CHAPTER-1

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“The crossing of wild wheat goat grass around 8000 B.C. produced a fertile hybrid called *emmer*. *Emmer* spread naturally by being broadcast in the wind and a further cross of *emmer* and another natural goat grass created the bread wheat with its plump of 42 chromosomes. This wheat had its grain ear tightly covered with husk. It could not crack by itself. This bread wheat needed an agent to open its ear so that it can be sown and spread. Man has a wheat he lives by, but the wheat also thinks that man has been made for wheat because only so can it be propagated. The life of each man and plant depended on the other. It is a true fairy tale of genetics, as if the coming of civilisation has been blessed in advance by the spirit of Mendel.” – The Brownskian approach to bio-technology by D. M. Balasubramanium of The centre for cellular and molecular biology (C.C.M.B) vividly depicts the tryst of man and nature right from the dawn of creation. Among all the species that adore the globe *homo sapiens* are outstanding because of possessing ‘intellect’ with which man has conquered ravages of nature and harnessed the natural forces for his own comfort and well being. The role of the power of the human mind is now being acknowledged as a major wealth creator in every economy.

To an increasing degree knowledge rather than labour or conventional property, is becoming constitutive for economic and social activities. Knowledge has become the source of economic growth and competitive advantage among firms, society and regions of the world. The developments allow us to speak of the transformation of modern industrial society into a knowledge society. It represents a social and economic world in which more and more things are “made” to happen, rather than a social reality in which things simply “happen”.

Innovation is the key for the production as well as processing of knowledge. A nation’s ability to convert knowledge into wealth and social good through the process of innovation will determine its future.

In this context, issues of generation, valuation, protection and exploitation of intellectual property are becoming critically important all around the world. Exponential growth of scientific knowledge, increasing demand for new forms of IPR protection as well as access to IP related information, increasing dominance of the new knowledge economy over the old ‘brick and mortar’ economy, complexities linked to IP in traditional knowledge, community knowledge and animate objects will pose a challenge in setting the new 21st century IP agenda.2

The economic dynamics and impacts of the myriad activities collectively referred to as ‘biotechnology’ portend to offer vast employment and commercial benefits. It is thus not surprising that many pundits in the private sector wax enthusiastically about the potential of this new ‘frontier’ of research if market forces are allowed to fuel investments and competition, unbridled to the extent possible by government hands. Yet, the nature of the technology e.g. potentially changing conceptions of ourselves permitting the development of techniques which no one knows with certainty what the ecological effects might be etc. have led to legitimate public debates.

Central to these are deeper concerns regarding ownership between biotechnology as a public good or as a private assets. Debate over ownership typically pivots on questions about property rights, public access, and the equitable distribution of benefits derived from advances in bio-techniques. Of course, prevailing legal conception of property and notions of ownership include the right of possession, use, management, income, security, transmissibility and exclusivity. In other words a public fear is that governments will loose control of this transformative and soon-to-be pervasive technology.

Ethical concerns with biotechnology clearly cover a broad swath. If one could try to typify these, a spectrum might range from moral issues (in which case cloning and other bio-techniques is felt to put ‘Man’ in place of ‘God’), to basic anti-technology
sentiments, to a fear of the unknown or more precisely, to a sense that bio-technology will increase uncertainty and thus public risk, to a core anti-capitalist or anti-corporatist reaction – particularly when it is felt or shown either that there is ‘excessive’ profit taking in certain bio-technology sector (e.g.- MNC seed monopoly) or that the benefits derived from bio-technology in terms of nutrition, agriculture and health are not only not being distributed to developing world but are actually having negative impacts on these impoverished regions. Concern with risk management is probably the most legitimate of these, but these together merely point to the dynamic interface between policy, business and society with this evolving technology. They certainly point to the environment with in which policy makers must work. **This policy has to be reflected in law. Thus the ideal law should try to foster a symbiotic social contract between science and society. In fact justice and science must combine in the idea of sustainability. Bio-technology has to become only one example of these axiomatic concepts through proper Jurisprudence.**

The post – Vienna legal phase is remarkably known for revolutionary changes across the globe wherein the doctrinaire limits of international and municipal law has been blurred\(^3\). In the arena of intellectual property rights (IPR) this seems more true because fresh spate of statutory activism making trade international

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\(^3\) Upendra Baxi, ‘Environmental Teaching and Research In Universities’, in Association of Indian Universities (ed) *Environmental Challenges And The Universities*, 44 (1994)
in character now seems to determine the relationship among the comity of nations. The onset of World Trade Organisation (WTO) jurisprudence (often described as Pro-North Jurisprudence) owes its genesis to Bretton Wood Conference, 1944, General Agreement On Trade and Tariffs (GATT), Arthur Dunkel Draft, Uruguay Round, and Marrakesh Agreement. The Bretton Wood Conference marked the beginning of a new world trade order which triggered economic changes and paradigm shift. This paved the way for preparation of Dunkel Draft eventuating in the Uruguay Round and Marrakesh Agreement. The major thrust has been the creation of world wide market grab system under the exuberance of globalization, liberalization and privatization. The GATT was tuned in such a way that it became instrumentality for the implementation of planetary business agenda.

The post-GATT-ised legal ordering is remarkably known for much publicized and debatable conclusion of Trade Related Aspect of Intellectual Property Rights (TRIPS) and creation of WTO. These jurisprudential polemics soon evoked fierce scrutiny. At home, in some quarter, it is dubbed as ‘bleeding operation with the dubious promise of benign global competition’, ‘de facto nullity of constitutional goal of social welfare’ and ‘contra-
constitutional coup\(^6\). Since India has become a member of WTO it indulged into massive rehabilitation and fundamental mutation of IPR regime. In view of nearing deadline of transitional phase and evaporation of euphoria of most favored nations (MFN), our legislatures swung into action by proposing three Bills for the enactment in the Parliament. Two of the Bills (now Acts), *The Protection of plant Varieties and Farmers' Right Act and Patent (Amendment) Act* constitutes India’s response to *TRIPS Agreement*. *The Biological Diversity Act* on the other hand seeks to implement the mandate of *U.N. Convention on Biological Diversity, 1992 (CBD)*. The three Acts have their own distinct focus but they share in common an attempt to define property rights over biological resources or inventions related to bio-diversity. The allocation of real and intellectual property rights over biological resources has become a matter of great concern\(^7\). The unique dovetailing of natural resources with global trade law has been a cause of great discontentment as the country never encountered such problem in spite of the fact that its patent legislation has stood the test of time and acclaimed far and wide. The insurmountable pressure of WTO, growing menace of bio-piracy, gradual commodification of natural agricultural and environmental resources and prevalent apathy and ignorance about the digitization of the indigenous knowledge and traditional practices are perceived as ‘re colonization in the

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making', 'global village – global tillage' agenda and jettisoning of country’s basic welfare obligation. Under this backdrop the study subsumes the community of concerns and assesses the potential and portent of TRIPS Agreement in strategizing an effective *sui generis* system of protection of plant variety, farmers and breeders right, bio-diversity, traditional knowledge etc.

After the assumption of original membership of WTO India is on the threshold of revamping the IPR laws. Some of the important radical changes effectuated to fulfill the TRIPS mandate include:

- A system for filing and handling product patent applications for pharmaceutical and agriculture chemical products and the granting of Exclusive marketing rights (EMRs) (to be implemented as of 1 January 1995; adopted in March 1999);

- The elimination of any restriction on the granting of product patents (as of 1 January 2000) except for product patents on pharmaceutical and agricultural chemical products (Where restrictions can remain until 1 January 2005);

- The elimination of restrictions on patentable subject matter such as the current exclusion of methods of agriculture or horticulture (as of 1 January 2000);
The lengthening of patent duration to twenty years, from the current fourteen years, and seven years for food and pharmaceuticals (as of 1 January 2000); 8

Restrictions and modifications concerning compulsory licensing. Licenses of right and the right of revocation (as of 1 January 2000); and

The adoption of a legal regime for the protection of plant varieties (as of 1 January 2000). This takes the form of a Plant Variety Protection Act 9.

The operational strategy has been devised into two phases. The first phase of reform, which encompassed provisions for filing product patent and grant of exclusive marketing right, is already over. The second phase reforms subsume implications on the overall growth of pharmaceutical industry, share of foreign and domestic investment, research and development and international trade mechanism 10. The fundamental mutation of Indian Patent Act is hailed and assailed. One set of opinions runs the Patent Act is development oriented and patriotically processed statute. It has been passed after a meaningful debate and thorough study and proved a national triumph for commerce and manufacturer alike. 11


9 Id at 626


Those who assailed revolution in the western world witnessed very little impact on industrial scene particularly in the innovation dependent industrial segment\(^\text{12}\). In the midst of claims and counter claims the leeway and loopholes of TRIPS needs to be examined logically. Unlike the general perception the Agreement provides considerable maneuvering to make it developing country friendly. A perusal of some of the provisions of TRIPS supports this view. Any developing country member which is in the process of transformation from a centrally planned into a market – free enterprise economy and which is undertaking structural reform of intellectual property system and facing special problems in preparation and implementation of intellectual property laws, may benefit or entitled for delay\(^\text{13}\). In view of special needs and requirement in least developed countries, their economic, financial and administrative constraints, and their need for flexibility to create a viable technological base, such member shall not be required to apply to the provisions of this agreement, other than Article 3, 4 and 5 for a period of ten years\(^\text{14}\). Further latitude is granted under the Agreement which is an armory in hands of municipal legislature to safeguard the national interests. It runs as under:

Member states may exclude from patentability inventions, the prevention with in their territory of the commercial

\(^{12}\) Supra note 10  
\(^{13}\) Article 65 (20) (30), The Trade Related Aspect of Intellectual Property Rights, 1995.  
\(^{14}\) Id Article 66 (1)
exploitation of which is necessary to protect public order or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by domestic law\textsuperscript{15}.

Member states may also exclude from patentability the diagnostic, therapeutic and surgical methods for the treatment of humans and animals vis-à-vis plants and animals other than microorganism and essentially biological processes for the production of plants or animals other than non-biological and micro-biological processes. However the members shall provide for the protection of plants varieties either by the patent or by effective \textit{sui generis} system or by any combination thereof\textsuperscript{16}.

This constitutes one of the few areas where India is conferred some margin of appreciation in devising protective \textit{sui generis} system. Some countries in the South American region have made use of these provisions to bring in restrictions on patentability in their national patent laws. As far as India is concerned, in view of the need to protect some indigenous systems, it may have been important to have a wider rather than a restrictive interpretation of Article 27.3 (a) to include indigenous products and

\textsuperscript{15} \textit{Id Article 27 (2)}

\textsuperscript{16} \textit{Id Article 27 (3)}
knowledge bases\textsuperscript{17}. A matter of great concern to India is the one related to the provisions for granting patents for discovering new uses for known molecules or products. While India wants protection of its bio assets from exploitation through second use patents by third parties, it should also consider the possibility of taking patents on new uses for existing products out of its own R & D efforts. TRIPS is silent on this issue. Implying that countries are free to decide for themselves whether it is advantageous for them to allow filing and grant of utility patents, like in the U.S.\textsuperscript{18}

The protection of plant variety, farmers and breeders' rights derives its life breath and sustenance from Union International Pour Law Protection Des Obtentions Vegetables or International Union for the Protection of new Varieties of Plants or UPOV Convention. The Convention was signed in Paris in 1961 and enforced in 1968. It was put to revision in 1972, 1978 and 1991. It ensures protection to plant variety and grant exclusive property right on DUS Criteria distinct, uniform and stable. For three decades (1961-1991), UPOV Convention has been granting following privileges/exemptions:

(i) Breeder exemptions, which allowed the breeders to use the protected varieties for research purposes and for breeding new varieties and

\textsuperscript{17} Supra note 10.
\textsuperscript{18} Ibid.
(ii) Farmers' privilege, which allowed the farmers to use their own harvested material of the protected variety for sowing the next crop on their own farm.

The Convention constitutes an alternative to patents insofar as plant breeders' rights provide slightly weaker rights to commercial breeders. However it does not recognize farmers as breeders, and rights over varieties. **On the whole, the current international legal framework favors the appropriation of biological resources and related knowledge through sovereign rights and private property rights.** It generally seeks to increase incentives for the commercial exploitation of these resources and knowledge. One of the consequences is that the role of common property rights which are still very important in many rural communities for the fulfillment of basic food and health needs is progressively side-lined. It thus provides a partial framework which is inherently of granting rights to farmer breeders despite the fact that an overwhelming majority of seed planted in India are farm-saved seeds. Since TRIPS leaves member-states to choose their own system of plant varieties protection, it is evident that countries such as India where agriculture provides employment to at least two thirds of the working population should adopt a system adapted to their own needs and requirements, something that UPOV can not achieve.

India's concern for a comprehensive legislation bears legitimacy because it is one of the twelve mega diversity regions of
the world and constitutes seven percent of world’s flora. The government has thrashed out Bio-diversity Policy which broadly encapsulates survey of bio-diversity, national data base, in-situ and ex-situ conservation, sustainable utilization, indigenous knowledge systems, benefit sharing, people’s participation, international cooperation, research, education, training and extension. Falling in line with BD Policy THE BIOLOGICAL DIVERSITY Act 2002 entails information sharing system, chronicling sustainable use and community benefit sharing. The twin provisions envisaged under CBD viz; right to sovereignty and equitable sharing of benefits among indigenous communities needs urgent restructuring in IPR regime because of prevalent unethical dichotomies in recognition-reward system. The conflicting sets of legal moralities was detected after one year of conclusion of CBD because India become signatory to WTO Agreement in 1995. Thus trading interests reflected in WTO have over ridden two basic assumptions, which are fundamental to CBD. Firstly, IPR is a matter of national sovereignty and policy because it establishes monopolies and monopolies are de facto dangerous Secondly, life forms are part of public domain. Subjecting the ecological and cultural heritage of indigenous communities to the legal regime of commercial monopoly right under TRIPS will place them in serious jeopardy.

Since TRIPS mandates IPR could be universally applied to all technologies, bio-diversity, genetic resources and plant variety automatically becomes subject to patent either under global patent regime or *sui generis* national system. It was possible for India to insist that the both TRIPS and the CBD, one insisting on conformity and other on diversity, can not be right at the same time. Unfortunately, such arguments have not been fruitfully deployed by the Indian governments in international negotiations to counter patentability.\(^{21}\) Therefore, the Bio-diversity Act is seen with great expectations and an instrument to ward off some of the deficiencies of PVP & FR Act and IPR regime of India. The Biodiversity Act has been drafted in response to the Bio-diversity Convention (CBD) & reflects, Government’s strong reaction to bio-piracy, illegal application of resource or knowledge and partly to avoidance of a direct confrontation with WTO\(^{22}\). However, it does not provide a comprehensive framework for the conservation and sustainable use of biological resources. In fact it focuses on access and assertion of the sovereign rights over natural resources. While the Act focuses on preserving India’s interests its main impact within the country will be to concentrate power in the hands of the Government. The Act has logical bearing with PVP & FR Act as it addresses the question of the rights of holders of local knowledge by setting up a system of benefit sharing. It is

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innovative in so far as it provides that an authority can grant joint ownership of monopoly intellectual property right to the inventor and the authority or to the actual contributors if they can be identified. However, sharing property right is only one of the avenues for the authority to discharge its obligation to determine benefit sharing. Further, it is in the authority's power to allocate right to itself or a contributor such as a farmer contributor and the latter has no right to demand to allocation of property rights. The Act thus accepts the introduction of IPR over bio-diversity as provided for in TRIPS Agreement but does not directly seek to make sure IPRs are subordinated to CBD as provided in the convention.\(^\text{23}\)

The patents Act of 1970 deals with patents in general and is not specifically related to biological resources and patentability of methods of agriculture.\(^\text{24}\) In view of WTO-TRIPS mandate the Act has undergone a fundamental change and still awaiting further amendments. But before finalizing the new patent Act India Should take into account socio-economic complexities of Indian agro-diversity\(^\text{25}\) and leverage and loopholes of TRIPS Agreement.\(^\text{26}\) Therefore, the new amendments to *The Patents Act* generally seek to modify the Act to allow compliance with TRIPS. However the

\(^{23}\) *Ibid*


exceptions contained in TRIPS have not necessarily been used to their full extent. **Further, the present Act does not consider at all the impact of the strengthening of patent rights on the realization of fundamental rights such as the right to food and health despite their close links with regard to environmental protection.**²⁷ Though the Act includes some of the TRIPS exceptions related to environment and health, it generally addresses the question of bio-piracy by imposing the disclosure of the source and geographical origin of biological material used in a patented invention. Further, non-discloser of the geographical origin or the anticipation of the invention in local or indigenous knowledge constitutes grounds for opposing or revoking a patent.

The three Acts generally reflect the trend towards the appropriation by States and private actors of a multiplicity of property rights the gradual dismissal of common property rights regimes and the denial of the principle of free exchange of resources and knowledge as the basic premises for managing genetic resources.²⁸ The sovereign rights over biological resource is relatively weak and it is likely that main beneficiaries of this regime will be the private sector, local industry and multinational companies.²⁹ The introduction and strengthening of private

²⁹ Ibid
property rights constitutes one of the most significant elements of the new regime. However, farmers, local communities and other managers of bio-diversity are not given intellectual property rights to their knowledge. In exchange, the concept of benefit-sharing has been introduced as *via-media* in a bid to recognize the contribution of these actors while usually denying them property rights.\(^{30}\) The three Acts deal in part with the same subject matter. But it is surprising that the bio-diversity Act definition of biological resources does not exclude plant varieties given the existence of a separate plant variety legislation. These overlaps do not stop at the level of definitions. The bio-diversity and plant variety Act which both deal with fundamentally similar issues and subject matters each seek to set up their own national authority instead of providing a single common body. Further, both adopt benefit-sharing as a compensatory mechanism but they set up benefit sharing mechanisms that are distinct and unrelated. One provides financial compensation and other property rights. This may lead to considerable difficulties, overlapping mandates and inconsistencies from conceptual to technical implementation issues.\(^{31}\)

Rest of the study attempts to encapsulate the confluence of the different streams which evolves a new branch of Jurisprudence of Intellectual Property Rights.

\(^{30}\) Ibid
\(^{31}\) Ibid
As said by Roscoe Pound, the main pillar of the Sociological jurisprudence the State as a juristic person requires to protect social interest. He propounded the theory of social engineering. According to him, every law should ensure the achievement of social fact meaning thereby a social investigation of conflicting interests, preparation of inventory of such interests and to balance and harmonise these conflicting claims and interests, with the aim to build as efficient a structure of the society as possible to ensure the maximum satisfaction of wants with a minimum of friction and waste.\textsuperscript{32} Thus, in every civilized society the main function of law has been to reconcile and balance the competing and conflicting interests, i.e, the individual interest and social interest in order to achieve maximum satisfaction of the needs of society at the cost of curtailment of minimum freedom of individuals.

That is why the government and its instrument, the law, are keen enough to strike a balance between countervailing forces of TNC/ Industry/commercial breeders and farmers - a very important yet a most difficult and delicate task to perform. Further, social justice requires that the state for its own existence owe an obligation to the community to bridge the gap between the two classes and evolve a healthy social order. \textit{It is from this fountain of social justice that the necessity of legal recognition of intellectual contribution of generation of farmers has flown.}

\textsuperscript{32} Roscoe Pound: 'An introduction to philosophy of Law', 1995, p.47
Power to make policy, power to make rules and power to ensure obedience to rules are the powers available to the State machinery to regulate socio economic relations. As opined by Friedmann, the State as an arbiter in a democratic society has three tasks: the maintenance of a rough balance between contending organized groups and the usually unorganized consumer, the protection of the individual freedom of association and the safeguarding of overriding State interests.

There has been much debate going on, both in national and international spheres, among industrialists, trade unionists, economists, social workers, NGOs, legal and political philosophers, academicians of various disciplines about the implications of globalisation policies for society and economy in general and its impact on agrarian relations in particular. Worldwide protests are on rise against the globalisation. The organisations like Asian Social Forum and others are voicing their protests by organizing seminars and symposiums. Demonstrations and protest rallies are being organized at the venues of WTO meetings. The recent Cancum and Hong Kong summits are no exceptions. Developing nations like India, who are pursuing the policies under the threats of trade sanctions, social clauses, consumer boycotts are also gradually realising the relative advantages and disadvantages of global economic policies for developed and developing nations. The failure of Cancum summit

of WTO is very significant in this regard. But for the concerted action of the developing countries led by India, the developed nations through WTO would have succeeded in imposing their own action plan meant to further their own interests on the developing nations.

All these developments raise a crucial question whether the Indian legal system can meet the challenges of globalisation and prevent the social tensions that may take place in socio economic relations and to protect the rights of the farmers in order to achieve growth with social justice. The apparent end of a particular legal system is no doubt determined by the dominant political and economic ideology of the society. But we have reached a stage wherein, cutting across all ideological differences, there is a consensus that law should promote social solidarity by furthering wider community interests. This is what Roscoe Pound has characterised as "socialization of law" and others in various ways such as social solidarity, social harmony, social welfare, etc\(^3^4\).

As contemplated by Pound\(^3^5\) and other sociological jurists, Law should be studied in its functional aspect rather than attempting to explain abstractly what law is. There has been a shift in the focus of inquiry from the nature of law to its functions, so how the law is actually working in a given society should be considered to assess


\(^{35}\) Roscoe Pound : 'An introduction to philosophy of Law', 1995, P-52
its efficacy to meet the existing social and economic conditions and its effectiveness to face the new challenges. This functional attitude helps us to measure legal norms by the extent to which they further or achieve the ends of the given legal order. When the legal system itself is in a state of flux, this approach will enable us to determine whether we are moving in a right direction.

The legal system in India, so far, has functioned in the context of the ideals of Welfare State, tending to move towards socialism, under a regime of mixed economy with the public sector as the dominant sector, choosing the policy and legislative measures protecting the farmer from the exploitation by all powerful capital and strived to achieve growth coupled with social justice. Now the times have changed. The Government of India is committed to dismantling of state-controlled-and regulated economy, and to promote the policies of liberalization, privatization and globalization under the influence, direction and command of the World Bank and International Monetary Fund. The economic reforms announced by the Government have changed the direction of the country from the socialistic pattern to market economy. The shift in Government’s IPR policy in tune with on going economic reforms and consequential move to amend IPR laws will have tremendous impact on the agrarian relations, in addition to the impact it will have on the society in general. As a result, the farmers face a crisis with declining protection afforded to them. In this process, the greatest worry now posing to the
farmers is the insecurity in the face of monopolization of seed supply by the MNCs. These new issues and concerns create new complexities and challenges leading to crisis in agrarian relations.

The welfare philosophy- a detailed agenda for promotion of social sector Human capital appearing in the preamble and directive principles of the Indian Constitution, is directly linked up with the role of the State in ‘Nehruvian’ model of development. This model of development was characterized by a highly interventionist State as opposed to laissez faire State, where welfarism was an identified concern and a deep rooted constitutional commitment. However, the introduction of globalisation motivated new economic policy in India, led to a new thinking of the role of the State and develops a need to redefine the role of the State in social, economic and industrial relations fields in the light of Constitutional ethos of ‘socialism’, ‘social justice’ and ‘welfare State’. Hence the questions that naturally arise are: Could the State contract out of its social welfare commitments in the background of ongoing reform process? Are the current economic policies in consonance with the constitutional philosophy? Is globalisation not posing a new challenge to the rights of the farmers and creating new complexities in agrarian relations?

All these issues give rise to fundamental question as to the social, legal and constitutional relevance of the changing role of the State and the consequential shift in its economic policies warranting a critical legal analysis. An attempt has been made by the present study to address precisely all these issues.

**METHODOLOGY:**

An attempt is made in this work to study the law relating to the IPR and farmers in India in the context of contemporary concerns of globalisation and consequential reforms. This is purely an analytical, descriptive and doctrinaire study and not based on any empirical data and no field studies etc. were conducted.

The Researcher has consulted the existing literature on the subject by referring to the standard and authoritative books and articles written by renowned Indian and foreign authors. Further, important judicial decisions (Indian and Foreign) have been systematically collected, classified and analysed. Various reputed Indian and Foreign Journals, Periodicals and publications have been extensively surveyed. While making the theoretical analysis, the support of recent statistical data from various sources was taken and presented in tabular form wherever necessary.

In order to facilitate an in-depth study the present work is divided in to seven chapters.