Need for ethical purposes of science and technology

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IT IS A acknowledged fact that science is a systematic study of the physical world, and technology is the application of knowledge, so obtained to real life problems.

Since the Industrial Revolution, technology has assumed the status of a social institution, with its own values, inner logic and agenda etc.

To appreciate the significance of changes that have been brought about by science and technology, it is only logical that we look at things associated with them and ask ourselves whether or not there is any genuine justification for adoption of these changes.

In this context, Rafiq Mirza (Impact International, 1/1997), draws our attention to a few items of daily use. In the first instance, he takes the case of television and remarks that even the poorest of countries possess televisions. One wonders who decided to spend millions of dollars in setting up expensive production and transmission facilities. This is quite an enigmatic problem and as such offers no easy solution.

Similarly, we may ask as to who decided for the Muslim government to provide moral- free entertainment at the cost of good education. Presumably much decisions are accepted on the basis of compelling technological imperatives.

Rafiq Mirza now takes up the case of medical education and says that dissection of cadavers is now taken as a rountine exercise but this runs counter to Islamic teachings of preserving the sanctity of the dead body. One wonders whether these decisions were made by the society on the basis of some objective analysis of

its needs or they were in conformity with its moral values. Whatever the case, these practices were not approved by religious scholars. In fact, it is the technology which dictates its own commands and provides its own code. All these, over-ride the Shariah. It is pity that such anti-Islamic practices do not evoke any protest from any Muslim quarter.

NOW, LET us take up the case of air travel. We simply do not know who decided that this mode of travel required the presence of female staff to serve and entertain the guests. Obviously, the air hostesses have been accepted in the most conservative of Muslim countries, simply because the technological gadget, i.e the aircraft, seemed to provide the legitimacy. Those who designed and manufactured it, employed air-hostesses. That lent legitimacy to this institution.

Incidentally, there is a great myth which indicates that science and technology are value neutral. This aura of neutrality and objectivity has given them authority, not generally conceded to any other section of society. As such, most non-scientists still look up to the scientists as the objective seekers of truth. Few, however, realise that scientists today work on problems for which funding is provided by government or industry with the objective of increasing its power or profits. Moreover, the value-based paradigm used by the scientists limits the range of possible answers. Finally, even the metaphors used to express scientific concepts reflect the value system of the society. Obviously,

technology, with its explicit purpose of satisfying some real-life need, is even now influenced by the same forces.

Realising the disastrous effects of technology on poor countries, some experts suggest the development of appropriate technology during the 1970s and 1980s. E F Schumacher popularised the term Intermediate Technology

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through his book "Small is Beautiful" (1974). This was a scheme with limited objectives of solving urban migration and rural unemployment in poor countries by developing industries that required small capital investment. That was also the time when they were talking about the new inter-

national economic order. In the age of economies of the scale people have realised that small is small. And the emphasis once again is an technology transfer.

It will not be amiss to mention here that technology transfer has happened very naturally in the past. An almost forgotten part of our history can provide some clues for the future. Hard as it may be to imagine today, from the 8th Century (CE) to the 12th, Muslims were the world leaders in science and technology. Their work is mathematics, astronomy, medicine, chemistry, metrology, and optics. These influenced the techings of these subjects for centuries afterward.

AT THAT time, the Europeans started translating all scientific literature from Arabic into Latin, a task that continued for the two centuries. Europe took not only all accumulated knowledge from the Muslim world but also its experimental method. But then it used it independently and named it the scientific method. The transfer of knowledge was the foundation, but their independent work was the key to the phenomenal progress of Western science beginning in the 16th century.

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The great idea, at the beginning of the next millennium, may be to give science and technology the moral and ethical purpose that they have been deprived of during the past four centuries. We must do it for our own reasons, whether or not some others will be ready to welcome it.