INTELLECTUAL PROPERTY RIGHTS IN THE DIGITAL AGE: BALANCING INNOVATION, PUBLIC ACCESS AND ENFORCEMENT IN INDIA

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ABSTRACT

Intellectual property rights (IPR) sit at an uncomfortable meeting point between private reward and public benefit. They exist so that creators and inventors can recover what they spend on new work, yet every exclusive right also narrows what the rest of society may freely use. This paper looks at how that tension plays out in India, where the law has moved from a weak, access-oriented regime before 1995 to a TRIPS-compliant system that still keeps several flexibilities. Using a doctrinal method, the paper reads the main statutes, the leading judgments and the international instruments together, and then tests them against three present-day pressures: access to patented medicines, online piracy and platform liability, and the arrival of generative artificial intelligence. The argument is that Indian law has, on the whole, struck a defensible balance in pharmaceuticals but is lagging in the digital field, where statutory text written for an earlier technology is being stretched to cover new problems. The paper ends with a short set of practical recommendations on AI authorship, intermediary duties, enforcement capacity and awareness among small creators.

Keywords: Intellectual Property Rights; TRIPS; Patent Law; Copyright; Section 3(D); Artificial Intelligence; Online Piracy; India.

Introduction

Almost everything we buy, watch, read or install today carries some form of intellectual property. A medicine is protected by a patent, a film by copyright, a shoe by a trade mark and a bottle of tea from the hills of Darjeeling by a geographical indication. The economic weight of this is hard to ignore. Knowledge-based goods now make up a very large share of international trade, and countries that once treated IPR as a concern of rich nations have had to build their own systems to take part in that trade.

India's own history shows how contested the subject is. Until 2005 the Patents Act, 1970 allowed patents only on processes, not on pharmaceutical products, and this choice is widely credited with helping the growth of an Indian generic drug industry that now supplies a large part of the world's affordable medicines. When India joined the World Trade Organization in 1995 it also accepted the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), and the law had to change. The question since then has been how much room the new rules leave for a developing country to protect public interest.

The question has become harder in the last two decades because technology moved faster than legislation. Copying a song used to need a factory; now it needs a phone. A machine can write a paragraph or paint a picture that looks like human work. These changes put pressure on ideas the law has relied on for centuries, such as who the author is, what counts as copying, and who should answer for an infringement that happens on someone else's platform.

This paper has three aims. First, it sets out the main justifications offered for IPR. Second, it describes the Indian legal framework against its international background. Third, it examines three contemporary problems and asks whether the present law handles them well. The method is doctrinal: the paper relies on statutes, treaties, decided cases and standard academic commentary, and does not use empirical data of its own.

Theoretical Foundations of IPR

Before looking at any statute it helps to ask why the law gives anyone a monopoly over an idea. Four answers are usually given, and each of them shapes how a particular rule is read.

The first is the incentive or utilitarian argument. Ideas are expensive to produce and cheap to copy. If a second person can copy a new drug or a novel at almost no cost, the first person may

never recover the investment, and so fewer such works will be made. A temporary exclusive right fixes this by letting the creator charge more than the cost of copying. Landes and Posner (2003) develop this economic reasoning in detail and also stress its limit: because exclusivity raises prices and blocks follow-on creation, the right should last only as long as the incentive actually needs.

The second is the labour theory, drawn from John Locke's *Second Treatise of Government*. A person who mixes effort into something owns the result. Applied to ideas, it says an author deserves the fruits of the work. The weakness is well known. Locke's argument assumed that enough and as good was left for others, which is not obviously true when an idea is fenced off for twenty years.

The third is the personality theory, associated with Hegel's *Philosophy of Right*. On this view a creative work is an extension of its maker's personality, and that is why many legal systems, India included, protect moral rights such as the right to claim authorship and to object to distortion. Hughes (1988) gives a clear account of how this strand differs from the Lockean one.

The fourth is the social planning view, which treats IPR purely as a tool for building a culture and an economy the community wants. Under this view there is nothing sacred about the right itself, and it can be narrowed, licensed or abolished if public welfare so requires. Much of Indian policy, particularly in public health, is easier to understand through this fourth lens than through the first three.

The Indian Legal Framework

Patents

Patents are governed by the Patents Act, 1970, as amended most importantly in 2005. A patent lasts twenty years from the date of filing (Section 53) and requires novelty, an inventive step and industrial applicability. The Act also lists things that are not inventions at all. Two of these deserve attention. Section 3(k) excludes computer programmes *per se*, which has made it hard for pure software innovators to obtain patents, though inventions with a demonstrable technical effect are treated more kindly. Section 3(d) provides that the mere discovery of a new form of a known substance is not an invention unless it shows enhanced efficacy.

Section 3(d) was tested in *Novartis AG v. Union of India* (2013) 6 SCC 1. Novartis sought a patent on the beta crystalline form of imatinib mesylate, the cancer drug sold as Glivec. The Supreme Court refused it, holding that the company had not shown the significantly improved therapeutic efficacy that the Section requires. Supporters read the judgment as a firm stand against "evergreening", where small modifications are used to extend a monopoly. Critics, mainly from the research-based pharmaceutical industry, argued that it created uncertainty for genuine incremental innovation. Both readings have some truth, and the Court itself was careful to say that its reasoning was tied to the facts and to the language of the Section.

Another flexibility is the compulsory licence under Section 84. In 2012 the Controller of Patents granted India's first compulsory licence to NATCO Pharma for Bayer's kidney cancer drug sorafenib, on the grounds that the patented drug was not reasonably affordable and was not being worked in India to a sufficient degree. The order was upheld on appeal. Since the abolition of the Intellectual Property Appellate Board through the Tribunals Reforms Act, 2021, appeals in such matters now go to the High Courts.

Copyright

The Copyright Act, 1957 protects original literary, dramatic, musical and artistic works, as well as cinematograph films and sound recordings. The term is generally the life of the author plus sixty years. Copyright arises automatically on creation and registration is not required, though a registration certificate is useful evidence in court.

On originality, the Supreme Court in *Eastern Book Company v. D.B. Modak* (2008) 1 SCC 1 moved away from both the old English "sweat of the brow" approach and the stricter American "creativity" approach. It held that a work must show a minimum degree of creativity, a "modicum" in the Court's words, arising from the exercise of skill and judgment. This middle path is now the standard test. The Act was substantially amended in 2012 to align it with the internet treaties, to give authors and performers stronger rights in cinematographic and musical works and to add exceptions for persons with disabilities.

Trade marks, designs and geographical indications

The Trade Marks Act, 1999 protects marks that can be represented graphically and distinguish the goods or services of one business from another, and it also protects unregistered marks

through the common-law action of passing off. In *Cadila Healthcare Ltd. v. Cadila Pharmaceuticals Ltd.* (2001) 5 SCC 73 the Supreme Court said that deception tests must be applied more strictly to medicines, because a confusion between two drug names can harm a patient and not merely a trader. The Designs Act, 2000 protects the new and original visual appearance of an article for an initial period of ten years, extendable by five. The Geographical Indications of Goods (Registration and Protection) Act, 1999 protects names that signal an origin-based quality, and Darjeeling tea was among the first Indian products to be registered under it.

Policy backdrop

The National Intellectual Property Rights Policy of 2016 (DPIIT, 2016) was the first attempt to place all these regimes under a single vision. It emphasised awareness, faster registration, stronger enforcement and the commercialisation of IP. Whatever one thinks of its targets, it signalled that the state now sees IPR as a tool of economic policy and not only a matter of private law.

The International Framework

The oldest treaties are the Paris Convention for the Protection of Industrial Property (1883) and the Berne Convention for the Protection of Literary and Artistic Works (1886). Both rest on national treatment, which means that a foreign author or inventor must get the same protection as a local one. Berne adds the principle that copyright arises without formalities.

TRIPS, which came into force on 1 January 1995 as part of the WTO system, was a very different kind of instrument. It set minimum standards for every major form of IPR, required patents in all fields of technology (Article 27) with a minimum term of twenty years (Article 33), and tied compliance to the WTO dispute settlement mechanism, which gave the standards real enforcement force (Correa, 2000). Yet TRIPS does not remove all national discretion. Articles 7 and 8 describe the objectives of the Agreement in terms of social and economic welfare, and Article 31 allows compulsory licensing on conditions.

The balance was clarified politically in the Doha Declaration on the TRIPS Agreement and Public Health of 2001, which stated that the Agreement does not and should not prevent members from taking measures to protect public health, and confirmed each member's freedom

to decide the grounds on which compulsory licences are granted. On the digital side, the WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty, both of 1996, extended protection to the online environment and required legal protection for technological protection measures.

Contemporary Challenges

Access to medicines

The pharmaceutical sector is where the incentive argument and the access argument collide most directly. Developing a new drug is very costly and most candidates fail, so firms say they cannot invest without strong patents. At the same time, a patented drug priced beyond the means of most patients is, for those patients, no better than no drug at all.

India's response has combined compliance with a conscious use of flexibilities. Section

3(d), compulsory licensing and the pre-grant and post-grant opposition mechanisms in the Patents Act are all attempts to keep the system from rewarding trivial changes. It would be unfair, though, to treat these as pure successes. Foreign investors and trading partners keep raising concerns about predictability, and there is a genuine legal debate about how far the efficacy standard of Section 3(d) can be stretched. A country that wants both domestic access and a reputation as a reliable home for innovation has to keep these concerns in view, rather than treating them as hostile lobbying.

Online piracy and the liability of platforms

Digital copying and instant distribution have made unauthorised use easier than at any earlier time. Films appear on pirate sites within hours of release, and a single rogue website can be mirrored across many domains. Enforcement has therefore shifted from chasing individual infringers to pressing intermediaries, such as hosting services, search engines and video platforms, to act.

The legal basis for this is Section 79 of the Information Technology Act, 2000, which gives intermediaries a safe harbour if they act as passive conduits and remove unlawful content once they have actual knowledge. In *Myspace Inc. v. Super Cassettes Industries Ltd.* (Delhi High Court, Division Bench, 2017) the court read the safe harbour together with the Copyright Act

and held that, for copyright claims, actual knowledge required specific information about the infringing work and not just a general awareness that infringement was possible. This reading protects platforms from an impossible duty to monitor every upload, but rights holders argue that it leaves them with an endless notice-and-takedown routine. Indian courts have also begun granting dynamic injunctions against rogue websites, so that new mirror sites can be blocked without a fresh suit each time.

The result is a workable but untidy system. It depends on court orders rather than clear statutory duties, and smaller creators, who cannot afford repeated litigation, are the ones who lose most from the delay.

Artificial intelligence

Generative AI raises two separate questions. The first is about output: can a work produced by a machine be protected, and if so, who owns it? The second is about input: is it lawful to train a model on millions of copyrighted works without the permission of their authors?

On the first, the Indian Copyright Act has an unusual provision. Section 2(d)(vi) defines the author of a computer-generated work as the person who causes the work to be created. This text was drafted in the 1980s with simple computer programs in mind and does not clearly address a situation where a user types one line and a model produces the rest. Other countries are firmer on the point. The United States Court of Appeals for the Federal Circuit in *Thaler v. Vidal*, 43 F.4th 1207 (Fed. Cir. 2022), held that an AI system cannot be named as an inventor under the US Patent Act, since the statute speaks of individuals. No settled Indian ruling goes the same way, and Indian practice around registering works with an AI co-author has itself been uncertain.

The second question is more commercially explosive. AI developers say that training is a transformative, non-expressive use. Authors, publishers and news organisations reply that their work is being copied wholesale to build a product that competes with them. Litigation on this subject is under way in several jurisdictions, including India, and the outcome is not yet clear. The Indian fair dealing provisions in Section 52 are narrower and more purpose-specific than the open-ended US fair use doctrine, so a straight import of American arguments would not work. Parliament may eventually need to decide whether to create a specific text-and-data-mining exception, with or without a licensing or remuneration scheme.

A related point arises in patent law. The same Section 3(k) that excludes software as such also affects AI-assisted inventions. The leading American case on abstract ideas, *Alice Corp. v. CLS Bank International*, 573 U.S. 208 (2014), shows how hard it is to draw the line between an unpatentable idea implemented on a computer and a genuine technical advance. Indian practice, guided by official examination guidelines, similarly looks for a technical effect, but the boundary remains a frequent source of disputes.

Discussion

Looking at the three problems together, one pattern stands out. Where India had a clear policy choice and a clear text, as with Section 3(d) and compulsory licensing, the system has produced reasoned decisions and a recognisable philosophy: protect real invention, resist mere extension of monopoly, and keep medicines reachable. Where the text is old and the technology new, as with intermediaries and AI, the law has to be built case by case, and this produces uncertainty.

There is also a point about capacity. A well-drafted statute is only as good as the offices and courts that apply it. Delays in examination, a shortage of specialist judges and the cost of litigation all limit the practical value of rights on paper. For a small designer in a tier-two city or an independent musician, the real question is often not whether the law protects them but whether they can afford to use it.

Finally, the debate over IPR is sometimes framed as a choice between creators and the public. That framing is too crude. A student who relies on cheap generic medicines and a startup that wants to license a patented technology are both members of the public, and both are served by a system that is clear, fair and not easily abused. The aim of reform should be a system that rewards real contribution and cuts back on rent-seeking.

Suggestions

Based on the discussion above, five practical suggestions can be made. First, Parliament should clarify authorship and ownership for AI-assisted works, deciding whether Section 2(d)(vi) is meant to cover generative systems and, if it is not, saying so plainly. Second, the safe-harbour rules for intermediaries should be supported by clearer statutory duties, with graded obligations for large platforms and lighter ones for small services, along with a time-bound takedown procedure. Third, the question of AI training should be settled through a deliberate legislative

choice, whether an exception, a licensing model or a mix, instead of being left wholly to piecemeal litigation. Fourth, investment in patent and trade mark offices, in specialist benches and in faster resolution of disputes would do more for innovators than any change in the substantive law. Fifth, awareness programmes aimed at students, artisans and small businesses, in the spirit of the 2016 policy, should be strengthened so that people know their rights before a dispute arises and not after it.

Conclusion

Intellectual property law is at its best when it is treated as a means and not as an end. India's experience since 1995 shows that a developing country can accept the global rules and still keep space for its own priorities, particularly in public health. The more difficult tests are now in the digital field, where questions of platform duty and machine-made content are arriving faster than the legislature can answer them. The most useful path is neither to expand rights without limit nor to weaken them out of suspicion, but to keep asking what each right is for and whether it is still doing that job. If that question is kept at the centre, Indian IPR law can continue to support both innovation and access.

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