, confined to the limits of our present imagination. It has been done so many times before.

It is our responsibility as scientists, knowing the great progress and great value of a satisfactory philosophy of ignorance, the great progress that is the fruit of freedom of thought, to proclaim the value of this freedom, to teach how doubt is not to be feared but welcomed and discussed and to defend this freedom as our duty to all coming generations.—R. P. FEYNMAN, *Norman Bridge Laboratory of Physics, California Institute of Technology.*

This editorial is based on an address, "The value of science," delivered at the autumn meeting of the National Academy of Sciences, 2 to 4 Nov. 1955; the address was published in Engineering and Science *(1 Dec. 1955) and is used here by permission.*

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