

## **XIV Symposium on Advanced Problems and Methods in Fluid Mechanics**

**Błażejewko, September 3-8, 1979**

THE FOLLOWING talk was given during an informal gathering of the participants of the symposium:

Those of you who have looked at our notice board found perhaps a table of dates and places of our previous symposia, showing that the first symposium was held in 1954, 25 years ago. Even for us organizers it is difficult to believe that so many years have elapsed. But it is not our intention to celebrate this anniversary, nostalgic remainders are out of place. The health of the symposium should be measured more by the youthfulness of participants than by the age of the series and on this basis our symposium is not only in good shape but during recent years has been getting better.

Neither do we intend to read a lecture on the history of our symposia — this is not our task, fortunately — but we should like to recall some dramatic changes of social attitude towards science witnessed during this period of time.

Our first meeting in 1954 coincided with the beginning of the era of détente — a long awaited spring after a winter of cold war. Scientific contacts between East and West were almost non-existent and scientists on both sides were anxious to establish normal relations, to meet each other personally and not only on the pages of scientific journals. Thus our first few symposia served as a trial for future wider contacts and closer collaboration between fluid dynamicists from countries with different social systems.

The decade 1955-1965 was in a sense a golden age of science. Society had faith in it: science helped during the war and it was expected that it would be of similar value in the time of peace, in liberating humanity from plagues diseases: from hunger, social ills and natural disasters — even from wars, because science provides means of discouraging anyone from starting a new great war.

Science was in the ascendent. It became big science and megascience. It demanded more and more money, institutes and laboratories grew in size and number, and there was a population explosion of the scientific community. It was argued that it should continue this way because results of scientific discoveries are unpredictable and therefore the scientific search should be as wide as possible: there are many eggs in the basket; no one knows how many of them are golden eggs and we must search for them.

Fluid mechanics was at that time in the front rank: after all it was at least partly responsible for the development of rockets, high speed aeronautics, for launching the first sputnik early in Autumn 1957 and for all the staggering successes in cosmonautics that followed. The extensive, accelerated development of fluid mechanics did not bypass our small symposium but it looked like a Cinderella between the giant meetings so fashionable at that time.

The wave of disillusionment with science came in the middle of the sixties. People began to question the benefits of past scientific achievements, and to doubt that science is able to solve the main present and future problems. If we invent a new type of bomb—argued those who questioned the role of science in preventing wars—what then? our enemies will have it also in a year's time. Science is not able to maintain peace, it simply shifts the level of military preparedness in equilibrium up and up and this equilibrium is less and less stable. It is true that science has helped to fight many maladies and that due to science we now produce more grain than ever before. But there has been a heavy price for these successes—our ecological system is on the edge of stability, the number of starving people is still rising, the differences between the poor and the rich can lead to catastrophe. Moreover science has proved to be helpless in the face of the important social problems. The collaboration of science and state—which continues—has not brought politics closer to science. On the contrary it has corrupted science itself: as a consequence science has been stripped of its tested traditional structure and lost its moral authority.

We are stating these arguments in an exaggerated form, but there is some truth in them. Since about 1965 science has been on the defensive; since that time it has had to justify all its needs and even to justify its very existence. The trouble is that those who have the power to make the relevant decisions are usually concerned with science only to the extent that it serves the economy of the country, its military purposes or its prestige. What answer can be given by the scientists?

One answer has been given by dr Robert Wilson, the Director of the National Accelerator Laboratory, who applied for 200 millions dollars to build a new accelerator. When asked by the Committee of the Congress whether the accelerator would contribute in any way to the security of the country he replied: "No sir, I do not believe so. It only has to do with the respect with which we regard one another the dignity of men, our love of culture (...) I cannot in honesty say it has such applications (to security or to the economy) but it has to do with whether we are good painters, good sculptors, good poets. I mean all the things that we really venerate and are patriotic about in our country. In that sense this new knowledge has everything to do with honor and country but has nothing to do directly with defending our country except to help make it worthwhile".

One may doubt whether this type of answer helps to get what is requested and many of us know that the usual answers look very different. But we should certainly applaud dr. Wilson's honesty and many of us feel some sympathy with his point of view.

Now when the XIV-th Symposium is over we feel sure that it accomplished its scientific purposes and also served to establish friendly relations between scientists present at our meeting thanks to the efforts of all its participants.

*W. Fiszdon, R. Herczyński*