

SAFETY IN THE LABORATORY : THE CULTURAL CONFLICT

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To be safe is a basic instinct of all living beings – humans and animals. Every living species in this world can sense hazard and danger, from the smallest of insects to the most intelligent being – human. Practicing safety does not require uncommon intelligence. It requires only common sense. As children we are taught by our parents to be safe, as parents we teach our children to be careful. Yet in spite of it all, safety is one activity where we freely advise others but completely disregard it oneself.

Safety has many dimensions. At one level it is intensely personal and to a degree very selfish. At another level, safety is a concern of a community, such as ours, a community working in a chemical laboratory. At the third level concern for human safety is the preoccupation of societies at large, even nations.

Let me begin at the third level. Are we safe as a nation? I believe not. We have little concern for either personal safety or the safety of the others in our daily life. Look at the way we behave on our roads and it is apparent that safety is the last thing on everybody's mind; be if a cyclist, a scooter or auto-rickshaw driver, or a car or bus or truck driver. There is a familiar sight on our streets every morning, rickshaw's ferrying little children to school. If you count the children in a rickshaw or see where these children are seated it is very clear how safety means nothing to us, even when it involves our most dearest possessions. We hear almost daily in our newspapers/TV of deaths to young children falling off crowded buses or being knocked down by speeding buses. Look at the statistics; India has about 37 million vehicles and the number of people killed or injured in road accident every year is about half a million. Compare this to a country like USA. They have greater than 400 million vehicles, yet less than 100,000 people are killed or injured every year in accidents. The situation is not different if you consider train or air accidents. For per kilometer traveled, the occurrence of accident is highest in India for travel either by road, rail or air.

Why are we so unsafe as a nation? One is of course, our poor infrastructure, low level of education and lack of economic resources. The second is our large numbers. With so many people around us loss of life is taken as an everyday occurrence to be read and forgotten. Even the most tragic of all accidents, man made or nature made, stays in public memory only for a short time. It is a curse of our times, that disaster seems to strike our nation in such rapid succession that, every time a new disaster strikes, it wipes

the memory of the old one. Gruesome pictures, of either an earthquake or cyclone, a flood or a drought, a rail accident or a plane crash flash into our living rooms with alarming frequency. It numbs our psyche, makes us insensitive to human blunder and saps our emotional energy to such an extent that we hardly feel the pain of others. Life goes on, as if nothing happened. With a push of a button on your remote control in TV, we switch off the grief and pain. As a civilization, which has been ingrained in the philosophy of *karma*, we are told that human destiny is inscrutable and uncontrollable; that we should accept the will of God with grace and there is nothing we can do to change our preordained destiny. Contrast with the more deterministic philosophy of the Anglo Saxon world – as best expounded by the 18th century Philosopher Immanuel Kant in his book called *Critique of Pure Reason* – which states that humans possess a priori cognitive knowledge, which enables them to control their action.

Herein lies the conflict of culture. On the one hand our tradition teaches us that when we were born, the cosmic constellations, preordained our destiny and there is nothing we can do to change it. Yet, we are all students of science, which teaches us rationality and relationship between cause and effects.

So what is it all go to do with Safety in the laboratory? Outside of this laboratory, we are part of a nation which has accepted tragedy as inevitable, loss of life as unpreventable and human misery as a price we have to pay for the sins we committed in an earlier birth. Yet when we enter the portals of this laboratory, we are supposed to become rational, pursue scientific inquiry, care for our safety as well as the safety of others and believe that it is in our hands to prevent accidents. I hope you now see the connection between our cultural values and laboratory safety.

So what is that we can do? Do we unlearn our cultural mind set? This is neither easy nor necessary. Human mind is remarkably multifaceted. We can be irrational and rational at the same time. We can be both fatalistic and deterministic. I give you only one example. Many of you have gone abroad, lived. these for long time. You have seen fellow Indians in these countries. You will notice that an Indian who has no qualms about jay walking or crossing the street wherever he feels like in India, patiently waits for the cross signal abroad. When your child drives a tricycle or bicycle abroad, you ask him to wear a helmet; yet here, neither the parents nor children who drive scooter or motorbike feel the need for wearing a helmet – in spite of knowing that if you are involved in an accident there is a greater than 75% chance that you will suffer head injury.

The point I am making is that we can retrain our mind. Alien climes and culture make us change our attitudes. If so why can't we do it here? All we require is a sense of determination.

Friends, the reason why we are so unsafe in our laboratory is because we have not understood the conflict of cultures. Let us begin today with a deep introspection so that from tomorrow we practice safety as a religion at NCL. Safety is not the responsibility of

the safety officer. Safety is your responsibility. Only you can make yourself safe. In doing so you make everyone else around you also safer.

To make ourselves more determined let me close this lecture with a challenge. Can we make a commitment to eliminate the use of mercury and benzene from all our laboratories by the end of 2001? I await your views.