

AFTER-DINNER TALK

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I found myself in a position of complete lack of inspiration when I was preparing this speech. This is a very serious matter, you know, because in the dinner speeches which have been given in the last ten years (and looking for inspiration, I read many of them) everything has been said! All correlations between physics and the whole aspect of mankind have been considered - science and sociology, science and history, science and philosophy, science and religion, science and politics, everything! I must say that in the end I was slightly embarrassed because my impression was that these people, consciously or unconsciously, tried to convince everybody that physicists are very important people. This I think is true, completely true, but to advertise so much is a little bit embarrassing. I then reconsidered what I could say and the only answer I found was the following: if you don't mind, tonight I shall speak on physics as a personal matter; what physics means for a man like me.

Well, I have to justify this statement. When I was a young man and very fond of oriental philosophies, mainly to be very charming with girls, I was deeply interested in Confucius, Buddha, and so on. Unfortunately, I do not remember too much of this broad culture. Evidently it was not very deeply absorbed. However, I still remember a statement by Buddha. He said: "I cannot teach anything, I can tell only how I lived". This, after all, is not so modest, but he was Buddha. I do not pretend to be in that position, but frankly I want

to say that when I decided to be a physicist it was merely by chance. I was pushed into physics by the fluctuation of life, and actually for many years I very much regretted this decision. I thought that I could have been good at painting or medicine or anything else but not at physics; probably I was right. However, after 20 years of physics, if I were again in the position to choose, I would choose to have this kind of life. I will now try to explain why.

It is very simple. Culture has many meanings. Going in the directions I mentioned before, it has a great sociological value. To me it also has a very personal aspect. Culture is one of the strong forces which I have within myself to have a decent life and to be a civil man. This is very simple. I have my own definition of culture which I believe is common to all of us. Culture is essentially the possibility of having within ourselves the tools with which to rebuild, to some extent, the spiritual experiences of great men who have lived before us. When you are listening to a record, when you are reading a poem, you just do not do anything else. In the limits of your culture you are pushed by this great man (who, fortunately for you, lived in an earlier era) to that level in which he was capable to live with your very modest forces. Well, physics, and usually science, is one of the best kinds of culture, and I would like to make a series of brief statements as to why I believe that this is a kind of culture which in this respect is better than many others.

Something like 20 years ago I read a book by Aldous Huxley entitled "Two or Three Graces" where he described a lady who had three lovers. One was very profoundly versed in literature, one in poetry, and the third in painting. All very artistic activities and this lady, according to whichever lover she was entertaining, was also very clever at painting, or literature, or poetry. I do not suppose that this is a true story, but it is something which one may consider possible in a so-called humanistic culture. Humanistic culture is a very serious

business but it can be understood in different ways at different levels and be a source of self-deception. You could believe to understand it rightly and actually you just live on the surface of it. Because it is irrational, you have no measure of this connection between you and these great minds. You may claim to have established a contact with a kindred spirit or to have broken now and then the painful sense of loneliness which we all must feel. In parenthesis, this power to overcome our isolation is to me one of the main aspects of the humanistic culture. The culture you acquire enables you to alleviate the sad moments in which you are not strong enough to tolerate your loneliness. However, reading a poem or listening to a record now and then (if you are not a poet or a musician, in other words, if you are afflicted as I am, by all the superficiality of an amateur) leaves you with a sense of instability which may be worse than the loneliness.

In science such self-deception is not possible. The culture of science has the very satisfying feature that it does not give you the illusion that you understand, if you do not. It gives you disquiet up to the point in which you start to understand; and when you start to understand you are entitled to feel that you have established a contact with another mind, which is extremely pleasant.

There are other aspects of science. You are allowed to be irrational because also science starts from free flights of imagination. However, this cannot stand for ever. Irrationality is allowed at the beginning but finally you have to keep yourself systematically under control because you approach something which may be very limited but has to be communicated to others in rational terms and has to be consistent with what is already known. You may go a step further and make this approach the basis of your ethics, as far as you can. Then you may feel that if you are not born an honest man (very few are those born honest) you can still behave as an honest man, because you are rational, consistent with yourself, and as responsible as you may be of your

actions and their consequences. After all I am inclined to believe that the real basis of morality is to be consistent with oneself, and science is master in teaching this attitude. Well for all these reasons I will not now change my decision, the decision that I took 30 years ago and purely by chance.

Now I am an old man and there is another problem for me, which is to teach to others the fondness for this kind of culture. This is not so simple. Physics has changed a lot in the course of my life. Probably you could teach others as well as I can or better. You are all very young; however, I would like to tell you that I consider that besides the ambitions that you have, that you must have, for a scientific career, it is also very important for you to consider yourselves responsible for the spreading of this culture, as a personal richness that can be given to everybody.

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