

FUTURE OF THIRD WORLD SCIENCE AND SCIENCE OF THIRD WORLD FUTURES

The development of science in the Third World in quantitative terms has been very small. Only a very small percentage of the world scientific research is done in the Third World and a still smaller percentage on the Third World problems. Qualitatively too, Third World science is hampered because science is a dependent culture emanating from the European metropolis. Consequently because of this cultural dependency, bold new fronts tend not to be opened out in the Third World and what are considered scientific problems in the Third World are but sub-problems of those in the metropolis.

The big push in metropolitan science in the last forty years or so has been due to the growth of big science associated with government sponsored science during world war II and the subsequent cold war. In short, in most big countries, science sponsorship and development was tied to the needs of military

weaponry (euphemistically called "defence"). Recently the cold war between big super powers has tended to die down and is tending to be replaced in its wake by a new cold war between what has been called the North and South, that is between the former colonial countries and their ex-colonies and neo-colonies. Consequently some defence research of the rich countries has been diverted to this new reality. Thus studies in rich countries have dwelt on the use of nuclear warfare on Third World countries as well as on the use of food as a weapon against the Third World. A few years ago, the reality of some of these aspects was aptly noted in the case of Vietnam where a "small" hot war against a Third World country saw as much scientific expenditure and lethal weaponry used as in the Second World War.

The future of Third World science should take into account these three strong contextual factors, the lack of quantity, dependency (and hence lack of quality) and the need for strategic defence of Third World interests.

All Third World countries are aiming at an increased quantity of science. The target would be to increase the amount of scientific workers in relevant fields so that they reach the "critical masses", that is still viable scientific sub-communities are created. This could be done by not merely increasing the number of scientific personnel and providing facilities for research but also by dealing with the braindrain which pulls mature scientific personnel away so that "critical masses" in scientific communities are prevented from forming.

Increasing the quality of Third World science meaning increasing the number of scientific breakthroughs of a fundamental nature requires a different approach. It requires a sense of self-confidence, of a view even of historical destiny of the Third World, and above all it requires boldness in charting new fields. It may require veering away from big formalised team science as it emerged in the West. It would require pulling out of research fronts charted by metropolitan countries and experimenting with new paradigms and exploring by-ways of knowledge which our countries demand.

FOOD AS A WEAPON

"Food is a weapon. It is now one of the principal tools in our negotiating kit", said United States Secretary of Agriculture, Earl Butz, last November. A CIA report prepared shortly before the World Food Conference recalled that the Third World food shortages "could give the United States a measure of power it had never had before (.....) in bad years, when the United States could not meet the demand for food of most would-be importers, Washington would acquire virtual life-and-death power over the fate of the multitudes of the needy (.....). In the poor and powerless areas, population would have to drop to levels that could be supported (.....). The population 'problem' would have solved itself in the most unpleasant fashion".

An interesting area where quantity and quality has been combined for a significant breakthrough is the case of China where an attempt has been made to use the whole country as a common scientific pool. A telling witness to this approach was the recent prediction of earthquakes in China.

This approach has similarities to the mood of Europe in the 16th century as it was poised for take-off in many fields. Today we see in economic and political fields a strong Third World assertion similar in some ways to the expansionist stirrings of Europe at the beginning of its expansion. The need for Third World science is to transfer this new mood of assertiveness to the area of conceptual boldness just as Europe did a few centuries ago.

On the one problem of strategic defence the need for immediate studies to guard our self-interests are called for. In the economic field, such studies have been made in forums like the UNCTAD, but in the field of science and technology such strategic studies have not yet been worked out. What for example we require now is if there is a scientific strategy for use of food as a weapon against us, to develop counter scenarios. If there are actual plans for the use of military weapons against us we should plan our response. Should we although poor as we are, develop new and effective weapons as counters to these threats?

Perhaps the strongest weapon in all this is the weapon of confidence, self-reliance and conceptual boldness.