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PEOPLE AND SCIENCE - IS THIS PEOPLE'S SCIENCE?

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"Wanted: a new way of thinking" was indeed an eye catching title. As my eye ran through the article, certain key words were most conspicuous - knowledge, actions, wisdom, co-operatively and rationally. Maxwell's definition of wisdom warrants a closer examination (1) -

> being defined as the capacity to solve problems of living so as to achieve what is of value, for oneself and others (wisdom thus including but going beyond knowledge).

Often an accusing finger is pointed at science and technology. In many instances seen as the cause of all evil associated with pollution, destruction of natural habitat and resources and for creating differences in wealth and well-being. But what is science then?

Certainly it is a way of finding out about life, the world around us, and the universe. It is based on curiosity, challenging the status quo and of accepting that knowledge is in a state of flux. Two aspects are critical in any scientific endeavour. That what we think we are investigating is truly what we are measuring. Secondly, that the results are reliable and if the experiment were to be repeated, the same data within acceptable limits, would be generated again. Therein lies the power of science and also its limitations.

A glimpse into the life of a research scientist such as Peter Medawar was, illustrates this approach to seeking truth. Investigating skin grafting in cattle, he wrote (2) -

> ...these results were totally anomalous and impossible to reconcile with our knowledge of the natural history of skin grafts in other animals we had studied. We accordingly repeated the entire trial again and started from the beginning; as we got exactly the same results we had to conclude that cattle tissues were an exception to the general rule.

Commenting on the limits of science, Sir Peter explains why science, though seemingly all powerful was quite unable (in principle) to answer those ultimate questions which have to do with the nature, purpose and destiny of mankind (3) -

> I believe these answers are to be found, if at all, in religion, metaphysics, or imaginative literature.

Do we teach science in this manner in our schools, yes, even in our universities? Interesting to read the introduction to what was considered to be a most innovative science programme in the sixties - Science: A Process Approach. In justifying their approach, the authors state that the procedures of scientific enquiry are "learned not as a canon of rules but as ways of finding answers". (4)

Let us return to the question of people and science. Consider medicine and people and how Lewis Thomas describes this modern dilemma so beautifully (5) -

> One of the hard things to learn in medicine, even harder to teach, is what it feels like to be a patient. In the old days, when serious illness was a more common-place experience, shared round by everyone, the doctor had usually been through at least a few personal episodes on his own and had a pretty good idea of what it was like for the patient ...We are not used to disease as we used to be, and we are not at all used to being incorporated into high technology.

The procedures of scientific enquiry are fundamental to research and if these requirements are not met with the necessary rigour, then knowledge thus acquired is scientifically invalid. The ethos of science teaching will be the same, whether as part of People's Education or

any other system. But how this knowledge is interpreted and utilised is indeed a different matter. Maxwell explores this notion further (6) -

> It is always what science enables people to do that helps to solve our human problems not the knowledge or technology itself.

The uneasy feeling arises that although science is part of our complex web of living, the effect of how such knowledge is used could be determined by other factors such as ideology, a search for power, or plain greed. This point is illustrated so starkly in the emotions described by Bronowski standing at the pond of Auschwitz prison camp (7) -

> into this pond were flushed the ashes of some four million people. And that was not done by gas. It was done by arrogance. It was done by dogma. It was done by ignorance. When people believe that they have absolute knowledge with no test in reality this is how they behave.

The focus moves back to wisdom. For a plea that the pursuit of knowledge and technological know-how not be separated from the imaginative and critical thought about the problems we face today. These are some of the sentiments expressed by scientists in the eighties. People's Science too has arisen during this era of questioning the status quo. How compatible are these ideas I wonder?

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3. see Maxwell, op cit.

4. American Association for the Advancement of Science (1968), Science-A Process Approach Commentary for Teachers, Third Experimental Edition, p. 1.

5. Thomas, L (1984), The Youngest Science Notes of a Medicine Watcher, Oxford University Press, pp.220-221.

6. see Maxwell, op cit.

7. Bronowski, J (1973), The Ascent of Man, British Broad- casting Corporation, p. 374.