

AT THE INTERNATIONAL SYMPOSIUM ON TECHNOLOGY, CULTURE AND  
DEVELOPMENT  
UNIVERSITY OF MALAYA (UM), KUALA LUMPUR

12 DISEMBER 1983

Your Excellencies;  
Distinguished Guests;  
Participants of the Symposium;  
Ladies and Gentlemen.

I am honoured and delighted to have this opportunity to be with you on this auspicious occasion. It is a pleasure to welcome each and everyone of you to Malaysia and in particular to Kuala Lumpur. I wish you every success in your deliberations and I hope you will find time to see a part of this country.

2. This is perhaps the first time that Technology and Development are to be linked and studied together with Culture. The tendency has always been to forget culture entirely when dealing with technology and development. The result is that importation of foreign technology and concepts of development has been disappointing to a lot of developing nations. As a newly developing country, which is fast industrialising and undergoing change, the theme of this Symposium is significant and very relevant to us. The interplay of technology, culture and development, while it can be complementary, can also tear a society apart if not fully appreciated, integrated and guided.

3. We know that man does not live by material gains alone. We must have a reasonably satisfying spiritual and cultural life. We should not forget that man requires spiritual nourishments in addition to the material necessities in order to enjoy a decent existence. It is probably this realisation that has influenced the organisers of this Symposium. I look forward to the results of your discussions, which I hope will not be entirely academic but will give due consideration to the need for practical application, particularly in the context of the complex Malaysian society and environment.

4. Indeed, I am rather envious of all the participants who will have a splendid opportunity to learn and exchange ideas concerning this rich mixture of vital topics. As this is not going to be my privilege I hope you do not mind if I take this opportunity to voice some of my thoughts on these subjects.

5. Firstly let me say a few words about culture and its role in the advancement of technology and development. What a society is is truly the result or the product of its Of course if we care to go further backwards we will find that the value system of a society is influenced by its environment. But the environment can be shown to affect different societies differently. Thus continuous hardship may either reduce a society to passive fatality or it may induce a hardiness which enables the society to overcome the challenges of life.

6. Assuming that the environment has produced passivity and a fatalist philosophy, the value system will be such that innovation and inventiveness will be uncommon. Indeed lethargy normally develops. The struggle against adversity will not characterize that society. In the really bad cases, the society is given to extreme self-pity and dependence on others.

7. Self-pity and dependence on others is in fact a characteristic of a lot of under-developed or developing countries. Such countries are usually lacking in discipline and the will to fight adversity. The value systems and culture of the society in these countries are influenced by the basic philosophy of dependence on others and passivity. There is no reaching out for knowledge and advancement. Rather there is a continuous clamour to be given everything in the ready-to-use state.

8. For such a society technology transfer is not possible or at least is not easy to achieve. The attitude militates against it because the acceptance of new technology requires a certain degree of discipline and desire for change and self improvement. Basically a transfer of technology is like the acceptance of a fishing rod in order to get food instead of getting the food itself when that is what is asked for. Few would have the patience to go fishing when hungry. Similarly the passive society would not want to learn to make an electric fan when it is hot. It is easier to buy or be given an electric fan. This is a

simplistic analogy of the cultural resistance involved in the transfer of technology but nevertheless it is an apt analogy.

9. The point that is being made is that before technology can be successfully transferred or while it is being transferred, the cultural resistance must be overcome. This can only be done if there is an understanding of the culture of the transferee community, or better still the differences of the cultures of the transferors and the transferees. If there is this understanding and the right allowances or preparations made, the transfer of technology will succeed. If culture is ignored, there will be resistance and failure or insignificant success at best.

10. That is why I am very attracted to the theme of this symposium. It is the first time that culture is being discussed in conjunction with technology and development. Hitherto there has been much talk on the need for technology transfer and the role of the transferor. The receptivity and capacity of the transferee has not received much attention. I hope this symposium will give this aspect their serious attention.

11. On the question of the transfer of technology itself. I would like to look back into history, our best teacher. Over five thousand years ago, the Egyptians discovered the technique of glass blowing. This technique spread through the Mediterranean, Europe and Asia with very little improvement until recent times. There was no clamour for a transfer of technology nor any organised effort to do so. Nevertheless technology transfer did take place and eventually improved upon. Mass production techniques for the manufacture of glass tubing and plate glass have now been devised and perfected. In navigation, the Arab travellers perfected the astrolabe, while the Europeans learned about the compass from the East. These are striking examples of the dissemination of technology. The social and political consequences of this diffusion are well known.

Ladies and Gentlemen,

12. Today, the so-called third world countries are striving to achieve rapid material progress by wholesale importation of a variety of technologies from the advanced countries. However, analogous to the process of the life sciences, technology cannot always be transferred without

considerable adaptation. The receiving country has to meet one vital prerequisite: trained manpower, before it can successfully absorb an imported technology. This principle seems to be commonsense, yet it is often forgotten in the surge of national pride and personal greed that lead to excessive absorption of foreign technology. The results have not been entirely to the good of the recipients' societies. If we look closely we will find that the absorption of foreign technologies implies and involves cultural changes. If the cultural changes are incompatible with the existing culture then disorientation and confusion results. Needless to say a disoriented and confused society is not the kind of society that is desirable.

13. Perhaps it would not be irrelevant for me to refer briefly to the pricing of technology. No technology is too dear if the resulting outflow of economic benefits exceeds its aggregate real cost. On the other hand, no technology is too cheap if it involves a seemingly unending entanglement with servicing costs and inventories that ultimately impoverishes the recipient and render it more and bearing gifts". I believe this refers to the story of the Trojan Horse. There is a significant precept here for all the newly-developing countries.

14. Developing countries have to be careful not to acquire obsolete technology which some advanced countries may wish to dump on them. In finding a fair and reasonable price for purchased technology, a third world country has to take into account not only what it must pay the supplier, but also the whole of the real costs involved in adopting the technology and training local manpower to operate it.

15. It is my observation that the more dynamic the pace of modernisation in a country, the greater will be its need for new foreign technologies. Technology in development is not a one-off affair. It is a flow with an exponential growth rate. Any country which hopes to be a substantial recipient of the new technologies developed by the advanced countries must have an expanding capacity to absorb more of such technologies.

16. I have spoken of resources including manpower as prerequisites of this absorptive capacity. Now I will turn to one of the most critical aspects of economic progress. This is popularly known as "R & D", or Research and Development.

17. I would emphasise that while some 'R' and a little 'D' may have to be imported all the time, there is no real substitute for sustained R & D at home. In a world dominated by national self-interest, it would be naive to expect any country to carry out R & D for the benefit of another country. We must carry out our own R & D to meet our own needs. Any work done by other countries should be regarded as a bonus which may not be depended upon as a reliable source.

18. I do agree that research always seems to be rather expensive. And, good research must be terribly expensive. Yet, if we are to succeed in development, we must invest substantial resources in research. The high costs appear to be so because excellent work frequently needs to be spread over a long period before its applied value ultimately becomes apparent. Then an even longer period is needed before any application can yield worthwhile economic results. Third world countries must therefore be selective in research and may perhaps be forced to limit themselves to researches in application before they venture into pure research. It must be remembered that with such a wide field open to research there is no way for any country to cover every aspect of research. Somewhere along the line it will have to buy the results of the work of others, no matter how advanced and rich that country is.

19. Our primary problem is to identify areas in which we wish to disburse our limited research funds. Whatever is funded should be adequate. Here we enter the domain of politics and priorities. Research results are the tasks of scientists. Priorities for funding are the business of the policy makers. Harmony between these two parties will optimise progress.

20. Above all, in Research & Development the greatest problem is to frame the right question so that the proper lines can be laid down for rigorous empirical enquiry. That problem can be overcome if there is an understanding of the development needs of the country.

Ladies and Gentlemen,

21. The sponsors of this symposium -- Honda Foundation of Tokyo, Centro Febbraio '74 of Rome, International Association of Traffic and Safety Sciences, (IATSS) of Tokyo, and Institute of Advanced Studies, University of Malaya -- are people who are very knowledgeable in the subjects that have been chosen. That they have chosen to hold this symposium in Malaysia, a developing country, is significant. The participants too are people eminently qualified to discuss this important interaction between the sciences and what is in fact the basics of the humanities, that is culture.

22. I have no doubt that there is much to be gained from this symposium, for the developing world and for Malaysia in particular. I look forward to the results of your deliberations. I look forward also to the follow-up actions that will have to be done if the symposium is not going to be merely an exercise in philosophical thinking.

23. Finally I would like to wish you a very warm welcome to Malaysia and an enlightening experience. Now I have great pleasure in declaring this International Symposium on Technology, Culture and Development open.

Thank you