



Traditional Social Knowledge: Issues and Challenges in Patenting

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Abstract: The traditional social knowledge is the basis of any society. It is the part of the wealth and heritage of any nation. Traditional knowledge is passed on from one generation to the other. And going through the generations, it gets challenged, experimented, adopted, applied and absorbed to become a social knowledge. It gets patronised many a times by the indigenous societies to take the shape of traditions through the prevailing regimes. Many a times such practices over the period of time may get termed as primitive against the experimented scientific and technological advancements; and the rich knowledge embedded in traditions and cultures may get totally denounced or ignored or may get encroached upon. The threat of encroachment is reflected in misuse of it through obtaining patents presenting the old knowledge in new garbs. It is important that such references of 'Indigenous Scientific Tempers' and 'Social Knowledge' are 'Protected and Preserved' against the 'Patenting Regimes'. Many a times the developing countries remain at the receiving end due to lack of technology and fight for patents. Various applications are either cancelled or withdrawn or the claims are amended by the international patent offices. As for example in case of turmeric, which without doubt is indigenous social knowledge and therapeutic usage of Turmeric for its healing and antiseptic properties is age old in Indian culture, but had to be experimentally proved to be considered as our traditional knowledge by US patent offices. To publish and document the social knowledge is a

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challenging task. The present study puts light on various such aspects of traditional knowledge and scientific temper by taking case studies from India thereby discussing the patent issues to draw the inferences from the study for further applicability.

Keywords: Traditional knowledge, Social knowledge, Scientific temper, Patents, Issues

5.1 Introduction

'Traditional Knowledge, whether written or oral, need to be treated as prior art in determining patentability'.

The indigenous, traditional and social knowledge are part of the wealth and heritage for any nation. Such living body of knowledge is passed through generations to new generations. Over the period of time, much of such knowledge may become social knowledge. More often, the developments in terms of scientific inventions by the indigenous societies, is termed primitive. Such rich knowledge of existing scientific facts and inventions imbedded in the cultures and traditions of these societies and nations is many a times ignored. It is important to understand the scientific temper, social knowledge in Indian contexts.

Scientific temper calls for a rational behavior. As a concept 'scientific temper' is related to an individual's way of thinking. It calls for rationality, reason and lack of belief in dogmas and superstitions. It involves logical thinking process based on scientific attitudes which involves: questioning, observing, testing, analysis and reacting to certain conclusions. Scientific temper encompasses application of logic, discussion, argument and analysis in all its fairness. It helps in understanding the phenomena, issues, occurrences etc. in a very objective manner to invigorates rational mind to reach to the truth and present it the way it is. Social practices based in Scientific temper is what is sustained for long periods of time to become social knowledge. Social knowledge is thus a living body. 'India possesses a rich traditional and social knowledge which is generally being passed down by word of mouth from one generation to another' (Source: Singh, Charu Lata, 2020).

As per Indian Constitution, to develop scientific temper was made one of the fundamental duties of Indian citizens. It was incorporated in Constitution of India, Article 51A through the

42nd Amendment of the Constitution in 1976. It read, it shall be the duty of every citizen of India, 'to develop the scientific temper, humanism and the spirit of enquiry and reform.'

Indian Constitution and governments strive to protect and develop scientific temper and preserve the rich social knowledge of the country. It is very important that 'Indigenous practices build on Scientific Tempers' called 'Social Knowledge' are 'Protected and Preserved' against 'Patenting Regimes'. Indian Government has led to many patent applications concerning India's traditional knowledge, but they have either been cancelled or withdrawn or claims have been amended in several international patent offices.

5.2 Objectives

1. To study the cases related to traditional knowledge.
2. To look into the various aspects of Patent & Issues which are important to discuss.
3. To seek and study the inherent implications.

5.3 Existing Social Knowledge: Indigenous Scientific Temper in Indian Context

Indian culture and civilization are a living and evolving one. It is important to understand that we connect scientific temper to what brings creativity and innovation, which in turn leads to evolution and progress. In that context, it is impossible that our such a rich cultural heritage could have remained devoid of the scientific temper. It is this reason that it is still growing and shall continue for ages. In other words, the Indian civilization is scientific in nature. The application of scientific temper in Indian historical Context is imminent.

In Indian culture, tradition and values based on questioning and observing have been the fundamental element ever since we refer to the Gurukul teachings and systems. Most of this traditional and social knowledge is having roots in ancient cultures has been informal and oral. Hence, is not protected by conventional intellectual property protection systems.

India has a civilization which is traced back to over a period of about 5,000 years. It has a wealth of traditional knowledge in ancient scriptures which consist of ;

- Vedas
- Upanishads,
- Epics,
- Bhagavad-Gita,
- Brahma sutras,
- Puranas,
- Manusmriti,
- Shastras and Smritis.
- Arthshastra,

(Source: National Biodiversity Authority [2014](#)).

This scenario has promoted many developing countries to develop their own specific and special systems for protecting traditional and social knowledge against the poaching developed, technologically and scientifically advanced societies and countries. Measures Taken by Government to Protect Ancient and Traditional Knowledge of Indigenous Medicinal Systems

Traditional Knowledge Digital Library (TKDL) set up in 2001, as a collaboration between the Council of Scientific and Industrial Research (CSIR) and the Ministry of Ayush is a pioneering Indian initiative to prevent exploitation and to protect Indian traditional knowledge from wrongful patents mainly at International Patent Offices. India's rich and time-tested traditional medicinal knowledge which exists in languages such as Sanskrit, Hindi, Arabic, Persian, Urdu, Tamil etc. is neither accessible nor comprehensible for patent examiners at the international patent offices.

"The TKDL contains documentation of publicly available traditional knowledge (TK) that: relates to Ayurveda, Unani, Siddha and Yoga is in digitized format is available in five languages: English, German, French, Japanese and Spanish" (Source: WIPO, 2020).

The TKDL seeks to prevent the granting of patents for products developed utilizing TK where there has been little, if any, inventive step intends to act as a bridge between information recorded in ancient Sanskrit and patent examiners (with its database containing information in a language and format understandable to patent examiners) facilitates access to information not easily available to patent examiners, thereby minimizing the possibility that patents could be granted for 'inventions' involving only minor or insignificant modifications.

Till date 3,35,260 formulations have been transcribed, 220 wrongful patent filings have been prevented and 12 patent offices have been provided access to TKDL database namely European Patent Office, US Patent Office, Japanese Patent Office, German Patent Office, Canadian Patent Office, Chile Patent Office, Australian Patent Office, CGPDTM (India), UK Patent Office, and Malaysian Patent Office, Rospatent (Russia) and Peru Patent Office? (Business Standard, December 5, 2015).

Besides setting up of TKDL, Yoga has since been inscribed in UNESCO's representative list of Intangible Cultural Heritage of Humanity. Indian Patent Office has also brought out Guidelines for processing Patent Applications relating to Traditional Knowledge and Biological Material to help Patent examiner to analyze what constitutes novelty and inventive step in Traditional Knowledge (TK) related invention (AYUSH, 2020).

India was the first to raise the fundamental issue at the World Intellectual Property Rights Organisation (WIPO) as to why the traditional knowledge-based system should not be treated at par with the industry-based system (Trivedi, Hetvi, 2020).

India has pioneered in the protection of its traditional knowledge. It is the only country in the world to have setup the Traditional Knowledge Library (TKDL). TKDL helps in filing and keeping record of patent applications with regards to traditional knowledge. It has helped in getting patents for a number of medicinal plants and is working to secure the intellectual property rights which have been ours for ages.

The Intellectual Property in relation to traditional knowledge is being protected in two types

of cases:

- Defensive protection which aims to stop people outside the community from acquiring intellectual property rights over traditional knowledge.
- Positive protection under which there is granting of rights that empower communities to promote their traditional knowledge, control its uses and benefit from its commercial exploitation.

5.4 Methodology

The study is exploratory and descriptive in nature and describes various Case studies from India.

- Defensive protection cases; which aims to stop people outside the community from acquiring intellectual property rights over traditional knowledge.
- Positive protection Cases: under which there is granting of rights that empower communities to promote their traditional knowledge, control its uses and benefit from its commercial exploitation.

5.4.1 Defensive Protection Cases

5.4.2 The Neem Case

A controversy that can be tagged the 'first' for India, and which rose doubts about a supposedly 'strict' patent system, was the granting of patent to a company W.R. Grace. The company was granted a patent in the United States and the European Union, for a formulation that held in the stable storage of azadirachtin, the active ingredient in the neem plant; it planned to use azadirachtin for its pesticidal properties. Traditional systems of medicine like Ayurveda and Unani, identify antiviral and antibacterial properties of the neem, also known as the 'curer of all ailments' in Sanskrit, and prescribe the same for treating skin diseases and as a natural pesticide. The applicant admitted in the patent application of how the pesticidal uses of neem

were known and pointed out to the fact that storing azadirachtin for a longer duration is difficult. The US patent granted, covered a limited invention whereby the applicant was only given the exclusive right to use azadirachtin in the particular storage solution described in the patent. The grant of the patent was followed by an uproar and it was challenged through re-examination and post-grant opposition proceedings before the United States Patent and Trade Mark Office (USPTO) and the European Patent Office (EPO), respectively. Though there was no success at the Uspto, the European Patent Office ruled stating the patent granted, lacked in novelty and inventive step.

5.4.3 The Turmeric Case

In case of turmeric, the Indian Council for Scientific and Industrial Research (CSIR), had objected to the patent granted and provided documented evidences of the prior art to US Patent Offices. Though it was a well-known fact that the use of turmeric was known in every household since ages in India, it was a herculean task to find published information on the use of turmeric powder through oral as well as topical route for wound healing. After extensive researches, various references were found in different languages namely Sanskrit, Urdu and Hindi.

A re-examination application was filed against the granted patent, along with nearly two dozen references, which resulted into early success. The inventors' defence was proven weak in front of the modern commentaries on classic ayurvedic texts, extracts from Compendium of Indian Medicinal Plants and nineteenth century historical texts from the library of Hamdard University. Resultantly, USPTO, revoked the patent agreeing that the use of turmeric was an old art of healing wounds in India

5.4.4 The Basmati Case

Another case that created much havoc was a patent granted by the USPTO to an American company called RiceTec for 'Basmati rice lines and grains'. Basmati rice is a traditionally grown aromatic variety of rice, in India and Pakistan.

The grant of this patent created multitude IP issues besides that under the patent law i.e.

under trademarks and geographical indications. RiceTec had been granted patent for the invention of hybrid rice lines that combined desirable grain traits of Basmati rice with desirable plant traits; this was due to the inferior quality of Basmati rice that grew in US in comparison to the good quality Basmati rice being cultivated in northern India and Pakistan and would help in growing a better crop of Basmati rice in the western hemisphere, especially US.

A re-examination request was filed, with declarations from two scientists, along with several publications on Basmati rice and the research conducted on the rice in India—one of which made the USPTO realise that core claims of RiceTec were non-obvious. .

5.4.5 JEEVANI AND KANI Tribes Case

New experiments are beginning to emerge on benefit-sharing models for indigenous innovation. An example of India is worth sharing. It relates to a medicine which is developed from and based on active ingredients in a plant, *Trichopus zeylanicus* (Arogyapaacha), found in South-Western part of India. Scientists at the Tropical Botanic Garden and Research Institute (TBGRI) in Kerala learnt of the plant, which is claimed to bolster the immune system and provide the additional energy. The medicine is traditional knowledge used by 'Kani' Tribe. These scientists isolated and tested the ingredient and incorporated it into a compound, which they christened 'JEEVANI', the giver of life. The tonic is being manufactured by a major Ayurvedic drug company in Kerala.

5.4.6 Yoga Patent

A US-based NRI, Bikram Choudhary's applied to get copyright for his method of teaching yoga; He applied for the patent of yoga; Yoga enthusiasts and gurus sais move is unjustified as yoga belongs to the entire human race. USPTO has reportedly issued 150 yoga-related copyrights, 134 trademarks on yoga accessories and 2,315 yoga trademarks. India has taken a strong view against the granting of copyrights and patents to Yoga postures by the USPTO and is preparing to oppose patents.

5.4.7 Patenting for the Indian variety of wheat Nap Hal

MONSANTO, was assigned a patent (EP 0445929 B1) on the Indian variety of wheat Nap Hal under the simple title 'plants?'. On January 27th 2004 Research Foundation for Science Technology and Ecology (RFSTE) along with Greenpeace and Bharat Krishak Samaj filed a petition challenging the patent rights. The patent was resultantly revoked in October 2004.

5.4.8 Positive Protection Cases

- Safeguarding the rights for eatables: For Tirupati Laddu, Goa Feni, Darjeeling Tea
- Safeguarding the rights for cloth: Banarsi Saree,
- Madhubani Paintings

These and many products have been given GI (Geographical indication) rights. Protection of rights is directly related to economic empowerment of the producer community. The measures to safeguard the social / traditional knowledge, which involving various aspects of Patent & Issues are difficult to resolve but should not be stopped.

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