

NATIONAL SEMINAR ON PATENT LAWS
NOVEMBER 22, 1988
INDIA INTERNATIONAL CENTRE
40, Lodi Estate, New Delhi- 110 003

OCCASSIONAL PAPERS

CONTENTS

- | | |
|------------|---|
| Paper No.1 | Protection of Intellectual Property - Indian Patents Act,1970 - By Convenor |
| Paper No.2 | Pitfalls of the Paris Convention - By Dr. Surendra J. Patel |
| Paper No.3 | Indian Patents Act, Paris Convention and Self - Reliance - By Dr. N.N. Mehrotra |

PROTECTION OF INTELLECTUAL PROPERTY
- INDIAN PATENTS ACT, 1970

COMMUNITY HEALTH CELL

BACKGROUND

~~47/1 St. Mark's R.~~

The Indian Patent Act, 1911 was influenced mainly by the British interests who were ruling this country till 1947. This Act was so retrograde that it allowed a virtual monopoly of the Indian markets by technologically advanced countries through the Patent System. To keep India as their captive market, the British rulers also did not make India a member of the Paris Convention.

After independence, the importance of modifying the Patents Act 1911 was amply realised by the leaders of the country. An expert committee headed by Justice Bakshi Tek Chand was appointed to examine in depth the issues relevant for rapid industrialisation of the country by modifying the old Patents Act. Later another Committee headed by Justice Rajagopala Iyengar was appointed to examine the new Patents Bill and to recommend appropriate provisions relevant to the national interest. Both the Committees found enough evidence of misuse of patent protection by various foreign companies, including the Multinational Companies, to ensure protected markets for themselves. More than 90% of the patents in India were registered by them and only a few patents were worked in the country. Most of the goods were imported from abroad. It was thus evident to these Committees that our National law was a big constraint in the industrialisation of the country. Not only this, the law even denied the country to obtain goods for its essential requirements at cheaper prices available from alternative sources in the international markets. This happened because of the patent protection granted to the foreign patent holders included right of importation also for them.

A National Conference of scientists also provided a strong basis for changes in the Patent Laws. Later the Patent Bill was extensively debated by the Parliamentary Joint Select Committee which even invited experts from all over the world to give evidence and

opinion based on their experience elsewhere. Both the Houses of Parliament also had in-depth debates on this major economic statute. Thus, a thorough national debate took place before the enactment of the new Patents Act of 1970.

INDIAN PATENTS ACT, 1970

The Indian Patents Act, 1970 was hailed by many countries and UNCTAD as one of the most progressive Statutes. The basic philosophy of this Act is to strike a balance between the interests of the inventor and those of the consumer to ensure that the benefits of new technological development reach the consumer as fast as possible. Appropriate technologies have been developed and assimilated for indigenisation of production. A Monopolistic regime which comes through the patent system is therefore non-existent in India. The Patents are granted to encourage invention and to secure that the inventions are worked in India on commercial scale and to the fullest extent without undue delay.

BASIC PHILOSOPHY

Section 83 of the Patents Act, 1970 enunciates the basic principles governing the Act in the following terms :-

- (a) "that patents are granted to encourage inventions and to secure that the inventions are worked in India on a commercial scale and to the fullest extent that is reasonably practical without undue delay ; and
- (b) that they are not granted merely to enable Patents to enjoy a monopoly for the importation of the patented article."

The Patents Act, 1970 during the last 16 years of its operation has served the aspirations of the framers. The basic philosophy behind the Act is still valid. The country has achieved rapid industrialisation. In fact, near self-reliance in many industrial fields has been achieved basically due to the balanced provisions of this unique Patents Act. It has also been possible to import the patented goods for meeting the country's needs from competitive sources abroad.

G-100 1564
COMMUNITY HEALTH CELL
47/1, (First Floor) St. Marks Road
BANGALORE - 560 001

SALIENT FEATURES

There are many positive features of the Patents Act, 1970.

Section 84 provides for 'Compulsory Licensing' on application by other interested enterprise, if the reasonable requirement of public interest has not been satisfied and the product has not become available in adequate quantities and at a reasonable price in a period of three years. Further Section 87 provides for automatic endorsement of 'Licences of Right' in the case of methods or processes for manufacture of chemical substances, food, medicine or drug. Again under Section 89 Government can revoke the Patents if in its opinion a patent or the mode in which it is exercised is mischievous to the State or generally prejudicial to the public.

There are special provisions under Section 5 in the case of inventions -

- (i) claiming substances intended for use, or capable of being used, as food or as medicine or drug, or
- (ii) relating to substances prepared or produced by chemical processes

no patent is granted in respect of claims for the substances themselves, but claims for the methods or processes of manufacture are patentable.

As regards the Terms of the Patent, it is 7 years from the date of application or 5 years from the date of sealing whichever is earlier for food, medicines or drugs and chemical substances. Further, the registration for the method or process of manufacture of such substances. In respect of other inventions, the period prescribed is 14 years from the date of patent.

ADVANTAGES FROM INDIAN PATENT SYSTEM

Three important advantages have accrued to the country

because of the progressive provisions of our Patents

Act, 1970 :-

- (i) Government have been able to ensure starting of commercial production of a Patented product process in India sooner i.e. in 3 years. Earlier the patent holders including MNCs used to file 'blocking patents' to maintain a market monopoly for themselves by importing patented products in India at exorbitant prices from exclusive sources abroad ;
- (ii) Indian Scientists and Technologists have been able to develop processes suited to the Indian conditions and these processes are being worked to achieve self-reliance. These processes are cost-effective.
- (iii) It has been possible to serve the consumer by importing even patented products at competitive prices. This is particularly true in the areas of food, drugs and chemicals where only the process patents are allowed.

FOREIGN COLLABORATIONS

It is generally pointed out that because of the inadequate protection under the Indian Patents Act the registration of new patents in India is on the decline. This argument has, in no way, affected the transfer of technology from the industrially advanced countries. The Patents Act 1970 has not stood in the way of entering of foreign collaborations for those products for which technologies are not available in India. There has been tremendous rise in the foreign collaborations in recent years, as is evident from the following table :-

<u>Year</u>	<u>No.of Collaborations</u>
1970	183
1981	389
1982	590
1983	673
1984	752
1985	1036
1986	957
1987	853

Due to liberal Industrial Policy enunciated during the last four years, it is expected that there will be further spurt in foreign collaborations in the coming years. The increase in foreign collaborations rather than the registration of foreign patents shows dynamism in India's industrial growth and capacity to improve self-reliance and absorb technologies

PARIS CONVENTION - FURTHER THE INTEREST OF DEVELOPED COUNTRIES

The Paris Convention was signed in March 1883. As on 1.1.198 there were 97 countries who were its member, out of which there are 62 countries who belong to underdeveloped or developing countries and when they became members of the Paris Convention they probably had no industrial base at all. Even now, there are 37 countries which have absolutely no industrial base. Further, there are 22 members who are signatories to the Paris Convention, but according to their domestic laws, drugs and pharmaceutical products are unpatentable. These eight countries where chemical substances are unpatentable. There are many countries who have excluded food products from Patent System. Thus, Paris Convention is a heterogenous Convention. It is a club of unequals. The needs of a Patent System in industrialised countries is quite different from that of the developing countries. Whereas the developed countries have traditionally been strong advocates of the Patent System, the developing countries have been stressing that the system should help in their development of indigenous manufacturing facilities.

PARIS CONVENTION - SALIENT FEATURES

Some of the specific provisions of the Paris Convention which deserve special mention and which are not in tune with the philosophy of the Indian Patent Laws are :-

Rights of Priority

"Right to Patent despite restrictions or limitations resulting from the domestic law."

- Non-forefeiture of industrial designs despite failure to work or Importation of protected articles.
- Convenient and weak excuses against 'Compulsory Licensing'!
- No permission to import patented products from competitive sources.
- Effective protection against unfair competition.
- Amendment of domestic law to give effect to the provisions of the Paris Convention ; and
- Binding for at least six years before any country can leave the Convention after joining it once.

The above Articles in essence ensure that a Patentee can continue to misuse his patent rights against any concern for the rights of the States who grant these rights and privileges to the patentee. Thus, even if the patentee is not at all interested in working his patent, it becomes extremely difficult to enforce the need for working of the patent or import of the product except from the monopoly patentee. Thus, "an overwhelming majority of patents granted to foreigners through National Laws of developing countries have been used as import monopolies".

The above features of the Paris Convention are viewed as retrograde steps for rapid industrialisation of a country like India which is still in the developing stage. The advantages of joining the Paris Convention are hardly any for the developing countries due to their technological limitations. On the contrary, numerous disadvantages would accrue and hinder industrial progress of the Patent System provided in the Paris Convention (See Table at the end comparing the provisions of Indian Patents Act 1970 and Paris Convention).

IMPORTANT VIEWS GENERALLY QUOTED AGAINST
TOO MUCH PATENT PROTECTION

From time to time, views have been expressed by important dignitaries about the patent protection and paramount need for self-reliance :

The way in which a foreign patentee behaves, has been brought out by Sir William Holdsworth in the following words :

" The foreign patentee acts as a dog in the manger, sends the patented articles to this country (U.K) but does nothing to have the patented articles manufactured here (U.K). He commends the situation and so our industries are under our own law starved in the interest of the foreigners".

Sir Robert Reid expressed himself more emphatically when he said :

" Nothing can be more absurd or more outrageous than that a foreign patentee can come here and get a patent and use it, not for the purpose of encouraging industries of this country but to prevent our people doing otherwise what they would do. To allow our laws to be used to give preference to foreign enterprise is to my mind ridiculous".

Indian Drug Manufacturers Association, a powerful body representing the national sector of drugs and pharmaceuticals also point out the above quotations as strong reasonings for not joining the Paris Convention. The process patent has helped the national pharmaceutical sector to develop process technologies of a large number of basic drugs and produce them on commercial scale at competitive prices. In fact, the Drug Industry is now poised to export a large number of bulk drugs to many developing and developed countries at internationally competitive prices. USSR is one of the biggest buyers of Indian Pharmaceutical products. Given these circumstances, the question arises as to why the Indian Patent Laws should be changed and why India should join the Paris Convention.

LEGAL OPINIONS ABOUT JOINING THE PARIS CONVENTION

There is formidable legal consensus amongst four former Chief Justices/Justices of Supreme Court who have come out against joining the Paris Convention. They are Justices Y.B. Chandrachud, M. Hidayatullah, J.C. Shah and V.R. Krishna Iyer.

As is widely known these four Justices have in the past differed on several issues but they are unanimous that joining the Convention will require abrogation of several important provisions of Indian Patents Law which will seriously harm the economy of the country. Justice Shah has gone to such an extent and considers that in his opinion joining the Convention is legally impermissible because it is in violation of the Directive Principles of the State Policy enshrined in Article 39 of the Constitution of India.

VIEWS OF INDIAN SCIENTISTS

India's foremost Scientists working on drug research and manufacture are also against India joining the Paris Convention. These include Dr. Vitya Mand, former Director of Central Drug Research Institute. They have warned that joining the Paris Convention will cripple research and development and technological development, not only in the traditional Drug Industry but also in the new area of biotechnology which holds enormous promise of creating a whole of new Drug & Vaccine Industry.

VIEWS OF INDUSTRY

In 1986, Government had asked FICCI, FIEO, PHDCCI & ASSOCHAM to give their views about joining the Paris Convention. Except ASSOCHAM, all other organisations had recommended to the Government that India should not join the Paris Convention. Last year, a three-member Committee, consisting of Mr. Ashok Ganguly of Hindustan Lever Ltd., Mr. S. Laha of IEL and Mr. S. Ganguly of Engineers India Ltd, examined the issue of

joining the Paris Convention. Although two of the three Committee Members belonged to MNCs, the Panel gave a verdict to the effect that the balance of advantage did not favour India signing the Paris Convention.

INDO-AMERICAN CHAMBER OF COMMERCE

In 1986, Indo-American Chamber of Commerce published a study on protection of intellectual property by Mr. Ashok Pratap, Barrister-at-Law. This publication has been updated again in 1988. It deals with all the four forms of intellectual property in India as elsewhere : Patents, Trade-marks, Copyrights, and Designs. The study has made a thorough analysis of the subject comparing statutory provisions in India and in a number of other countries developed and developing. The conclusions are reproduced as follows :-

" CONCLUSION ON PATENTS POSITION IN INDIA

Viewed, therefore, in the totality of the circumstances, the historical background, the stage of economic development and the relative positions of various other similarly placed countries the Indian Patent legislation offers adequate and substantial protection to inventiveness and, with the possible exception of certain narrow and specific areas, is generally of a standard found in other parts of the world. This should generate more confidence and less concern".

x x x x x x x x x x x x x x x x x

" CONCLUSION ON INTELLECTUAL PROPERTY IN INDIA

All of the foregoing should demonstrate that the concept of the importance of intellectual property in India is established soundly at all levels : statutory, administrative and judicial. The applicable provisions do, as they indeed must, take into account the felt necessities of the times but this is not done at the cost of the foreigner. The comparative studies presented here show that India is not out of step and in fact enjoys perhaps the longest history and experience in these matters in the developing world. Although industry and Government can both take a greater part in ensuring enforcement, the indications are encouraging. The indepth investigations and studies undertaken and directed by the Government

from time to time evidence the intent and willingness to change and adapt as times and needs require. The example of the film industry hopefully portends a trend. In sum, the protection of intellectual property in India is alive and well."

SUM UP

To sum up, India signing the Paris Convention or modifying the vital provisions of its Patents Act, 1970 diluting its philosophy in any way is totally not in the national interest and economic development of the country. In regard to the pharmaceutical field in fact Mrs. Indira Gandhi, the former Prime Minister, made the following bold statement at the World Health Assembly at Geneva in May, 1981 on patent protection :

" My idea of a better ordered world is one in which medical discoveries would be free of patents and there would be no profiteering from life or death".

CONVENOR
National Working Group on Patent Laws

TABLE

COMPARATIVE PROVISIONS IN INDIAN PATENTS ACT 1970 & PARIS CONVENTION
ON MAJOR ASPECTS OF PATENT SYSTEM

<u>ASPECT</u>	<u>INDIAN PATENTS ACT-1970</u>	<u>PARIS CONVENTION</u>
I. <u>SCOPE</u>	<p>Law permits both product and process patents. Process Patents are for food, medicine, drug, chemical substances:</p> <p>For others : Product Patents</p> <p>Agriculture products and processes for treatment of human beings or animals are not treated as inventions; hence not patentable.</p> <p>Atomic energy inventions are also not patentable.</p>	<p>System provides for product patents. Extends to Industry and Commerce, Agriculture, extractive industries, natural products.</p> <p>Covers patents of importation, improvement and addition.</p>
II. <u>TERM</u>	<p>5/7 years for food, medicine, drugs and chemical substances.</p> <p>14 years for others.</p>	<p>No period specified.</p> <p>Member countries have different periods viz. U.K.:20 years; Japan : 15 years;U.S.A.:20 years; China : 15 years; Spain : 20 years</p>
III. <u>COMPULSORY LICENSING</u>	<p>Compulsory licences granted after 3 years if reasonable requirement of public interests not satisfied about availability; reasonable prices.</p>	<p>Compulsory licence can be applied on the ground of failure to work or insufficient working after 3 years of grant - shall be refused if patentee justifies inaction by legitimate reason.</p>
IV. <u>LICENCES OF RIGHT</u>	<p>(a) Government may apply after 3 years <u>suo-moto</u> endorsement in public interest for any patent.</p> <p>(b) Licences of Right is deemed to have been endorsed after 3 years in regard to the process patent for food,medicine, drugs and chemical substances.</p>	<p>No provisions for Licences of Right.</p>
V. <u>REVOCATION</u>	<p>Revocation order if first compulsory licence is not worked in 2 years - orders issued within one year thereafter.</p>	<p>Revocation proceedings instituted two years after grant of compulsory licence. Proceedings may take any length of time.</p>
VI. <u>RIGHT OF PRIORITY</u>	<p>No provision.</p>	<p>Right of priority extendable for 12 months in all member countries from the date of registration in any one country.</p>
VII. <u>UNFAIR COMPETITION</u>	<p>Infringement proceedings are possible.</p>	<p>Member countries have to assure effective protection against unfair competition - Reason : contrary to honest practices.</p>

I - Pitfalls Of The Paris Convention

By SURENDRA J. PATEL

INDIA's position about not joining the Paris convention has remained well-settled since independence. Our three successive Prime Ministers, Pandit Nehru, Shastriji and Mrs Indira Gandhi, had resisted all pressures, particularly from foreign transnational corporations and their domestic supporters, to join the convention. Instead, they had directed our policy towards revising both the national patent and trademark laws and the Paris convention, in order to safeguard India's national interests of rapid development.

Our longstanding position of not joining the Paris convention, unless it is basically revised, is now being reconsidered. A committee of five men, under the chairmanship of Dr S. Ganguly, chairman of the IPCL, has been established to advise the government whether to join or not to join the Paris convention. It is important, therefore, that the basic issues which had guided India for all these long years against joining the convention, are examined once again so that their full awareness would show why there is no case for a Hamlet-like hesitation on the subject.

A public discussion of this esoteric subject is hampered by the general ignorance of what the patent and the trademark system and its guardian, the Paris convention, are all about.

A patent (and a trademark) is an exclusive grant by government to an individual or a legal person to restrain all others from making, importing, offering for sale, selling or using in production the products and processes covered by the grant. It is thus the grant of a monopoly to prevent others from imitating, adapting, improving and producing these items. Quite clearly, the conflict between private gains and public interest or national needs is at the very heart of the system.

The major industrial countries have always been the strongest advocates of the system. The imperial powers — Britain, France, Belgium, the Netherlands, Italy, Germany — imposed it in their colonies upon conquest. And the United States did the same in the Latin American countries under its domination. Indian patent law was introduced as early as in 1859, just a few months after the suppression of India's first rebellion against the British. No wonder, it was among the very first laws given by the crown. It reserved at one stroke and for all time Indian markets for the British exporters. A similar situation was created in all other colonies and semi-colonies.

3.5m. Patents

There are some 3.5 million patents in the world. Of these, the third world countries have only 200,000. The nationals of the third world hold only 30,000 of these, that is, less than even one per cent of the world total. The other 170,000 — or 85 per cent of the total — are held mostly by the powerful transnational corporations of the United States, United Kingdom, Germany, France, Switzerland and Japan. To add injury to insult, not even five per cent of these patents are used in production in the third world. In India too, foreigners hold 80 to 90 per cent of all patents, few of which were ever used in production.

The system thus reserves the third world markets for the foreigners. It perpetuates perverse preferences, or reverse reservation. It is a system mainly for the benefit of foreigners, but legalised, operated and even subsidised by the nationals — a system guaranteeing private foreign gains at public cost to the third world countries. In the comity of nations, the third world accounts for 75 per cent of population, 20 per cent of income, 30 per cent of trade, and about 40 per cent of enrolment in

higher education. But its share in the world patent system is only 1 per cent. The present system, designed to protect the foreign interests, has thus remained the most unequal and most unjust of all the relationships between the developed and the developing countries.

The Paris convention serves as the guardian of the patent system. It, therefore, legitimises all the inequities of the patent system summarised above. The convention was established during the 19th century on the initiative of the United States. It was signed in Paris in 1893, at the time the Paris world fair of industrial products of "all" nations was underway. Many governments, mostly from the less industrialised countries in Europe, had serious misgivings about such a convention which they felt, would serve the interests of the patent holders in the then "developed countries" (USA, Switzerland, Germany, France and the UK) and thereby adversely affect their national interests and industrial development.

This opposition was skillfully handled. The USA brought with it to Paris, aboard the same steamship, its protectorates—Brazil, Ecuador, El Salvador and Guatemala, and France brought in Tunisia—to create a majority through block-voting.

Since then, the convention has remained for long, "a rich-man's club". It was revised six times—in 1900, 1911, 1925, 1934, 1958 and 1967. But each revision only further strengthened the rights of the foreigners.

Basic Asymmetry

The basic asymmetry between the interests of the foreign patent holders and the nationals of the third world countries, runs all the way through the entire structure of the convention. Its first article is devoted to the definition of the coverage of industrial property. Its very next article guarantees equal treatment to patentees from all countries—both the rich and strong, and the poor and weak. We have come to know well, how such "spurious equality" between the very strong and the very weak, actually perpetuates preferences for the powerful foreign multi-national enterprises. The Paris convention furnishes, yet one more classic example of this, along with nuclear non-proliferation treaty and such "international legislation".

The convention then spells out in detail how the signatory countries have to pass new laws, or adjust the old ones they already have to conform to the basic thrust of the convention—to protect only the rights of the patentees while being silent on his obligations. This is clearly embodied in the watered-down historic compromise contained in article 5. A century-long legal battles have not produced even a few favourable judgments safeguarding public interest.

The convention has a unique system implicit in the provision on its revision—only by complete unanimity. The veto system was thus not invented just for the United Nations security council. The Paris convention had started it long before finally.

The process of withdrawing from the convention is both tricky and a long one. It would involve at least five to six years.

These are the reasons why the summit conferences of the non-aligned movement and the group of 77 have forcefully called for a basic revision of the Paris convention.

(To be concluded)

The author, former director of the technology division of UNCTAD (Geneva) is currently Sr. adviser, World Institute of Development Economics Research (UNU), Helsinki.

Courtesy - Author

II — Pitfalls Of The Paris Convention

THE post-war world saw the collapse of imperialism and the independence of the colonies. The newly independent countries began to perceive the perversity of the patent system, the inequity of the Paris convention.

The third world countries called for a basic revision of both. As director of UNCTAD's technology division, I was closely associated with this process. India was in the forefront of this crusade, acting as the natural spokesman of the developing countries, or the Group of 77, as it came to be called in UNCTAD.

The skill with which Indian representatives marshalled the evidence, won the respect and admiration of the Group of 77.

As charity begins at home, India was, therefore, among the first countries to revise in 1970 its British-imposed patent law. The new law was a long step forward.

Above all, it changed the very objective of the system — denying monopoly to foreigners for the imports of the patented articles and centring the system upon encouraging national inventiveness and securing working of the patents in the production system.

It contained several departures. It excluded critical sectors of national interest from patentability — agriculture, processes of treating human beings and animals, inventions relating to atomic energy (already made unpatentable by section 20 of the Atomic Energy Act of 1962).

It prohibited the grant of patents to products for food, pharmaceutical and chemicals and limited it to only processes.

The duration of the patent grant was cut down to only 5 years in these items of critical national interest. It introduced automatic endorsement for "licences of right" so as to use the patents in production in order to promote national development.

Patent Act

India's 1970 patent Act became a model for other third world countries. They too revised their patent laws. In consequence, the third world pressures for the revision of the Paris convention mounted in UNCTAD.

India and Brazil, supported by the rest of the Group of 77 and the socialist countries, finally succeeded in mid-70's to initiate the formal process of the revision of the Paris convention — a revision in a direction completely different from that in the earlier six revisions of the convention.

This time the pendulum was to be pushed in the other direction — safeguarding the interests of rapid industrial development of the third world. But even after eight years of negotiations, the revision process is still stalled by the fierce opposition of the western industrialised countries.

During discussions on the revision of the Paris convention in various forums of the World Intellectual Property Organisation (WIPO), Geneva, the group of developing countries have maintained that any industrial property system must fulfil the developmental needs of the non-industrialised countries.

Today, India has about 1000 in-house R and D units in public and private sector industrial companies, and major investments in public-funded R and D through the Council of Scientific and Industrial Research, Indian Council of Agricultural Research, department of atomic energy, department of space, department of defence research and institutes of higher technical/scientific education.

Trump Card

India is, therefore, at a stage of making a competitive entry into international markets on technology. It is at this stage that the highly industrialised countries through the Paris convention can do maximum damage by blunting the edge of India's developing innovative capability.

This is the background for India's refusal to join the Paris convention. India's remaining outside the convention has served as the strongest card in the negotiations to revise the Paris convention. It has enabled it to adopt a new patent law safeguarding its national interests.

Thus there is no change in the fundamental reasons why India has all along refused to join the Paris convention.

In fact, the needs for India's social, economic and industrial development in the present phase, make the arguments against joint the convention still more valid.

The appointment of the Ganguly committee has, therefore, understandably caused widespread concern that this position may now be compromised.

Several recent developments have in fact reinforced the grounds for

India's refusal to join the convention. Joining it will compromise some of the most important provisions of our 1970 patent law. That will undermine the development of national industries, particularly in the pharmaceutical field. According to Dr S. Vedaraman, former controller general of patents, sections 5, 10(5), 47, 66, 87, 88, 91, 93, 99 and 102 of the Patent Act would require modification if India joined the convention.

According to Justice V. Seshuraman of the Madras high court, section 23(1) of the trade and merchandise Marks Act and section 28 of FERA are inconsistent with the Paris convention. Similarly, section 20 of the Atomic Energy Act of 1962 will face modification.

There is a formidable legal consensus among four former justices of the supreme court, who have come out against joining the Paris convention. They are justices J. C. Shah, Y. V. Chandrachud, M. Hidayatullah and V. R. Krishna Iyer.

As is widely known, these four justices have in the past differed on several issues. But they are unanimous that joining the convention will require "abrogation" of several provisions in our patent law and "will seriously harm the economy of the country."

Drug Element

Justice Shah considers that in his opinion, joining the convention "is legally impermissible because it is in violation of directive principles of state policy enshrined in article 39" of the constitution. It will also lead to "the infringement of fundamental rights" as protected by statute laws.

The Indian drug manufacturers' association has expressed its strong opposition to joining the convention. It considers that such an Act would undermine the progress we have made in developing rapidly our national drug industry.

Since 1976, drug production in the national sector has increased 3.4 times, with that by multi-nationals more or less unchanged. The FICCI had established in early 1986, a special sub-committee on this question, which came out against joining the Paris convention. FICCI's views were communicated to the government on May 7, 1986.

Our foremost scientists working on drug research and manufacture are against our joining the Paris convention. These include Dr Nitya Anand, former director of the Central drug research institute.

They have warned that joining the Paris convention would cripple R and D and technology development not only in the traditional drug industry, but also in the new area of bio-technology, which holds enormous promise of creating a whole new drug and vaccine industry.

In summary then, economists of all shades, supreme court justices, outstanding scientists, FICCI and IDMA have added their strong voices to reinforce India's determined stand not to join the Paris convention.

That stand was forcefully articulated by the late Prime Minister, Mrs Indira Gandhi, in an address delivered at the 34th session of the world health assembly on May 6, 1981 in Geneva. There she stated: "My idea of a better ordered world is one in which medical discoveries would be free of patents and there will be no profiteering from life or death."

(Concluded)

Courtesy— Author

Indian Patents Act, Paris Convention and Self-Reliance

N N Mehrotra

The Indian Patents Act of 1970 has been hailed as one of the most progressive of such legislation in many countries as well as by UNCTAD. It offers several advantages to entrepreneurs, scientists and technologists and to consumers. The provisions of the Act help India ensure that blocking and repetitive patents are not allowed to stifle technological and industrial self-reliance.

According to the Paris Convention the protection of the industrial property and rights of patentees has supremacy over the interests of any country or its people. More than 99 per cent of the 3.5 million patents held by individuals or corporations are in developed countries and the Convention largely helps them maintain their monopoly in member countries. If India joins the Convention now, it will be bound to give wider rights to the nationals of all member countries without matching reciprocity. The disadvantages for India far outweigh notional advantages for any activity, be it in the area of innovation, technological development or industrial self-reliance.

OF late, there has been an increasing demand that India should join the Paris Convention and if possible, modify its Patent Act of 1970. This is despite denials by the government against any such move. This demand for revising our progressive Patent's Act is certainly not sudden and is perhaps a part of the recent campaign to open up the Indian economy to multinational corporations (MNCs) in the false hope of getting new technologies. Large developing (and emerging) nations like India offer such vast markets that the efforts to control these (even through unfair trade practices) are not only made by these multinational companies alone but also by the governments of the developed countries representing them. Thus the role of developed countries during recent debates in GATT should sufficiently caution the countries like India if they have any concern for self-reliance.

Historically, though India was not a member of the Paris Union, its Patent Act of 1911 was so retrograde that it allowed a virtual monopoly of the Indian market by technologically advanced countries. Though after independence, the importance of modifying the then existing Patents Act (of 1911) was amply realised and two expert committees headed by Justice Rajagopala Iyengar and Justice Bakshi Tek Chand went into great detail into the issues of modifying the then Patent Act. Both the commissions found ample evidence of misuse of patent protection by foreign companies (who owned more than 90 per cent patents in India) and it was clear that many patents were taken by the MNCs basically to ensure protected export markets. Thus it was observed that the country was denied by its own national law the right of getting, in many cases, goods even though they were essential for industrial production, or for the health and safety of the community, at cheaper prices available from alternative sources because of patent protections. A national conference of scientists also provided the basis for changes in the Patent Law which was extensively debated as a Patent Bill by a joint select

committee of Parliament, which invited experts from all over the world to give their experience and opinion.¹ Such thorough debates for almost a decade had to take place and bills seeking changes had to lapse more than once, before the New Patents Act of 1970 came into being.² All this delay occurred in changing the Patents Act of independent India primarily because of "heavy criticism from abroad" and opposition to these bills by the associations representing interests of MNCs in India.

The Indian Patent Act of 1970 has been hailed by many countries including United Nations agencies like UNCTAD as one of the most progressive Patent Acts. The basic approach of this Patent Act has been to strike a balance between the interests of an inventor and those of a consumer and to ensure that the benefits of new technological developments reach the people and not be exploited by the inventor alone for monopoly control. It expects that patents are granted to encourage inventions and to secure that inventions are worked in India on a commercial scale and to the fullest extent that is reasonably practical without undue delay and that they are not granted merely to enable patents to enjoy a monopoly for the importation of a patent article.

Three advantages are available in the Indian Patents Act of 1970. The first applies to Indian entrepreneurs, manufacturers and the government to ensure commercial production of a patented product (or through a patented process) in India where an MNC or any other person may have filed a blocking patent to maintain a market monopoly for importation of the patented product in India at exorbitant prices. The second apply to Indian scientists and technologists enabling them to obtain patents on products and processes after modifications on existing patents. This was not possible earlier due to virtually all-encompassing patents which were allowed by the Patents Act of 1911 similar to which the provisions also exist in the Paris Convention. The third type of

advantages accrue to the consumer since (a) even patented products can be imported from manufacturers in the countries where such patent protection may not be available and (b) competition in the production of even the erstwhile patented products causes a decline in the local prices, if the production can be ensured through indigenously developed (or imported) modified process. This is particularly true in the area of food and drug products where no product patent is allowed in India and even the process patent is allowed only for a short period of 5 to 7 years.³

Some of the specific positive features of Indian Patents Act of 1970 are "revocation of patents in public interest (article 66, 89); licences of right (article 86, 87); compulsory licensing being more rigorous (article 84, 97); licensing of related patents (article 96); power of the government to use inventions for the purposes of government (article 100) or in the public interest even to third parties (article 101); acquisition of inventions and patents by the central government (article 102). Besides not allowing product patents on food and drugs, patents are also not granted for products related to atomic energy and space applications. Article 47 of the Act provides that the government can even import patented medicines and drugs for their own use or distribution to ~~any~~ dispensaries, hospitals or medical institutions.

It should be clear that the above provisions not only help the Indian consumer but also help India ensure that blocking and repetitive patents are not allowed to stifle technological and industrial self-reliance. It may be worthwhile to note that many of these provisions of the Indian Patents Act have been adopted by a diplomatic conference under WIPO in the proposed revision of various articles (particularly article 5 and 5 ter) of the Paris Convention. Most of these provisions are made to remove hindrances that are placed by the patentees on working of their patents.⁴

On the contrary, Paris Convention has a philosophy according to which protection of industrial property and rights of patentee are given supremacy over the interest of any country or its people.³ Though there have been several modifications in the original convention of 1883 because of six revisions, less developed countries (LDCs) have been dissatisfied with several provisions of the convention which put fetters on their national administration in the interest of patent holders, who are almost invariably from developed countries. While many subsequent amendments have been more favourable to patentee, 20 countries of the union have not signed subsequent amendments to the Paris Convention.⁶ These countries have thus safeguarded their interests by not subscribing to these adverse clauses of the convention. However, countries like India who may join now have no such option and are thus faced with a situation where they will be bound to give wider rights to nationals of such 21 countries without matching reciprocity. Some of the specific provisions of the Paris Convention which deserve special mention in this regard are Rights of priority (articles 4C(4), 4F and 4H), right to patent despite restrictions or limitations resulting from the domestic law (article 4 quarter), no forfeiture of industrial designs despite failure to work or importation of protected articles (article 5B), convenient excuses against compulsory licensing (article 5A(4)), no permission to import patented products (article 5 quarter), effective protection against unfair competition (article 10 bis), amendment of domestic law to give effect to the provisions of the Paris Convention (article 25) and binding of at least six years before any country can leave the convention after joining it once (article 26(3) and (4)). The above articles in essence ensure that a patentee can continue to misuse his patent rights against any concern for the rights of the states (or its people) who grant these rights and privileges to the patentee. Thus, even if the patentee is not at all interested in working his patent, it becomes very difficult to enforce the working of the patent or import the product of the patent except from the monopoly patentee. Thus, "an overwhelming majority of patents granted to foreigners through national laws of developing countries have been used as import monopolies".⁷

Despite the fact that about 99 per cent of the 3.5 million patents are currently held by residents or corporations of developed countries and that the Paris Convention largely tries to help these patentees in maintaining their monopoly in the member countries, some of the advocates of Paris Convention have been arguing in favour of India's joining the convention on the following grounds:⁸

(i) Membership of Paris Convention is important for obtaining better facilities for the filing of foreign patents.

(ii) Membership of convention will help non-resident Indians to return to India.

(iii) Indian Patenting abroad is becoming important for India from the angle of exports.

(iv) International protection for Indian patents abroad will encourage scientific research in India.

(v) Faster information flow on patents is an essential requirement for the sound decisions on foreign collaborations and this requirement can be met only by the membership of Paris Convention.

(vi) Better climate for patenting by the foreigners in India will enable India to obtain technical collaborations rather than having to seek turnkey projects of foreign collaboration arrangements having a wider scope.

(vii) Membership of the convention will help India in getting a better deal in acquisition of technology from small and medium companies and motivating foreign investors to transfer the latest technology.

(viii) Membership will help India to intervene in the revision of the convention.

It will be appropriate to examine carefully whether the above mentioned propositions bring out any real advantage to a country like India in its scientific, technological, or self-reliant industrial development.

PATENTS, TECHNOLOGICAL DEVELOPMENT AND INDUSTRIAL SELF-RELIANCE

Let us first examine the role of patents in technological and industrial development. Industrial development requires both the capital and technology, besides raw materials and the human capability to make effective use of these sub-systems. The Scientific Policy Resolution of the Indian government of 1958 stressed the key role that technology plays in industrial development.⁹ However, it must be kept in mind that the technology should not only suit the socio-cultural-economic milieu of a nation but should also be under national control, rather than jeopardising its self-reliance. This was amply realised by the Industrial Policy Resolution of 1956 of the Indian government.¹⁰ In fact, the Scientific Policy Resolution of 1958 was in that context a natural corollary to the Industrial Policy Resolution.¹¹

Technological developments in a country can be based both on indigenously developed technology as well as on import of the required technology. To a developing country like India, it is often contingent to import the required technology since it cannot always wait for its indigenous development. However, even the import of technology is influenced by the technological status of the importing country and the assimilation and development of such imported technology is governed by both scientific as well as industrial capabilities. Recognising the importance of technological development and the role that science and technology plays in today's society, Indian planners encouraged the establishment of a

broad base of scientific research. While opinions on the extent of contribution of indigenous scientific and technological research to development of technology and industrial base in India may differ, it is not debated that the contributions of indigenous research right from agriculture to space technology and industrial research have made significant impact on the growth of indigenous industrial development.^{12, 13}

Major components of technology are the know-how and capability to perform a given task. Since the inventors and developers of technology would like to derive some benefits from their endeavour, they like to keep both the know-how as well as these capabilities as secrets to themselves. In order that the benefits of this technological development are shared by others without prejudice to the interests of the inventor, a system of patents and inventors' certificates had been introduced. While a patent provides the patentee the right to exclude others from using the patented invention (subject to national law), the owner of an inventor's certificate has the right to receive remuneration for the use of invention while the exclusive right is transferred to the state.¹⁴ While the patents and other forms of intellectual property rights do provide an incentive to the inventors, they also allow them to control technology transfer as well as further technological development in many ways. It should, however, be recognised that while the patent licensee may not give any information on know-how and technology, the patentee may not allow exploitation of a technology even if others have know-how and other details of technology utilisation. This is becoming increasingly important due to the fact that most of the technologies as well as patents are today controlled by MNCs from the developed countries.^{15, 16} Thus, the international trade in technology is between unequal partners and this imbalance is used by developed countries and their MNCs for economic, technological and industrial exploitation of developing countries through restrictive business practices.¹⁷ It was against this monopoly and exploitative control in science and technology that UN bodies like UNCTAD have been constantly raising their voice, demanding that the benefits of modern science and technology should also reach developing countries and efforts have been made by UNCTAD to develop an international code of conduct for transfer of technology.¹⁸ It is in this context that one will have to examine the role of international patent treaties like Paris Convention and their influence on technological development and industrial self-reliance of an emerging, though developing country like India, in order to find correct answers to the advocates of Paris Convention.

PARIS CONVENTION AND INDIAN TECHNOLOGICAL SELF-RELIANCE

Given the character of the Paris Convention described earlier, let us see how India's

joining this union at this stage will help it in any concrete terms. If we analyze the grounds on which it is advocated to join the Paris Convention, these can be broadly classified under three categories. Analysis of these claims under all these three categories are given below:

1 *Procedural advantages of filing patents abroad, getting information on patents and priority rights in the member countries*

All these advantages are relevant if Indian inventive activity was at a level where Indians have to file a large number of patents abroad. However, Indian research and development activity in most areas is unfortunately still at a stage where not many new inventions are often made, particularly of the type that require patenting abroad, more so which have the potential of working abroad. For example, out of 300 patents granted to CSIR since 1981, only a few could be licensed or worked abroad. This is largely true of other research organisations and units also, both in the public and private sectors. There are no indications of any significant changes in the objectives of Indian R and D agencies or in their character of R and D, programmes expect a boom in Indian patenting activity abroad. Even the extent of Indian's filing patents in India itself has been almost constant in the decade 1974-75 to 1983-84 (Table 1). In fact patents contribute only marginally as incentive to worthwhile inventive activity whereas several other factors namely climate for technology supply, market demand, pattern of industrial development, industrial R and D nature of training and education, etc. are more important.¹⁹ Thus, merely joining the Paris Convention or giving more rights to patentee is not going to significantly increase the innovative activity in India. Several other changes are probably more important in this regard.^{20, 21, 22}

Even if we assume that there is a likelihood of increased inventive activity in India which would demand filing abroad of more patents by Indians, do Indian inventors face any specific problem(s) that could be solved by joining the Paris Convention? So far as translation facilities in several European languages is concerned, these are available to Indian patentees through the European Patent Office where a patent filed in any one language is automatically translated into all other European languages. So far as actual filing of patents is concerned, Indians even today do file patents in other countries (including those which are members of Paris Convention). Even after joining the Paris

Convention, Indians, just as any other members will have to file patent applications in all the countries where they want any legal rights on patents. The only advantage that they do not get now is of getting automatic priority of 12 months in filing a patent in any country of the convention. The lack of this single advantage to India's in a selected few cases of patents, which have been of consequence, has not created any problem in the past and is not likely to create any problem till such a time that Indian innovative activity reaches a level which requires its constant transfer to other developed or developing countries. Today, India does export technology to other developing countries (and in a few cases, even to developed countries), none of this technology, however, has any significant patent protection value (Table 2). It is not likely that this picture is going to suddenly change to let India become a major technology (patentable) donor, requiring urgent measures to derive advantages of priority offered by the Paris Convention.

On the contrary, Indian innovators today have a definite advantage of not only patenting

in India (and other non-member countries) the processes based on incremental innovations but also of manufacturing these products in India as well as exporting technology and their products to non-member countries. The case of the pharmaceutical industry is a well known example where Indian inventors and industry have been able to achieve such advantages only because of the Indian Patents Act of 1970 and India not being a member of Paris Union. Thus Indian pharmaceutical industry today produces large number of drugs for which international patents are yet to expire (Table 3), besides having large number of process patents based on incremental technological advancements. The Paris Convention (article 4) provides priority even for elements which do not appear among the claims formulated in the application in the country of origin. Such provisions can influence the existing advantage of incremental innovation that developing countries like India enjoy today.

It was for such reasons alone that almost 40 countries of the world do not offer pa-

TABLE 2: CSIR TECHNOLOGIES EXPORTED TO VARIOUS COUNTRIES

Countries	Technologies
1 Burma	Menthol, sodium alginate, bentonite, electrolytic manganese dioxide, miltone, orange juice concentrate, glue and gelatine, calcium carbide, potassium schoenite, terpineol, diosgenin and progesterone, phenol-formaldehyde, model distillation column, electro-chemical metallurgy, workshop, straw-board and specialty paper, hard board, special laboratory equipment, electronic instruments (pH meters, etc)
2 Malaysia	Spice-oilresins.
3 Nepal	High-draught kiln, spice-oilresins.
4 Philippines	Active carbon from saw-dust, fish meal.
5 Sri Lanka	Buff coloured green pepper.
6 USA	Synian-PKR.
7 West Germany	Suri transmission.
8 Egypt	Rice bran oil.
9 Indonesia	Water filter candle.

TABLE 3: ILLUSTRATIVE LIST OF BULK DRUGS FOR WHICH TECHNOLOGY COULD BE INDIGENOUSLY DEVELOPED OR ACQUIRED, AND PRODUCTION UNDERTAKEN AS A CONSEQUENCE OF PATENTS ACT OF 1970

Period when the Patent Expires/Expired	Name of the drug
1983	Ibuprofen, clobefrate, tetramisole and verapamil
1984	Allopurinol, betamethasone and derivatives (1984-87)
1985	Tinidazole, chromoglycate
1986	Lorazepam
1987	Pyranter
1988	Propranolol
1989	Mebendazole, salbutamol, clotrimazole, ketoprofen levamisole, bumetamide
1992	Cimetidine, metoprolol

TABLE 1: NUMBER OF APPLICATIONS FOR PATENTS FROM PERSONS IN INDIA AND ABROAD YEARWISE FROM 1974-75 TO 1983-84

	1983-84	1982-83	1981-82	1980-81	1979-80	1978-79	1977-78	1976-77	1975-76	1974-75
Indians	1,055	1,135	1,093	1,159	1,055	1,124	1,097	1,342	1,129	1,148
Foreigners resident in India	25		19	19	37	13	37	23	34	66
Foreigners resident abroad	2,065	1,950	1,877	1,776	1,888	1,795	1,736	1,739	1,833	2,192
Total	3,145	3,085	2,989	2,954	2,980	2,932	2,870	3,104	2,996	3,406

Source: Annual Report.

tent protection to pharmaceutical products and some of them do not provide patent protection even for processes used in production of pharmaceuticals. They include all the leading pharmaceutical markets in the developing countries, ranking among the 15 leading world markets, e.g. Brazil, Argentina, Mexico, South Korea and India.²³ The differences in the approach of the developed and developing countries (almost opposite) are clearly related to the differences in economic and technological circumstances prevailing in each group of countries. The range of effects of patent protection in the pharmaceutical sector clearly shows the serious implications of the degree of protection that is offered in these countries. It is also for this reason that lobby of the pharmaceutical MNCs is one of the most powerful votaries of India joining the Paris Convention and changing the present Patents Act.

Another argument, namely of getting better information flow due to joining of Paris Convention is not true either since India even now gets all the necessary information on patents, including patents search through WIPO, European Patent Office and Berne convention membership. In fact, what is required is the strengthening of the Nagpur information centre as well as the creation of more regional centres and following international classification system in India.

2 Patenting Advantages to Indians for Patenting Abroad and Increase in Indian Inventive Activity

As discussed in the earlier paragraphs, the inventive activity in India is not likely to suddenly increase. Moreover, the argument for better patent protection abroad to get more returns to Indian inventors/researchers to protect against infringements abroad with the accession to Paris Convention is hardly valid. When we look at (a) priorities of Indian R and D, (b) extent of cross-licensing of patents in our technology transfer agreements and (c) the nature of export and manufacturing activities abroad.

Most of scientific and technological research in India is done in government funded R and D institutions and their research objectives have hitherto often been of generating technology for indigenous markets, utilisation of its resources and providing services to industry and other service sectors and assimilation of imported technologies, besides conducting basic research to keep abreast of frontiers of international research. Thus, it was natural that our patenting activity was of little commercial consequence. Without major changes in our science and technology policies and the character of the S and T infrastructure (namely larger role of corporate sector), it is highly unlikely that international patents can become any motivating force for Indian R and D. On the other hand a global orientation in R and D of several MNCs operating in India do have an interest in international patent protection particularly since they also have live links with their parent companies

in the west. While Indian subsidiaries of MNCs may be benefited by joining Paris Convention, it can hardly be a cause for promoting Indian R and D. On the contrary, as discussed earlier, it may stifle Indian R and D (and utilisation of its results) by way of blocking patents which may become easier as a consequence of joining the Paris Convention. In fact, Indian manufacturers can often be put to the disadvantage of not being allowed to manufacture or export many products involving incremental modifications in patents. For example, if we were a member of the Paris union, the Bajaj auto factory (producing and exporting scooters) would not only have been forced to stop exports (and pay damages) but also indigenous production of these scooters.

3 Help in Technology Acquisition and Development

According to the fourth Reserve Bank of India Survey, 40 per cent of the companies covered were able to obtain technical collaboration agreements despite Indian absence from the Paris Convention, compared to 35 per cent of the companies covered in the third survey. This clearly indicates that the technology market is becoming internationally competitive to allow access to technology even without membership of Paris Convention. This is equally true of the fact that more progressive patents acts not only in India but also in other developing countries like Mexico and Colombia have not negatively influenced the inflow of technology or direct foreign investments in these countries.²⁴ While the foreign technology donors would prefer more favourable patents acts, the patents clearly are not becoming any hindrance in technology transfer.

Thus, out of 371 companies having technical collaborations in the fourth RBI Survey only four cases in the private sector (0.1 per cent) involved patents and trademarks together or patents alone.²⁵ It was only in 24 per cent cases that patents or trademarks were involved with know-how in technology transfer. In 80 per cent of the 580 cases of the total technical collaboration agreements, Indian collaborators were granted exclusive rights by the foreign collaborators. A large number of small and medium size firms have also been transferring their technologies to India. They have also been patenting in India in considerable strength. Similar has been the experience of many other developing countries "particularly for the development of relatively labour-intensive and small-scale industries" with "less restrictive terms and conditions than large TNCs" and in a manner as to "allow for greater participation and learning by doing by local firms in the host countries".²⁶ Thus, it is clear that the flow of technology into India (or even into other developing countries) is hardly influenced today by patent restrictions and therefore, it may at best be an alibi to seek the member-

ship of the Paris union under such a lame excuse.

Thus, it is apparent that at this juncture the disadvantages to India in joining the Paris Convention far outweigh some notional advantages for any given activity, be it innovative activity, technological development or industrial self-reliance. India has therefore, wisely decided against joining the Convention unless it is modified so as to be a balanced tool of interest both to developed as well as developing countries. A country like India can mobilise more pressure from outside (through forums like NAM and UNCTAD, etc) for such changes in the Paris Convention than by joining it. Moreover, once it joins the Convention, it cannot walk out of this union for at least six years during which enough blocking and repetitive patenting may be done by the vested interests of industrialised countries. For those who still want to advocate India's membership in the Convention, we pose a set of questions:

1 In how many cases in the last 15 years have Indian inventors incurred losses due to lack of simultaneous filing priority (an advantage which is likely to be available as a result of joining Paris Convention)?

2 In how many cases in the last 15 years has technology import been refused/delayed due to India not being a member of Paris Convention?

3 In how many cases has patent/information been refused/delayed to India because of it is not a member of Paris Convention?

4 How often in the last 20 years has patent protection been used as a tool to stop the import of (a) new products (e.g. drugs, etc) and (b) new technological process (particularly before the introduction of our new Patent Act of 1972)?

5 Can India join Paris Convention without really modifying its Patents Act as also the trade-marks and design Act?

6 Is India changing its own stand at the UN (UNIDO, UNCTAD, etc) and NAM where it has been advocating against joining the Paris Convention until it is modified in the interest of developing countries?

Notes

[Views expressed in this paper are those of the author and not necessarily of NISTADS.]

1 Minutes of the Joint Select Committee on the Patents Bill of 1967 cited in *IDMA Bulletin*, XVII (12), 1986, Supplement Pages 1-48.

2 U Baxi in "Inventive Activity in the Asian and Pacific Region", WIPO, 1980, pp 95-102.

3 "The Patents Act, 1970", Eastern Book Company, Lucknow, 1985.

4 A K Koul, "Technology, Paris Convention and India—Some Thoughts", paper presented at National Seminar on Indian Patent System and the Paris Convention Legal Perspectives, Delhi, 1986.

5 G H C Bodenhausen, "Guide to the Application of Paris Convention for the Protection of Industrial Property", BIRPI.

- 6 *Industrial Property*, January 1987, pp 6-8.
- 7 UNCTAD Report "Promotion of National Scientific and Technological Capabilities and Revision of the Patent System", TD/B/C6/AC2/2, July 1975.
- 8 Iqbal, T, 'International Patent System and India's Economic/Technical Co-operation', *Journal of Developing Countries*, 1987, 21(1), 1-10.
- 9 "Scientific Policy Resolution", Government of India, 1958.
- 10 "Industrial Policy Resolution", Government of India, 1956.
- 11 Dinesh Abrol et al, "Scientific Policy Resolution: A Different Perspective", NISTADS, 1985.
- 12 V Rao Aiyagari and P J Lavakare, Department of Science and Technology, 1981.
- 13 "Seventh Five Year Plan 1985-90", Vol 1, Government of India, 1.13 to 1.16.
- 14 "Role of Patent System in the Transfer of Technology to Developing Countries", UNCTAD, New York, 1975.
- 15 "Review of Current Trends in Patents in Developing Countries", UNCTAD, Geneva, TD/B/C6/ACS/3 of 1981.
- 16 A K Koul, 'UNCTAD Code on Transfer of Technology 1985', *Foreign Trade Review*, XX(2) pp 141-162.
- 17 "Major Issues Arising from the Transfer of Technology to Developing Countries 1975", UN Publication Sales No E7511DI and D2 cited from A K Koul above.
- 18 UNCTAD Conference on an International Code of Conduct on Transfer of Technology, Geneva 1983.
- 19 P Bagerjee, V B Lal and P Nath, "Arrangements for the Promotion of Technology in Developing Countries (1985)", Report submitted by NISTADS to WIPO, March 1987.
- 20 N N Mehrotra, 'Indian Science: What is Wrong? What is Right?', *Bulletin of the Association of Scientific Workers of India*, 1983, 13 (9), pp 133-140.
- 21 N Ray in "Management of Indian Science for Development and Self-Reliance" Ed, N N Mehrotra et al. Allied Publishers, Delhi, 1993, pp 32-35.
- 22 "Promotion and Encouragement of Technological Innovation. A Selective Review of Policies and Instruments", UNCTAD Report TD/B/C6/139 of 1986.
- 23 UNCTAD Report TD/B/C6/AC 5.3 of 1981, p 29.
- 24 Ibid, p 23.
- 25 "Foreign Collaboration in Indian Industry", Fourth Survey Report 1985, Reserve Bank of India, Bombay.
- 26 "Trends in International Transfer of Technology to Developing Countries by Small- and Medium-sized Companies", UNCTAD, TD/B/C6/138, 1986.

Courtesy - Author

NATIONAL WORKING GROUP ON PATENT LAWS

OBJECTIVES

To discuss issues relevant and related to the Patent Laws and Paris Convention ;

To arrange for research and publication of papers relating to these issues ;

To help create a better understanding of these issues by organising meetings, seminars and public debates ;

To represent to the Government and those concerned with the formulation of policy on agreed views of the Group ;

Publicise and organise publicity ;

in respect of India's and international patent and related laws and policies.

To forge a National Alliance of various Organisations/Forum/Associations, etc. to work towards and campaign for patent laws and policy best suited for India's interests.