

COMPARATIVE ANALYSIS OF PATENT PROTECTION

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ABSTRACT

This paper examines the relationship, conflict and complementarities between patent protection and academic publication (referred to here as "publication" or a "published certificate" such as DOI-registered works). It is aimed at law students and explores the doctrinal foundations, procedural steps, strategic considerations, comparative advantages, and real-world implications of choosing to patent an invention versus publishing it. The analysis covers legal requirements, timing issues (novelty and prior disclosure), rights conferred, duration and scope, enforcement, and policy rationales. The paper concludes with practical guidance for researchers, innovators, and legal practitioners on harmonising publication aims with patent strategy.

KEYWORDS – Patent protection within the field of Intellectual Property Rights (IPR) generally fall into categories related to the legal framework, the innovation process, and commercial implications.

Introduction

In the modern knowledge economy, researchers and inventors routinely face the choice between publishing results quickly and pursuing patent protection.

Academic publication advances scientific progress and academic careers; patents create exclusivity that can incentivise investment and commercialisation. However, an untimely publication can destroy patentability by becoming prior art. This paper provides a practical comparative analysis of both mechanisms, with a focus on Indian law while noting important international principles.

1. Key Concepts and Definitions

Patent: A statutory right granted to an inventor for a limited period in exchange for public disclosure of the invention. It grants the patent-holder the right to exclude others from making, using, selling, or importing the claimed invention.

Publication (Published Certificate): In this paper the term covers formal academic publication

(journal articles, conference proceedings) and formal digital registration such as DOI-assigned papers or institutional repository records. A "published certificate" may also mean a formal record or certificate of publication issued by a publisher or repository.

Prior Art: All information made available to the public before the priority date of a patent application that could be relevant to novelty and inventive step.

Novelty & Inventive Step (Non-obviousness): Core substantive tests for patentability; an invention must be new and not obvious to a person skilled in the art.

2. Legal Framework

India

Statute: The Patents Act, 1970 (as amended) governs patentability, filing, examination, opposition and revocation. Key concepts include novelty, inventive step, and sufficient disclosure.

Grace Period: Indian law traditionally does not provide the kind of broad grace period

available in some jurisdictions (e.g. United States) for disclosures made by the inventor; consequently, early public disclosure in India can harm patentability. (Students should verify current rules and any amendments or recent case law for precise grace-period details.)

International

TRIPS Agreement: Sets minimum standards for patent protection that WTO members must observe (e.g., patentability criteria, term of protection: at least 20 years).

Patent Cooperation Treaty (PCT): Facilitates international filing by allowing an international application to be filed, delaying national phase entry.

Different Jurisdictions: The U.S., EPO, and Japan have different nuances—most notably the U.S. historically offered a one-year grace period for inventor disclosures; the European system is stricter about novelty.

Note to student: Because national rules differ about grace periods and what constitutes prior art, strategic timing of publication vs. filing is jurisdiction-dependent.

3. Comparative Analysis

3.1 Subject Matter & Eligibility

Patent: Protects technical inventions—processes, machines, compositions of matter, and improvements. Pure discoveries, abstract ideas, and mere literary works are excluded (though software/biotech have nuanced treatment).

Publication: Protects expression as academic output. It does not by itself grant exclusionary commercial rights, though publication can create reputational and moral-rights consequences in some domains.

Takeaway: Patents protect functional innovation; publications protect the dissemination of knowledge and academic credit.

3.2 Novelty, Prior Art & Timing

Risk of Publication: A public disclosure before filing normally becomes prior art and may destroy novelty, making the invention unpatentable in many jurisdictions. Even a conference abstract or thesis posted online can be prior art.

Grace Periods: Some countries allow limited grace periods for inventor-originated disclosures. Where present, a grace period (often 6–12 months) may allow filing after disclosure; where absent, filing before disclosure is safer.

Practical rule: If patent protection is desired, file a patent application (or provisional/PCT) before any public disclosure unless you are certain your target jurisdictions allow safe inventor disclosures.

3.3 Rights Conferred and Remedies

Patent rights: Exclusive rights to prevent others from exploiting the invention for a limited term. Remedies include injunctions, damages, account of profits, and border measures in some jurisdictions.

Publication: Does not confer exclusionary rights; protection is instead through copyright (for the text) or academic norms. Remedies for plagiarism/copyright infringement are civil (and sometimes disciplinary) rather than proprietary.

Implication: Patents create commercial leverage; publications mainly protect reputation and attribution.

3.4 Duration and Maintenance

Patents: Typically 20 years from filing (subject to maintenance fees and term adjustments). Non-renewal leads to public domain.

Publication: Effectively perpetual as part of the public record; copyright term lasts much longer (life of author plus 60 years in India), but the informational content remains available.

3.5 Costs, Accessibility, and Public Interest

Cost: Obtaining and maintaining patents is expensive (filing, prosecution, translation, national-phase costs, attorney fees).

Publication is comparatively low- cost.

Access: Publication maximises public access and immediate dissemination; patents restrict use while requiring disclosure of the technical details (after expiration these join the public domain).

Public Interest: Publishing promotes academic progress; patents may promote investment but may limit access, especially in healthcare.

3.6 Territoriality and International Routes

Patents are territorial. Rights must be obtained in each country or region of interest (or via PCT strategy).

Publications are global once publicly accessible online; they count as prior art in most patent systems worldwide.

4. Interaction between Publication and Patent Rights

Disclosure as Prior Art: A publication can be fatal to novelty. Even a poster, thesis, or online preprint may be counted as prior art.

Strategic Filing Options: Provisional applications, PCT filings, or keeping data confidential until filing can preserve rights while allowing later publication.

Academic Exceptions & University Policies: Many universities have technology transfer offices (TTOs) and policies balancing publication with patenting. TTOs often require disclosure to the office before public presentation.

Open Science and Defensive Publishing: Sometimes researchers deliberately publish to create prior art that blocks competitors from obtaining patents (defensive publication).

5. Strategic Considerations for Law Students and Researchers

1. Decide objective early: If commercialisation is intended, consider filing before public disclosure.

2. Use provisional/PCT: A provisional application can establish an early priority date with lower cost, giving time to refine claims and plan

publication.

3. Coordinate with TTO: If affiliated with an institution, inform the TTO before submitting manuscripts or presenting at conferences.

4. Redact critical details: If you must present earlier, avoid revealing enabling details that would allow replication.

5. Consider defensive publishing: If you prefer the innovation to remain free to use, publish a clear disclosure to prevent others from patenting the same invention.

6. Check jurisdictional rules: Always check the patent rules in jurisdictions of interest—especially on grace periods and experimental-use exceptions.

6. Illustrative Examples and Hypotheticals

Hypothetical 1: A researcher posts a preprint describing a novel synthesis method. Six months later a company files a patent application in multiple countries. The preprint is prior art; depending on jurisdictions and whether the researcher filed a patent first, the company's claims may be invalidated.

Hypothetical 2 (defensive publication): A team chooses to publish an enabling description in an open-access repository specifically to prevent competitors from patenting the technique; the publication becomes worldwide prior art.

Hypothetical 3 (university invention): A PhD student intends to submit a conference paper but first must disclose to the university TTO. The TTO decides to file a provisional patent before release, preserving patentability while allowing later journal publication.

7. Conclusion

Patents and publications serve different but sometimes overlapping goals. Patents incentivise commercial development through temporary exclusivity, whereas publication serves the advancement of knowledge and academic recognition. For law students and researchers, the central practical lesson is

coordination and timing: if patent protection is a goal, prioritise filing and coordinate with institutional processes; if open dissemination is the aim, publication (including deliberate defensive publication) is an effective tool. Sound legal advice and an early strategic decision are indispensable.

8. Bibliography & Suggested Readings

1. The Patents Act, 1970 (India) (as amended).
2. TRIPS Agreement, World Trade Organization.
3. Paris Convention for the Protection of Industrial Property; Patent Cooperation Treaty (PCT).
4. WIPO resources: Patents and Publishing – Guidance for Researchers (search WIPO website for current guidance).
5. Cornish, Llewelyn & Aplin, Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights (textbook – consult latest edition).
6. Relevant journal articles on patents vs open science; university TTO policies and guidelines.

