

**SPEECH BY TUN DR MAHATHIR BIN MOHAMAD AT THE CONFERMENT OF
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“Future of Asia, Science and Technology”

Firstly I would like to thank RIKEN Institute for conferring on me its Honorary Fellowship. It is indeed a great honour to be recognised and to be associated with such a great institution.

2. I also feel greatly honoured to be invited to give this talk on such an important subject namely “The Future of Science and Asia”.

3. Today we see science as the solution to all our needs. We think with some justification that there is no limit to what science can do or provide us. We have only to name the objective and scientific research will lead us to it.

4. Unfortunately this has given us such a sense of power that we have become arrogant, and we have disregarded morality in the application of our scientific knowledge. Very frequently we use science for doing what is evil.

5. Japan and the Japanese must be particularly conscious of the application of science for evil. If Einstein had been asked to kill 100,000 Japanese men, women, children, the old and the sick, he would probably recoil at the idea. But his scientific findings and theories did in fact kill 100,000 Japanese, innocent non-combatants who had done Einstein, and the Americans no harm.

6. In human society killing people is regarded as a very serious crime deserving of the most severe punishment. But we gladly fund research in science to enable us to kill a huge number of people – and we did not regard the massive killing with these weapons as a crime. We do not regard the people who invented these Weapons of Mass Destruction as criminals.

7. If we care to examine we will find that every scientific discovery has been used to enhance the power to kill people. Every advance that we make in scientific knowledge, be it in chemistry, physics or biology has been used to increase our capacity to kill. And we know that we have never hesitated to use these weapons to kill.

8. The steam engines, the internal combustion engines, the jet engines and now the rocket engines have all lead to the development of more and more destructive weapons. Now we have mastered wireless or radio control from great distances and what we see are the unmanned vehicles which can deliver death and destruction to more people at no cost in lives to ourselves. We are now working on weapons for war in outer space and later there would be weapons installed on the moon and the stars, to be launched against targets on

earth and if there is a war between the planets and the stars we would be able to kill and destroy everything there too.

9. Science has no more moral values. We are going to play God and create new life forms, clones etc which we will again develop for use in our wars, in killing and destroying each other. Already the cinemas and television are showing stories of future wars where robots would kill people and destroy cities. This may be fiction today but we know many of the fictions in the past have already become reality. No doubt the star wars will become realities in the future. The movies, television shows and books will work on the minds of our children who will grow up to think of wars, killing and destruction. If they become scientists they would work on newer and more destructive weapons.

10. Science is the greatest discovery in the field of knowledge. It was initially referred to as a branch of philosophy. But the methodical study of life and matter free from superstitions has enabled men to make better use of all natural material and phenomena on earth. And this new field of knowledge became known as science. Since then superstitions have been eliminated in every field of human knowledge and the human race has made tremendous progress in understanding the true nature of the environment he lives in.

11. The early scientist believed that this new area of knowledge would enable us to improve the quality of our life. Initially the main objective was to turn base metal into gold. But soon scientific research spread into other areas which might help improve the capacity and quality of life.

12. Today we know that we have only to determine what we want to produce and if we provide sufficient money and scientific manpower for research and development we would be able to achieve our objective. Brilliant inventors like Edison or Bell are not always necessary today because with enough funds and scientific manpower we can methodically analyse and synthesise things even at the level of atoms so that eventually we will come up with the answer or the products.

13. In medicine for example we can methodically examine compounds which we break up or synthesize and we are likely to come up with some useful drugs. But why have we not found the cure for cancer or HIV-Aids etc. This is because these are not our priority. Our priority is to kill people. Our money and our scientist have been programmed to focus on research and development of weapons. But if we decide that our priority is to cure diseases or to produce something to make life healthier for people, or to control the weather, than if the money presently allocated to research on weapons of greater mass destruction are re-allocated and the research scientist redirected to these new priorities and instructed to focus their research on these items, there can be no doubt that we would shorten the time taken to discover, develop, test and produce these cures

at a price that even the poor can afford. But we are not because curing people is not our priority. Killing people is.

14. There are in fact many other problems which require the attention and the research skills as well as the money of the rich countries. We need for example to be able to control the destructiveness of natural phenomena like earthquakes, storms, floods, droughts etc. We may not be able to establish complete control but we can mitigate the effect.

15. We know the eruptions of volcanoes occur because of the build up of pressures within. Perhaps it would be possible to provide vents which would allow the pressure to be reduced continuously over time, to direct the flow of lava, even to utilize the heat for power generation etc. The technology would not be far different from drilling for oil or producing thermal energy.

16. We need to reduce the burning of fossil fuels. One of the ways is by the development of hybrid vehicles. Pure electric vehicle would still need electricity to be produced somewhere, probably by burning fossil fuel. One day the world's reserve of petroleum will be exhausted. Even before that, alternative ways of power generations, with wind and wave, the differences in the temperature of water in the deep sea and flowing water need to be researched and developed.

17. Today's concerns is over power and fossil fuel. But water will be a problem in the near future. We have developed ways to desalinate sea water, and suddenly the waterless desert areas have developed into great cities. It is a fact that some countries have more water than they need while others have hardly any water. We know that snow is the best form of water storage. What is more snow melts into water continuously. We transport oil and gas for thousands of miles through pipes. Why are we not transporting water over thousands of miles from land with abundant melting snow to the arid areas of the world? Not only will we be able to provide drinking water but enormous areas of arid land would become green as food crops are grown.

18. We may not be able to control weather but we may be able to reduce the damage caused by storms, of floods etc.

19. Truly there a lots of things that can benefit from science for the betterment of human life.

20. The population of the world is now more than 6 billion. The world is really becoming overcrowded. If we succeed in prolonging life through better health and a less disaster prone environment, the population of the world would not only increase but there would be many old people. Science should be directed at delaying the onset of senility and extending the productive life. At the same time those suffering from senility should be helped to become less dependent on others. With this we can put up with an overcrowded world. Still by the year

2100 we may have as many as 10 billion people in the world. We need to think about how to deal with this situation. Do we really want a lot of people age between 150 to 200 years?

21. The Chinese tried to limit their population growth by decreeing that each family can have only one child. Unfortunately the Chinese prefer male children. With the ability that science has given us to detect the gender of the embryo very early, the females are being aborted. Today there are millions more males than females in China.

22. If this is carried to the extreme the Chinese race would be wiped out, as there could be no women to bear children. Perhaps we should clone Chinese females. But here a great moral issue will trouble the human race.

23. This idea of one child one family is not quite the right solution to population growth control. Science must find a better way to prevent over populating planet earth.

24. Then there is the problem of drugs. Crime rates have risen everywhere because of drugs and human productivity has gone down. Science must find a way of preventing or ending addiction, of modifying the opium poppy, of making the human body reject these drugs.

25. Clearly there are a huge number of things that science can focus on and resolve for the good of humankind. But most scientific research, most of the money allocated for research and development, most of the scientific manpower are directed at inventing weapons of war, and how to kill more and more people more efficiently. There are also other scientific researches which are really criminal and unethical.

26. What we need now is a return to sanity, to resurrect moral values. If this world and humanity are not to be destroyed by science than we need to agree on an international scientific code of ethics or morality.

27. This is not easy because we do not want to stifle scientific research. Nevertheless we need to do this. We need to have an International body to oversee and licence certain scientific research. It should have jurisdiction over every country. We cannot afford to have one-sided agencies like the International Atomic Energy Commission, which ignores the R & D in nuclear weapons by the Nuclear Powers but obstruct even the peaceful use of Nuclear energy for poor countries.

28. Asia is older in terms of civilizational development. It is usually conservative – and much more given to preserving traditional values than the West.

29. In the effort to formulate and apply better moral values to science and scientific research and development Asia must play a bigger role and insist on the world respecting the moral codes.

30. The failure of the United Nations is due to the most powerful nation in the world ignoring the authority of the United Nations. Without the backing of powerful nations all international institutions will fail. Today with the emergence of only one world super power, it would be impossible to draw up a code of ethics for everyone because the super power refuses to abide by the code.

31. Multilateralism has failed. We need to go back to the old game of balance of power. There must be three world powers, not necessarily of the same strength. Each of these three must enter into a solemn agreement to curb any one of them from disregarding internationally agreed norms. At any one time there would be two world powers to confront any one power which ignores the International Law.

32. It is not the perfect solutions to the failure of democratic multilateralism. But the world would be totally destroyed if there is a war between these three great powers. That should be sufficient to deter the use of violence when a great power abuses International agreements.

33. One of the great powers must be in Asia. It is not necessary that it should be just one country. It could be a coalition or alliance.

34. Asia is an important player because the peoples of Asia have largely retained their moral values. Perhaps Asians are too conservative. But we need to temper progress with tradition.

35. In human society change is inevitable. But change is not always good. Certainly in the application of science to war the change is for the worse not for the better.

36. The world is too Eurocentric. The Europeans believes that all conflicts can be and must be resolved through contests where the winner takes all.

37. It is time that we discard contest in the solution of our conflicts. It is time that the solution to conflict is not through the determination of who is the winner. It is time that the solution is in favour of both, in a win-win result. Rather than contest there should be compulsory negotiation, arbitration, or judgement by third parties.

38. In the effort to regulate science and its applications, Asians must push for a no-war no-loss solution. Asia has the capacity in science which is equal to that of the West. Asia therefore has clout. We should use this clout to create a better

world. The code governing scientific research and development, agreed upon by the three great powers will achieve this.

39. Unless we realise this the future of Asia, science and technology is bleak.
