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Taking science seriously

By Shiv Visvanathan
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One of the great stalemates in recent times was the moratorium on Bt brinjal. The India debate on genetically-modified (GM) food froze to a still life, with activists confused as to the next step. Meanwhile, the environment minister, Mr Jairam Ramesh, seems content with his decision, without realising that moratorium beyond a point is a non-decision. I was wondering whether there was a way of unravelling such debates. Sitting at one of Netherland's most prestigious academic centres, I decided to ask how the Dutch thought through science and technology. My meeting was with Mr Wiebe Bijker, director of science studies at Maastricht University.

Mr Bijker smiled. He warned me that the European reaction to GM foods was absolutely virulent. There was the failure of social trust around the technology. There was a split between citizens and scientist, with the government playing the bumbler. But the Dutch learnt quickly when it came to nanotechnology.

Nanotechnology deals with particles which are less than one-billionth of a metre. When the Health Council invited him to chair a committee on it, Mr Bijker admitted that he initially thought the technology was hype and one could wait it out. The committee's invitation was however flattering. The challenge before him was how one creates methodologies of trust. Social movements are intellectually and emotionally intensive. What we need are methods, a sense of norm, an ability to build institutions which operate on trust and openness. There was one advantage. Dutch society is unique in one aspect. It sees science studies as a form of expertise different from science and takes it seriously. It holds that science is too precious to be left to scientists. More crucially, the scientist as expert and citizen is involved in the process. But the process is democratic, open and institutionalised.

Initially, scientists on the committee for nanotechnology and health were wary. Many were just not used to seeing the public as a part of any serious debate. The learning process was both on the citizen's and the scientist's side. Initial citizen's reaction would be a shrug and a question, "What is it?" The challenge was how to take them past indifference and fear to an open-ended idea of technology.

Mr Bijker made a subtle distinction. He said confidence in a society can be brittle. Faith can be almost magical and when the cards collapse you overact in terms of rage and disappointment. What one needs to build is trust — trust about knowledge, trust about the processes by which knowledge is discussed, generated and applied. There is an everyday ethics to it which is crucial. Social trust is what anchors science policy and democracies. In that sense, science studies can help the democratisation of democracies through an understanding of knowledge as a process.

Societal debates are, however, not easy. In this case, the scientists being twice bitten were thrice shy. There was also a tremendous hype about nanotechnology. It promised breakthroughs in longevity, cosmetics, health and, most of all, sustainability. But the technology was more in the form of a promissory note. Society could move from hype to fear in a few minutes.

One of the interesting things about Europe and the US is the role of think tanks. They are usually small outfits with an unusual cast of scholars. One can think of Rand, the Stanford Institute, the Brookings Institution and the Adam Smith Institute. These institutes try to highlight issues, play the role of middleman, brokering key issues for a society. It is true that some are pressure groups but others play a more public function attempting to retain knowledge as a public good. For nanotechnology, this role was performed by the Walter Rathenau Institute which created a small forum on nanotechnology that went beyond civil servants to create a wider sense of expertise and stakeholder representation. It set the right context for societal debate.

The government set up the committee soon after. The Health Council provided a secretariat of scientists and lawyers. They did the basic research which the committee then sifted through. Process was crucial and the continuous conversation between the team of researchers and the chairman was vital. It allowed for experts to evaluate and respect each other. Expertise, instead of being valorised or overrated, becomes a functional, professional term.

Trust, responsibility needs a culture of debates and controversies. Dutch society tends to see creativity and fairness in balance. Balance is not mere compromise or adjustment; it is a synergy of representations. It is a search for middle ground, the middle path. Every policy process is a thought experiment; it demands skill in problem solving, where trust and intelligence work towards solutions. The drama is not in the process of decision-making. Policy-making, like institution building, is an art form that the Dutch enjoy and take pride in.

The key to the solution was a classificatory act. Classifications need not be bureaucratic. One has to develop a model for handling problems. The committee came up with a four-fold classification. The first dealt with “simple” issues. These were strictly technical and there was clear cut knowledge about it. An example of this would be asbestos poisoning.

Then there were more complex issues. These could not be textbook assignments. They involved multiple worlds where details were clear but relationships were not. Here one addressed the implication of nanotechnology for Third World agriculture.

In the third category one moves to precaution. Scientific knowledge itself is not clear. One needs other forms of expertise — like the citizen, the lawyer, the ethics professor. Decision involves a variety of stakeholders. Balancing is tougher. One faces up to fears and fantasies.

Then there are ambiguous problems which society does not know how to handle. Consider the issue of human enhancement. Many religious groups would object to the idea. Each category demands more and more of the democratic process. A working model created a framework of trust. Politics and policy making is like carpentry. Small pieces count.

Mr Bijker hinted policy is like craftsmanship. We need to steer between technology and populism or even a romantic direct democracy. But when scientists behave like citizens and reciprocal citizens take science seriously, an imagination is born. One wishes India could conduct a similar experiment. Our minister has the intelligence to create such a process. The

question is does he have the will. One has to wait and watch.

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