

You have scientific administrators who, again, want to quantify. How do you know, when you are running a laboratory with 175 men, who the best ones are? Well, one easy way is to count papers, and so you quantify your personnel. You see that Joe has published 22 papers and Albert has only published 1. So, Joe is 22 times better than Albert; it follows logically.

The result of this, of course, is this famous pressure to publish, which, again, is clogging the lines. Here again, quantitatively we are losing sight of the fact that science is a creative activity. I do not know what to suggest. I have only criticism and no answers.

As for the Soviet Union, if you read the papers you know as much as I do about it. My impression of the Soviet Union, because I am not a Sovietologist, is simply this; there has been a long tradition of science in the Soviet Union; a European tradition; it is not, I think, peculiarly Russian. Children are exposed to science. I do not know how it is stressed; I would suspect it is very much the same way as it is taught here; learn the facts, memorize the textbooks; give facts to the teacher. You do experiments; that is the crucial point.

I am impressed with one small fact that I dug up in a totally different way. I just finished writing a biography of Michael Faraday and in this I tracked down translations of Faraday's work. I was intrigued to find that in the equivalent of the fifth grade in Russia, Russian schoolboys read the English version of Faraday's chemical history of the candle. This is terribly clever of the Russians. It gives them English and it is also a great classic in science writing. And it is an exciting book.

This shows a little imagination, which worries me, because this is an unusual commodity. In any case, I cannot comment more than this except to say that certainly in theoretical physics, which is all I know, the Soviet Union is doing very well. Certainly, I think it is equivalent to what we have. There are areas that, for obvious reasons, are in poorer condition; genetics is a good one. If you are a bright young student and want to go into genetics you should have your head examined. Where there are political implications it seems to suffer.

**QUESTION:** Earlier you referred to the meaning of interpretation. Would you like to expand on that?