AN INTRODUCTION TO INTELLECTUAL PROPERTY LAW

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Intellectual Property Law

- Major categories:
  - Copyright law
    - Neighboring rights
  - Trademark law
    - Geographical indications
    - Anti-ambush marketing
  - Patent Law
  - Industrial Design Law
  - Trade Secrets

Intellectual Property Law

- Other categories:
  - Integrated circuit topography protection
  - Plant breeders' rights
  - Personality rights
  - Database rights

Intangible IP v. Tangible Property

- Intellectual property is often embodied in a tangible product – e.g.:
  - A patented machine (e.g., a car, a washing machine)
  - A published novel
- Ownership of the tangible object is separate and distinct from ownership of the intangible IP rights

Characteristics of Intellectual Property as Intangible Property

- Like other forms of property:
  - Rights are transferable and heritable
  - Rights have a commercial value
  - Rights can be managed and licensed

Characteristics of Intellectual Property as Intangible Property

- Unlike other forms of property:
  - IP is non-rivalrous (i.e., consumption of the goods does not limit the supply)
  - IP rights provide limited monopoly rights
    - Limits can be temporal (e.g. copyright or patent term of protection)
    - Legislature can provide for exceptions to rights
      - Ex: fair dealing in copyright law

National protection

- National law determines the subsistence of IP rights and the nature of any exceptions (although influenced by international treaty obligations)
- Copyrights receive strong protection internationally via the Berne Convention and subsequent international treaties

National protection

- Intellectual property that requires registration (e.g., trademarks, patents, industrial designs) must be registered in every country in which protection is desired
- EU has conventions that facilitate EU-wide protection
- International agreements are increasingly harmonizing registration requirements, examination, and other procedures (e.g. for trademark and patent law)

Economic importance of IP rights

- Intangible property has replaced tangible property as the most valuable commercial asset
  - Ex: Coca-Cola's trademark rights are more valuable than its physical plant and equipment
  - Entire companies/industries are built on intangible property

Digital and Internet Eras

- Rapid evolution of digital technologies has presented significant challenges to IP rights owners
  - Copyright law: ability to make perfect or near perfect copies of works (eg music, film), in unlimited quantity, and to distribute them rapidly and globally
  - Much easier to alter and modify works
  - New challenges will come from the ability to generate works using AI

Technology and Copyright

- New technologies that facilitate reproduction have posed challenges for copyright law
  - Who should be liable for infringing copies of works that are made using:
    - Photocopiers
    - Cassette recorders
    - Video-cassette recorders
    - The Internet

Digital and Internet Eras

- The impact of digital technology on copyright law has led to:
  - More enforcement-oriented global treaties
  - Changes to the law to enhance power against new forms of copying (making available right; statutory damages for infringement; anti-circumvention laws)
  - New business models (e.g. streaming)
    - Note that new business models can impact the traditional balance struck in copyright law

Digital and Internet Era

- New challenges for patent law
  - Patentability of software, algorithms
  - Machine 'inventors'?
  - Domestic reproducibility of inventions through 3-D printing
- Challenges for trademark law
  - Greater ease of copying logos and other trademarks
  - Trademarks on the internet (e.g., in domain names)
  - Disruption of geographical boundaries of trademark use and enforcement

Globalization

- Globalization has also had an impact on IP law
  - New comprehensive IP treaties (bi- and multi-lateral to enhance protection of IP rights) (raising important global equity issues)
  - Emerging movement to recognize rights/interests of exploited communities
    - Access/benefit sharing regimes, e.g.

Globalization

- Globalized manufacturing has contributed to rise in counterfeit products – as well as grey-market goods, creating interesting challenges in trademark law
  - Increase in penalties and approaches to trademark counterfeiting
  - Increase in treatment of grey goods as counterfeit

Copyright: Philosophical foundations

- Some tension between common law and civil law approaches
  - Common law systems tend to base protection on the right of the creator to benefit from their labour
  - Civil law tends to focus more on the relationship between the author and the work (with the work being an expression of the author's intellect, personality, etc.)

Copyright

- Limited monopoly right lasting for the life of the author plus 70 years
- Applies to any original *literary, dramatic, artistic* or *musical work*
  - Categories tend to be defined broadly
    - E.g., a menu or set of instructions can be a 'literary work'
- Protection is automatic and does not require registration or deposit

Copyright

- Gives the copyright owner the right to produce, reproduce, publish, adapt, communicate to the public by telecommunication and otherwise exploit the work
- A number of exceptions, including fair dealing, provide for "users' rights"

Copyright

- Users' rights are important to the copyright balance
  - Ensure access to works (A2K)
  - Ability to reference, discuss, criticize and comment
  - Facilitates reporting of news
- Scope and extent of users' rights can vary by country

Economic and Moral Rights

- Economic rights protect the right of the author/creator to commercially exploit their work

- Moral rights protect the relationship between the author and their work
  - Right of attribution, right of integrity
  - Droit de suite

Copyright

- Copyright in a work can be assigned (in whole or in part)
- Or rights can be licenced (in whole or in part)
  - Exclusive licence
  - Non-exclusive
- Collective rights management

Contemporary challenges for copyright law

- The 'author' or 'creator' has been central to copyright law from the outside
- AI is being used to generate works (e.g., literary, artistic)
  - Can AI be an 'author' for the purposes of copyright protection?

Contemporary challenges for copyright law

- AI to create new works of art or literature (or translation tools, etc.) requires the ingestion of massive quantities of works (text and data mining)
  - What rights are available to those whose works are used in text and data mining?

Contemporary challenges for copyright law

- Is there a "right to read"? (or more broadly a right to consumer works)?
  - Does the use of paywalls and ephemeral copies pose a public policy problem?
  - Should licences be allowed to override fair dealing rights?

Contemporary challenges for copyright law

- Is strong (and long) protection in the public interest?
  - North/south differences
  - User-generated content
  - Importance of public domain for creativity, knowledge, access, etc.
  - Tension between creator's rights and publicly funded education systems

Trademarks

- A trademark is a "sign" that distinguishes the source of wares or services
- Trademark rights generally protect the use of the "sign" for source-distinguishing purposes in commercial contexts
- Protects the investment of a trademark owner in their distinctive marks and protects the public against confusion
- Trademark law tolerates identical or similar marks as long as there is no likelihood of confusion

"Signs"

- Trademarks used to be predominantly words or designs (or a combination of the two)
- Today they can be almost anything – including sounds, smells, holograms, moving images, tastes, textures, 3-D shapes, etc.

Trademarks

- A crucial role of a trademark is source identification
- Strong trademarks are ones that are very distinctive (of the trade source)

- https://www.youtube.com/watch?v=JDXocryX8to

Trademarks

- Unregistered (rights are based on use and are more limited)
- Registered – rights are based on registration which requires examination and allows for opposition
  - Protection is national (in country of registration)
- Registration is valid (typically) for 10 years, with infinite possibilities to renew

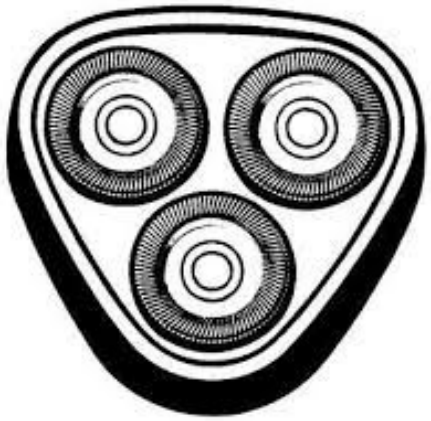
Trademarks - Distinctive

- Descriptive words, images or phrases make weak marks
- Trademarks must also be distinctive of a trade source
  - Generic terms cannot function as trademarks (e.g., bread (for bread), paper (for paper), window cleaning services (for window cleaning services)
  - If not carefully maintained, distinctive marks can become generic:
    - Trampoline, Yo-Yo, Escalator, Thermos
    - Nearly generic: Xerox, Velcro

Trademarks: Functionality

- Functional features of marks cannot operate as trademarks
  - Trademark protection should not extend to the underlying product/service

Functionality v. Distinctiveness



Functionality v. Distinctiveness

- Functionality will be an issue with non-traditional marks as well
  - E.g.: the smell of coffee cannot be a trademark for coffee
  - The smell of a perfume cannot be a trademark for a perfume

Trademark limits

- Typically trademarks must be used in order to acquire rights and to maintain those rights
- Use must generally be commercial use
- A mark that is not used is vulnerable to invalidation (of registration)

Trademark infringement

- Infringement typically involves the use of the same mark for the same goods or services
- Or
- The use of a confusing mark
  - Actual confusion
  - Likelihood of confusion

Some factors relevant to trademark confusion

- Similarity between goods or services
- Similarity between marks
- Dominant character of the marks
- Distinctiveness of the mark
- The relevant public
- Global Assessment

Trademark Confusion and Famous Marks

- Famous marks controversially have stronger protection against confusion
  - This is in part because the fame of the mark may strengthen consumer associations with the mark
  - And because contemporary licensing practices can extend trademarks beyond their traditional categories of goods/services

Trademarks and Technology

- Trademark protection is national – but when is a trademark used in a country?
  - When residents of a country can view the trademark on the internet?
  - When goods or services are provided in that country via the internet?
  - What counts as providing services via the internet?

Geographical Indications

- Geographical indications are not really trademarks, as they are not distinctive of a particular trade source
- But they do indicate that a product has come from a particular geographic region and is produced according to a specified mode of production

Examples of GI's

- Champagne
- Parmigiano di Reggiano
- Irish whiskey
- Kalamata olives
- Bayerisches Bier
- Queso Manchego

Protection of GIs

- Increasing protected internationally through a web of bi- and multi-lateral trade treaties
- GI protection essentially means that only products that conform to the specification can use the protected term
- GIs are used as a kind of regional economic development tool
- In North American, GI protection has been quite limited, and instead "certification marks" have been used to protect similar attributes

Old world/new world challenges

- Immigrants to the 'new' world brought their memories of traditional foods and tried to recreate them
- In Canada and the US, for example, there are all kinds of mass-produced foods that use names such as 'parmesan', 'asiago', 'feta', 'fontina', etc.
- Outside of Europe, some of these terms may have become 'generic', but EU pressure in treaty-making is attempting to demand protection for them as Gis
  - E.g.: Canada Europe Trade Agreement

Old world/new world challenges

- In the meantime, countries like Canada and the US will need to think about whether they have their own GIs to protect
  - Icewine? Vin de cidre de glace?
  - Florida oranges, Idaho potatos, vidalia onions (protected as collective marks, not as GI's per se)

Industrial design

- Industrial designs are designs applied to objects on an industrial scale
  - They must be new or original
  - Designs dictated predominantly by technical or functional considerations cannot be protected

Patents

- Available for "inventions"
- Registration is required and patents are only protected in those countries where they are registered
- Registration requires
  - Full disclosure of the patented invention
  - Lengthy examination and evaluation
- Different patent offices may take different approaches to certain technologies
  - E.g: life forms; biotechnology; computer software; algorithms; business methods
- Term of protection is 20 years
- Relatively few exceptions

Patent Law: Art. 52 European Patent Convention

European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application.

(2)The following in particular shall not be regarded as inventions within the meaning of paragraph 1:

(a) discoveries, scientific theories and mathematical methods;

(b) aesthetic creations;

(c) schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;

(d) presentations of information.

(3)Paragraph 2 shall exclude the patentability of the subject-matter or activities referred to therein only to the extent to which a European patent application or European patent relates to such subject-matter or activities as such.

Inventions

- Patentable inventions can include:
  - Machines and components for machinery
  - Chemical compounds
  - Engineered singe-cell organisms
  - Genetically modified seeds and cells
  - Genetically engineered higher life forms (e.g., the oncomouse)
  - Processes
  - Computer-implemented inventions

Non-patentable subject matter

- Scientific principles or mathematical formulae
- Abstract ideas
- Exclusions permitted in national law under TRIPS Agreement:
  - diagnostic, therapeutic and surgical methods for the treatment of humans or animals;
  - plants and animals other than micro-organisms
  - essentially biological processes for the production of plants or animals other than non-biological and microbiological processes
  - Exclusions for *ordre public* or morality (but not just because something is not permitted by law)

Patentability

- Inventions are patentable if they are "new, involve an inventive step and are susceptible of industrial application" (novelty, non-obviousness and utility)

Patents

- Patent protection is against the making, sale, offering for sale, importing, or use of the patented invention
  - Protection goes right down the chain of supply. For example, a consumer who purchases an unauthorized patented machine infringes the patent when they use the machine (and the parties that manufactured it and sold it are also infringing)
- Relatively little scope for exceptions for private or research purposes

Patents – Contemporary challenges

- Infringement has tended to be on a commercial scale
  - By competitors or imitators
- 3-D printing creates the possibility for individual-level, small scale infringement

Patents – contemporary challenges

- Patents are granted to "inventors" – can AI be an inventor?
- When is an algorithm patentable?
- What biotechnological innovations are patentable?
  - Discovery and isolation of genes that cause certain diseases?

- Bad patents in areas of new technology
- Patent 'thickets' (leading to defensive patenting)
- Patent 'trolls'

Trade Secrets

- Trade secret protection is available, according to TRIPS art. 39 where information:

(a) is secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to persons within the circles that normally deal with the kind of information in question;

(b) has commercial value because it is secret; and

(c) has been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret.

Trade secrets

- Trade secrets are often protected by provisions in civil law, or as a matter of common law (in other words, there is no full statutory regime as for other areas of IP law)
- Trade secret protection is linked to unfair competition law, and may also overlap with the law regarding fiduciary relationships
- Trade secrets can be protected and enforced through confidentiality agreements and non-competition clauses

Trade secrets

- Protection of trade secrets is often an alternative to patent protection
- No registration required, and protection is potentially perpetual (e.g. secret formula for Coca-Cola)
- Trade secrets are important in areas of innovation where patentability may be uncertain (e.g., AI algorithms) or unavailable (e.g., large data sets used in AI)

Principles of international IP protection

- Intellectual property is protected by national (domestic) laws
- But international treaties play an important role:
  - Minimum standards
  - National treatment based on non-discrimination
  - Harmonization of the laws of member states
  - Multilateral registation mechanisms

International treaties

- First Generation
  - Minimum standards of protection
  - National treatment
- Examples:
  - Paris Convention (trademarks and patents)
  - Berne Convention (copyright law)
  - Rome Convention (neighboring rights (performers' rights; rights in sound recordings; broadcasters' rights)

Example: Copyright Law

- The Berne Convention establishes certain minimum requreiments for the protection for copyright (term of protection, originality requirement, categories of works that are protected, etc.)
- It also provides for national treatment. For example, an Italian author whose book is translated and sold in Canada without her permission can sue in Canada for copyright infringement

International treaties and IP

- Second generation IP treaties: International trade agreements
  - Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement)
  - Bi- or multilateral agreements (ex: Canada-Europe Trade Agreement; Canada-US-Mexico Trade Agreement)

Dispute resolution and investor-state arbitration

- The World Trade Organization has a mechanism for resolving disputes between states
- If it is determined that a state is not in compliance with the TRIPS Agreement, the non-compliant country must make the necessary changes to their laws within a prescribed period of time
- If the changes are not made, the other part can, with WTO approval, impose trade sanctions
- Other treaties may permit investor-state arbitration

Enforcement (TRIPS Agreement)

41. 1. Members shall ensure that enforcement procedures as specified in this Part are available under their law so as to permit effective action against any act of infringement of intellectual property rights covered by this Agreement, including expeditious remedies to prevent infringements and remedies which constitute a deterrent to further infringements. These procedures shall be applied in such a manner as to avoid the creation of barriers to legitimate trade and to provide for safeguards against their abuse.

Criminal penalties (TRIPS)

- Art. 61 Members shall provide for criminal procedures and penalties to be applied at least in cases of wilful trademark counterfeiting or copyright piracy on a commercial scale. Remedies available shall include imprisonment and/or monetary fines sufficient to provide a deterrent, consistently with the level of penalties applied for crimes of a corresponding gravity. In appropriate cases, remedies available shall also include the seizure, forfeiture and destruction of the infringing goods and of any materials and implements the predominant use of which has been in the commission of the offence. Members may provide for criminal procedures and penalties to be applied in other cases of infringement of intellectual property rights, in particular where they are committed wilfully and on a commercial scale.

'Third generation' international IP treaties

- The third type of international IP treaty are those aimed at harmonizing national systems and providing mechanisms for multilateral registration.
- Examples:
  - The Treaty of Singapore (trademarks)
  - The Madrid Protocol (trademarks)
  - Patent Co-operation Treaty (patents)

Example: Trademarks

- An Italian company that wants to sell its product outside of Europe must obtain a trademark in each of the countries in which it wishes to sell its product
- This can be complex and costly
- The Singapore Treaty provides for the harmonization of national systems of registration
- The Madrid Protocol provides for a multilateral mechanism for registration (and for renewal and maintenance of rights)

Example: Patents

- The TRIPS Agreement sets minimum standards for the protection of patents under domestic laws
- To be protected, an invention has to be patented in every country where patent protection is desired
- The principle of national treatment provides access to the patent system of each signatory country to the nationals of other signatory countries
- The patent cooperation treaty facilitates the deposit of patent applications in multiple countries

International dimensions of IP law

- Harmonization at the international level tends to bes towards the norms insisted upon by wealthier nations
- These tend to be laws that favour the producers of IP, rather than the users
  - Ex: Laws that provide longer and stronger copyright protection with fewer exceptions
    - This favours countries that are net producers of content as opposed to those that are net consumers
    - Can have impacts on the cost of (and access to) education, knowledge
    - Requires the expenditure of national resources on the enforcement of rights that are largely owned by those outside the country

International dimensions of IP law

- The norms embodied in international treaties favour Western was of knowing and of knowledge production and innovation
  - Example: Copyright law is a poor fit with the cultural production of many indigenous cultures
  - Example: Patent law has allowed large pharmaceutical companies to exploit traditional indigenous knowledge of plants and animals without acknowledgement or compensation
    - Traditional knowledge not even acknowledged as 'prior art'

International dimensions of IP law

- Patent monopolies are meant to help companies recover the costs of research and development; big pharma has tended to focus on innovating in relation to medication/treatments for diseases of the wealthy
- Concerns about parallel importation and grey markets have made pharmaceutical companies reluctant to allow for lower-cost licensing for products in developing countries

International dimensions of IP law

- There is a growing movement that argues that IP law is not equitable at an economic, cultural or social level
  - Example: *Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity*
  - Example : Doha Programme of Action for the Least Developed Countries
    - Certain exceptions to patent law with respect to pharmaceuticals
  - " intellectual property rights should be interpreted and implemented in a manner supportive of the right of member States to protect public health and, in particular, to promote access to medicines for all, and note the need for appropriate incentives in the development of new health products"

Patents and COVID-19 (vaccines and treatments)

- What is the appropriate balance between the rights of innovators and the public interest at a time of pandemic?
  - Should vaccines and medical treatments be patentable?
  - If yes, should there be exceptions in special cases to the patent rights?
  - How can equitable access to vaccines and treatments be provided?

- https://www.nature.com/articles/s41587-022-01485-x

Thank you!