

The New Patent Regime

A Blow against Science and Public Health

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ON 27th December 2004, as the whole country was still reeling with shock of the news of the killer tsunami that had hit the southern coast the previous day, the Union Government took advantage of the situation and promulgated the Patents (Amendment) Ordinance 2004. The Third Amendment to the Patents Act, 1970 was to be tabled in the winter session of Parliament in 2004, but was held back by the Government in order to bypass Parliament in a most undemocratic manner. The Government's explanation for the Ordinance was that the TRIPS (Trade Related Aspects of Intellectual Property Rights) agreement under the GATT (General Agreement on Tariffs and Trade), which the Union Government signed in 1994, required India as a WTO member to make her domestic patent laws TRIPS-compliant by 1st January 2005, or else to face retaliatory measures from other WTO members.

The main objective of the Ordinance was to introduce product patents for food, pharmaceuticals and chemicals, in place of the existing system of process patents under the Patents Act, 1970. When the Dunkel proposals were first put forward more than a decade ago under the Uruguay Round of GATT, numerous people's organisations and scientists had vehemently opposed the concept of product patents. The then Government had paid no heed and had gone right ahead and signed the Marrakesh Agreement of GATT. A process patent

gives the owner exclusive right only over the manufacturing process through which a particular product is made. Any persons can manufacture and sell a particular product as long as they use a different process of manufacture. But a product patent prevents others from manufacturing, selling, or importing a patented product, even if the product has been manufactured through different processes, without taking permission from and paying royalty to the patent holder. A product patent therefore confers a monopoly over a product on a patent holder. This has dangerous consequences in the case of pharmaceuticals in particular, as we shall demonstrate in this article.

After India joined WTO in 1994, two important Amendments were carried out to make the Patents Act, 1970 TRIPS-compliant. In the first Amendment to the Patents Act in 1999, the term of patent protection was extended from 7 to 20 years. In the second Amendment in 2002, a 'mailbox facility' was created, as required by the TRIPS agreement, to receive patent applications from companies worldwide, and to grant Exclusive Marketing Rights (EMR) to the applicants, even before final clearance of their patents could be done through an amended Patent Act conforming to TRIPS. Patent applicants for pharmaceuticals and agrochemicals thus received a monopoly over their products, even before their patents were approved. With the promulgation of the 2004 Ordinance, these patent applications will have to be scrutinised and product patents given on

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the eligible applications to the applicant companies.

Loopholes for MNCs to Exploit

A scrutiny of the Amendment Ordinance shows that it has a number of glaring shortcomings, the most important among these being the question of patentability or what is allowed to be patented. The ordinance states, in general terms, that a patent applicant has to show that there is novelty and an inventive step involved in the new product. But multinational corporations (MNCs) are resorting to a strategy of 'evergreening' of patents. That is to say, MNCs are filing patent applications for new forms of older patented drugs and for new uses of older drugs, thereby trying to block the entry of generic drugs into the market. This essentially means that off-patent drugs used for even common ailments, which are in the generic category, will get patented and monopolised, thereby leading to a rise in their prices too. The domestic companies have therefore demanded, in order to safeguard their market interest, that the Ordinance should be amended so as to clearly exclude from patenting polymorphs, hydrates, isomers, metabolites, changes in purity level, particle size, blood levels, etc. In the absence of such clear-cut legislation, patentability would have to be disputed in the law courts and jurisprudence would have to be developed to define what is patentable and what is not. With their sheer money power and the ability to hire the best international legal opinion, MNCs would have a greater advantage over non-MNCs.

Similarly, the procedure for opposing patent applications has been changed. The earlier Patent Act, 1970 had a provision for any person to file an application with the Controller of Patents opposing a patent application on defined grounds, e.g. the so-called invention not

being novel or inventive, but based on existing traditional knowledge. This was called the right of pre-grant opposition. The latest Ordinance has changed this into a pre-grant 'representation'. Any person can, within 3 months of publication of a patent application, or within one year of grant of a patent, "represent by way of opposition to the Controller against the grant of patent"[1]. The crucial change is that the person opposing does not become a party to the legal proceedings. The main objective of this change is to ensure that the process of opposition is not time-consuming and the entire procedure is finished in a time-bound manner in a few months. It must be remembered that there are already 12000 patent applications in the 'mailbox' from 1995 onwards. From this year, there will be hundreds of new applications. The Patent Offices of even developed countries like the USA are unable to cope with the flood of applications. The underlying philosophy of the change, therefore, is that a patent must be granted as a matter of course, and denial must be a rare exception. With MNCs being the major applicants for product patents, it is clear that this amendment too will go in their favour. The only recourse for opposing parties whose arguments are not accepted by the Controller is to go to Court and depend on judiciary. It is already seen that Indian judiciary itself is showing a tendency to change in tune with the fallout of globalisation in the Indian scenario and often upholding the interests of the corporates, domestic and foreign, against public interest. In such a circumstance, it is highly probable that a very 'flexible' product patent regime allowing for broadly, and in a sense, loosely defined product patents will emerge. The implications for the development of science, health care and prices of the pharmaceuticals are extremely dangerous.

Public Health Consequences of the New Patent Regime

The Amendment Ordinance will have serious consequences for public health. Under the present process patent regime, relatively low-cost and locally manufactured generic drugs are available for patients suffering from a wide range of ailments, many of them chronic and life-threatening, like diabetes, asthma, hypertension, coronary diseases, schizophrenia, depression, cancer, HIV/AIDS, arthritis, spondylitis and respiratory/urinary tract infections. These relatively cheap generic drugs will no longer be available in the market once product patents are granted to companies with pending patent applications for drugs for these ailments. The practice of 'reverse engineering' – preparing the same product through a different process, which was used throughout the process patent era, is no longer legal. For example, the MNC Novartis AG had applied for a patent and had obtained an Exclusive Marketing Right (EMR) for Gleevec, a drug used to treat Chronic Myeloid Leukaemia (CML), a life-threatening form of cancer. Novartis AG sells Gleevec at Rs. 1.2 lakh per monthly dose. The generic version of the drug was otherwise available to CML patients at Rs. 9000-12000 per month. (Letter from the Affordable Medicines Treatment Campaign to India's National Human Rights Commission.[2] Only four years ago, millions of people living with HIV/AIDS across the world and in India could not afford the cost of treatment with antiretroviral (ARV) drugs, which are known to prolong the lives of HIV positive persons. At that time, prices ranged between Rs. 4.5 lakh to Rs. 5.4 lakh per person per annum. Prices began falling when Indian manufacturers introduced generic versions of ARV. By 2003, the annual cost per person had come down to Rs. 6300.[3] Legalising product patents will also imply that the fruits of scientific

innovation will be denied to people at large, as new and better drugs that replace older ones with harmful side effects will become inaccessible owing to their high prices. Many such drugs are currently being reverse engineered and sold cheaply by local manufacturers. For example, if the patent application pending for Olanzapine, an 'atypical anti-psychotic drug', used in the treatment of schizophrenia, a common life-long mental illness, is granted, cheaper local versions will no longer be available, and many patients will have to revert to older generation drugs with greater adverse side-effects.[4] Warnings about these serious consequences of a product patents regime for people's health were issued when the Dunkel Draft was in the discussion stage itself.

The Union Commerce Minister Kamal Nath said that fears of a price rise are unfounded. "In fact a feature of patent protection is that it spurs research, so that constantly alternatives keep appearing in the market – and often the alternatives are better ones. Thus price control is inherently built in".[5] But the experience worldwide is the opposite. In the United States, the Food and Drug Administration acknowledge that patenting has not worked as an incentive for production of new drugs. Only 20 percent of drugs developed in the last ten years can be called qualitative breakthroughs. On the other hand, companies have used patenting for minor modification of existing drugs and are selling them at very high prices.[6] In India too, the Indian Pharmaceutical Alliance (IPA), the organisation of the top 12 domestic pharmaceutical companies, notes that most of the over 4000 applications for pharmaceutical patents in the 'mailbox' are for pre-1995 drugs, seeking patent protection for drugs which are already being marketed by domestic companies.[7] This shows that the Commerce Minister's assurance that 97

percent of all drugs manufactured in India are off-patent, including all life-saving drugs and drugs for common ailments, and so prices will remain unaffected, is completely misleading. The Indian Drug Manufacturers Association (IDMA) has declared, "...the era of inexpensive medicines due to earlier process patent is becoming history and new patented medicines will now be sold at the monopoly prices laid down by their patent holder." [8]

The Minister also hinted that the Government would soon come out with comprehensive regulations for protection of data. [9] This has serious implications in the case of clinical test data. When companies seek regulatory approval for a new drug they have to submit test data to the relevant government concerning the quality, safety, and efficacy of the drug, as well as information on its chemical composition. In many countries this body of data is kept confidential for a period. When this period expires, generic producers can gain regulatory approval without generating their own clinical data, by submitting bio-equivalence data that shows that their drugs are the same compound, which is much quicker and cheaper. The TRIPS Agreement requires that members must protect such data against 'unfair commercial use' but does not specify what this means, or the time period for protection. MNCs and the US Government are pressurising developing countries to give exclusive rights over test data to the patent applicant companies and for countries to adopt a minimum five-year protection. The implication of such protection is that even after the expiry of patent on a patented drug, generic manufacturers will be forced to undertake costly and time-consuming generation of fresh test data before they can market their generic drugs. In the case of Compulsory Licensing, the domestic manufacturer would find it difficult to work the patent in the absence

of data. Essentially, this measure prevents Governments from breaking a patent in public interest and prolongs the monopoly of patent holders even after the expiry of patents.

Indian Elites' Response to WTO and TRIPS

The main question is: why did the Government resort to such an Ordinance, which is against science, healthcare of the people and even against the interests of a section of the Indian pharmaceutical industry itself? Why is the Ordinance full of features that will even go in favour of MNCs over domestic companies? This question rightly puzzles many common people who are used to thinking that a Government of a nation is committed to protecting the interests of its citizens.

But India is a capitalist country and Indian society is a class-divided society. On the one hand, there are the vast millions of common people, who sell their physical or intellectual labour for their livelihood. On the other hand, there are the elites who control all the means of production - from agricultural land to industrial machinery - as well as control the Government. Though formally a democracy, it is the money power of the elites that actually dictate the policies of Government. The Indian elites not only play a dominant and controlling role within the country, but also aspire to become a superpower in the global arena. After the collapse of the socialist camp, which had hitherto acted as an alternative market for developing countries like India, the Indian elites were left with no other choice to fulfil their own global ambitions than to go for the integration of the Indian economy with the global market economy. In their attempt to find an easy and wide entry into the foreign markets which are already in the grip of the highly developed countries and also their powerful multinationals, the Indian elites are

obliged to enter into collaboration with them and in return to open entry into the Indian market for those multinationals. This is what served as the motivation for the Government signing the GATT, agreeing with the Dunkel proposals without paying any heed to the countrywide people's protest movement against the same.

As revealed by this latest Ordinance, the Government has taken a position that concessions to MNCs are unavoidable in the aggregate interest of Indian elites and their global aspirations, in return for promised concessions by the developed countries in other sectors. It must be remembered that in the Uruguay Round of GATT too, the Indian Government had initially opposed 'Intellectual Property Rights' being brought under the purview of GATT, but later on had done a volte-face hoping to gain concessions for textiles and agriculture in exchange for giving concessions on IPRs. Once again, the Government has taken the same position as revealed by Minister Kamal Nath's statement on the Ordinance. The Minister argued that India's conformity with the international IPR system is essential in order to ensure that developed nations adhere to their commitments to phase out the Multi-Fibre Agreement (governing access to textile markets of developed countries) by 2005 as promised under the Marrakesh Agreement ten years ago. He further held that there were great opportunities for Indian research institutions and pharmaceutical companies in the global pharmaceutical market itself. But what is the reality behind this seemingly rosy business picture of pharmaceuticals?

Strategies of Indian Pharmaceutical Majors

There has been a significant increase in patent applications in India since 1994-95, when the policy changes began taking

place. But there is a significant increase in the proportion of foreign to domestic applications in the post-1995 period as compared to previous years. MNCs have been able to take advantage of changes in patent laws much faster and have rapidly increased their applications since 1995. Though there is also a rising trend in domestic patent applications, it is confined to a very small number of public and private institutions. The ability of domestic firms to raise their patent activity is dependent on several factors including the ability to shift focus from domestic to global markets, the capacity to collaborate with foreign firms, the capital to invest in research for innovation, and access to legal skills necessary for filing patents. Naturally, only a few companies can have all these and benefit from the new patent regime. While the world's leading firms spend an average of 15 percent of their turnover on R&D, the average investment in R&D of Indian firms is 2 percent.[10] But Indian companies are not accepting this fate of being out-competed by MNCs passively. They are trying a number of alternative strategies simultaneously. On the one hand, in order to satisfy their ambition for a share of the global market, they are fiercely competing with MNCs. On the other hand, increasingly constrained by the aggressive strategies of MNCs backed by developed nations like the US, they are entering into collaboration with MNCs as junior partners. Indian generic drug makers who have successfully developed alternative processes for the manufacture of patented drugs have been aggressively challenging patent claims and trying to have longer exclusivity periods. MNCs in turn see major cost advantages in outsourcing manufacturing and clinical research to Indian companies. Clinical research outsourcing to Indian companies has seen fast growth. Studies indicate that a handful of large domestic pharmaceutical firms have the capacity to

use their aptitude for reverse engineering for new drug discovery. They are in turn selling these new molecules to MNCs for further development and sale. The Indian Government is in turn providing a range of tax concessions to encourage such R&D.[11-13] Thus, Minister Kamal Nath said, "...the transformed Indian pharma industry is itself looking for patent protection – particularly the bio-tech sector, in which India has aggressive prospects." At the same time he also said that with an Intellectual Property protection framework in place, the pharma industry can take advantage of the huge scope for outsourcing of clinical research.

Does TRIPS Offer Any Flexibility?

Expressing themselves against the Ordinance, a number of political leaders, prominent intellectuals, and public interest groups/NGOs argued that the Government had not utilised the available 'flexibility' under TRIPS. Is there really any such 'flexibility' except on paper? Whenever countries have tried to take advantage of such 'flexibility', they have been targeted by MNCs and governments of developed countries, led by the US. The Declaration on TRIPS and Public Health in the Doha Ministerial Meeting of WTO in 2000 had been rendered hollow by the bilateral bullying tactics of the US government and the MNCs. This bullying even forces developing countries to adopt 'TRIPS-plus' measures – measures that are not required even by the TRIPS Agreement – which will further favour MNCs.[14] Such tactics have undoubtedly been adopted by the US Government against the Indian Government, and the outcome in the form of the Patents (Amendment) Ordinance, full of 'TRIPS-plus' features and weighed heavily in favour of the MNCs, is clear proof of this. The Government has taken a position that such a concession is unavoidable in the

aggregate interest of the Indian elites and their global ambitions, in return for promised concessions by the developed nations in other sectors. *Ultimately, there is no 'flexibility' in TRIPS as it is the power of capital of a country that determines its ability to compete, capture markets and earn maximum profit.* Developed nations and developing nations can never be at par, no matter what the written rules of WTO and TRIPS are; so acute are the contradictions between them. The developments in the pharmaceutical sector and patent laws are ample proof of this. There is no hope for the future of science or of people's health by depending on illusory 'flexibilities' of TRIPS.

Long-term Consequence

The most devastating long-term outcome of the Amendment Ordinance and the ensuing product patent regime is the retardation of the growth of science itself. This is a great irony of history, because, the same capitalist system that gave birth to modern science in its youthful phase is now turning against science in its present moribund phase. The Scientific Revolution took place in the era of ascendant capitalism, hand in hand with the revolutionising of productive forces through the growth of technology and the Industrial Revolution. Modern science classified perceptual knowledge, and built conceptual knowledge by searching for the laws governing natural phenomena with the aim of purposeful utilisation of such laws. In this period, national barriers did not confine the growth of scientific knowledge. In capitalism, material production and the intellectual product used in the process of material production assume social character, but the means of production and the profit from production remain under individual ownership, giving rise to an irreconcilable contradiction, which can disappear only with the destruction of capitalism. But despite this

historical limitation of capitalism, the Scientific and Industrial Revolutions in its ascendant phase led to the rapid widespread of knowledge of science and technology. The widespread of scientific knowledge in turn led to its further growth through fresh hypotheses, experimentation and verification – through a collective process in an expanding scientific community. Similarly, technology grew through a process of observation, experimentation and adaptation. One of the ethics of science, in contrast to the narrow base and secrecy of feudal knowledge, was openness and sharing of knowledge. Even in the early and mid-twentieth century, though capitalism had already reached its moribund imperialist stage, this ethic was displayed in the actions of many scientists like Marie Curie, Jagdish Chandra Bose, Alexander Fleming and Jonas Salk bequeathing their inventions and discoveries to mankind, without any reward for themselves. Salk famously stated “Who owns my polio vaccine? The people! Could you patent the sun?” Jagdish Chandra Bose refused to patent his work on radio waves; when Sister Nivedita obtained an American patent for him, he refused to encash it![15]

But the same capitalist system, which in its rising phase had given birth to modern science, turned against science in its moribund phase. In the interest of profit in chronically crisis-ridden economies, the bourgeoisie began stressing only the technological aspects of science while neglecting theoretical or basic science. As giant monopoly companies began to dominate the production process, they also began to control the process of technological innovation, using scientists and engineers as their salaried employees. Multinational corporations converted scientific and technological knowledge itself into a form of private property, though the character of its production too was social.

A brief history of patenting will illustrate this point. The word *patent* comes from the Latin ‘*litterae patentes*’, meaning an open letter. Such letters were used by medieval monarchs to confer rights and privileges. With a royal seal, the letters served as proof of those rights, for all to see. While the first system for patenting inventions cannot be attributed to any one country, it is generally acknowledged that the first informal system was developed in Renaissance Italy. This system was introduced into the rest of Europe by émigré Venetian glass-blowers to protect their skills against those of local workers. The first recorded patent of invention was granted to John of Utynam. In 1449, he was served with a 20-year exclusive right by King Henry VI for a glass-making process previously unknown in England. In return for his rights, John of Utynam was required to teach his process to the native Englishmen. It is noteworthy that the early English patent system began to be abused by the monarchy very quickly, with patent rights being conferred on entire industries, not just new inventions, in order to benefit the monarchy itself and officers and friends of the royal Court.

But with the rise of capitalism in England, in an effort to curb further abuses of power by the monarchy, the Parliament, in 1624, passed the English Statute of Monopolies, which outlawed all royally sanctioned monopolies. Realizing the importance of protecting inventors and the economic benefits associated with encouraging innovation in an environment of competitive capitalism, an exception was allowed for patents of “new manufactures.” These patents were awarded to the inventor as long as their new devices did not hurt trade or result in price increases. Additionally, a statutory limit of fourteen years was imposed on English patents. In North America the colonies adopted a similar system of limited monopolies. Following the revolution, in 1788, Article I, Section 8 of

the Constitution was ratified: *'The Congress shall have power . . . to promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive right to their respective writing and discoveries.'* Three different patent Acts followed in the next fifty years, reflecting deep differences on the subject. Thomas Jefferson believed that ideas should not be patentable, rather patents should be issued only for physical inventions that have been put into practice. While Jefferson and Benjamin Franklin were generally opposed to the awarding of limited monopolies to inventors, James Madison and Alexander Hamilton were in favour of providing inventors with rewards for their inventions. In this period in American history, individual inventors were commercializing their own inventions, and the objectives of patent laws were, as Abraham Lincoln put it, "The patent system added the fuel of interest to the fire of genius." [16,17]

But with the development of monopoly capitalism and the rise of corporations, the patent system underwent a fundamental transformation. David Noble provided an excellent description of how the patent process in the United States had been used to exclude competitive invention. Drug companies and manufacturers of communication equipment are among those corporations that maintain research departments to generate the new technology that they can invest in. In the communication industry, for example, once a new device is invented and patent applied for, the researchers begin to explore all of the ways improvements can be made in the device and those also go to the patent office. The corporation's patent attorneys are on the alert for inventions that might infringe on the patents of their new device. Any invention that comes to the patent office that appears to be competitive is challenged in court, a process that keeps the

competitor out of the market until the suit is settled. This whole invention patenting process requires such resources that individuals are mostly shut out of technical invention and the development of new technologies for investment is reserved for corporations. [18]

Thus, monopoly capitalism brought about a fundamental change in the system of patenting inventions and discoveries. The patent owner was not the individual scientist or inventor, but the company itself, while the actual inventors were mere wage-earners. Initially, the patenting system was for processes, which prevented another manufacturer from using the same process. Process patenting by itself restricted the possibilities of improvements in a particular process, by conferring exclusive rights to one company. The product patent system is still worse. It prevents the development of even alternative processes, which may be more cost-effective and efficient. The patent-holding company's monopoly acts as a fetter on technological development, because the company has a monopoly on the product and any process to manufacture it.

Further, such patenting is a disincentive even for research in theoretical sciences in the same area, given the broad scope of patents and the huge royalties involved to merely access scientific knowledge 'owned' by giant corporations. Therefore, product patenting throttles science itself. In this phase of crisis-ridden and moribund capitalism, knowledge, discoveries and inventions are also being sold in the market as means of production, generating huge profits for MNCs. MNCs thus profit from the sale of goods as well as sale of knowledge commodified through product patents. The product patent system was initially confined to the developed nations through their national laws. But following the collapse of the Soviet Union and the socialist camp, the developed nations and their MNCs successfully introduced a

universal system of protection of “intellectual property rights” (IPR) through TRIPS at the conclusion of the Uruguay round of GATT. Members of WTO were required to amend their national patent laws and introduce a product patent system. The aspirant elites of developing countries like India accepted this change with the expectation of global market access.

The effects of the product patenting regime on the development of science evoked concern from scientists the world over. In April 2003, the Royal Society (U.K.) noted that the system of granting patents in the UK was encouraging a ‘gold rush’ mentality in science, which restricted the free flow of information, and had damaging effects on both science and society. Though by law, patents had to satisfy the strict criteria of being novel, inventive and useful, the Royal Society report said that the enormous investment in biotechnology and software meant that there was great pressure on patent offices to grant very broad patents. The Royal Society Vice-President said, “This affects all of us. If patents are granted which are too broad in scope, they block other researchers from carrying out related work and so hold up the development of medicines and treatments. This is tremendously bad for science, but the ultimate losers are the patients who wait longer for beneficial drugs to reach their hospitals and pharmacies.”[19]

From the time India became a member of WTO, some of the top Indian government research and scientific institutions, notably Council for Scientific and Industrial Research (CSIR), felt that they could benefit from patents and lobbied with the Indian Government accordingly. Studies by the Technology Information Forecasting and Assessment Council (TIFAC) shows that only a very small number of public sector institutions and academic institutions account for all the patent applications filed by public

institutions. In the case of the ‘successful’ government research institutions and other teaching institutions, the ‘success’ is at the cost of their earlier social objectives. CSIR’s ability to increase its patent activity as compared to other public sector institutions arose because it adopted a global market focus rather than a domestic one; initiated a number of collaborations with foreign companies; and promoted a cultural shift away from publications and social objectives towards patents and commercial goals. The Central Drugs Research Institute, Lucknow, a CSIR institution, revised its decades long-policy of research on the control of parasitic diseases towards areas of international market potential. The ‘successful’ academic institutions have also initiated foreign collaborations, and have special cells for relations with industry.[20] The culture of secrecy, an anathema to science, may also be growing. It was reported recently that scientists of CSIR and Lupin had jointly developed a new candidate drug that dramatically reduced the treatment time for tuberculosis. But while Johnson & Johnson, which had also developed a new candidate drug for TB had published a paper on it in **Science**, Indian scientists had no publications, even though they themselves must have benefited from publications of Italian researchers who had published on a similar class of chemicals.[21]

On the other hand, the emerging scientific ethics was displayed by the Chairman of the Toxicology Panel of the Indian Council of Medical Research, who wrote a passionate piece arguing that India must offer its large population unexposed to new classes of drugs for clinical trials to MNCs. His argument was that with such a large population, and large numbers of doctors and medical colleges, the cost to MNCs of conducting such trials in India would be a fraction of what it would be in the US or Europe;

hence the clinical trials market in India could grow five-fold in five years.[22]

Scientists Must Oppose the Product Patent Regime

Scientists must vehemently oppose the Ordinance and the introduction of a product patent regime. In fact, the Government must be forced to scrap all Amendments to the Patents Act, 1970. Firstly, as discussed earlier, the Ordinance and the ensuing product patent regime will act as a fetter on the development of science and technology itself. This will threaten the future of humanity and civilisation itself, as the ability to understand the laws of nature and to harness nature for the benefit of mankind will be severely impaired. Secondly, as is well-known, public healthcare is all but absent in India. Public health expenditure as a proportion of GDP has been relentlessly falling. Under the influence of liberalisation, privatisation and globalisation policies, there is a further attempt to reduce Government expenditure on healthcare. All this means that the common people are increasingly at the mercy of the completely unregulated private sector – private practitioners and private or corporate clinics and hospitals, the vast majority of whom charge exorbitantly for their services. There is no doubt that prices of both common generic drugs and new inventions will sharply increase after the product patent regime comes into effect. The common people will therefore be doubly burdened – by expensive and unregulated private practitioners and hospitals, and by expensive medicine.

Scientists therefore have a stark choice before them. A few among them may get the best facilities and professional opportunities through patent-oriented research. Compared to the often ill-equipped, uncreative and unrewarding work environments in public sector

institutions and universities, such career opportunities might seem attractive at first. But ultimately, the individual scientist can only be a slave of a company operating in a crisis-ridden market. The most talented scientist might end up doing patent-oriented research on superficial consumer products because that alone is cost-effective and profitable for the company. Work environments in corporate research can also turn excessively bureaucratic, stifling and unhealthily competitive. Scientists with commitment towards the noble vision of science for humanity will have to spurn narrow careerism and choose more difficult paths, confronting the commercialisation and corporatisation of science. They will be the real scientists, in touch with the common people and working for them.

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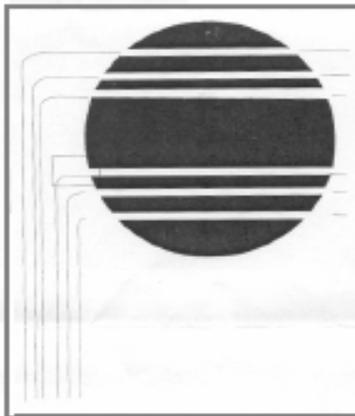
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"A hundred times every day I remind myself that my inner and outer life are based on the labours of other men, living and dead, and that I must exert myself in order to give in the same measure as I have received and am still receiving." – Albert Einstein



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