Intellectual property

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Types of intellectual property

- Copyright, patents, trademarks.
- Computer programs.
- Entertainment:
  - movies, music, games.
- Biological material (example: genes).
- Inventions, but not discoveries.
- Implementations, but not ideas.
Moral justifications for private property

- Convention.
- Natural Law/Rights/Justice:
  - Effort: Labor theory of property, home stead principle
    - As long as “[...] there is enough, and as good, left in common for others.” (John Locke)
    - Property legitimate when it emerges in such a way as not to harm anyone. (Comte)
  - Extension of the individual. (Haegel)
  - Scarcity: to avoid tragedy of commons (overuse of limited resource).
- “Capitalist” Utilitarian/Pragmatic Argument.
- Private property: excludable and rival.
“Liberal” Utilitarian Argument

- Intellectual property optimizes social utility.
- IP rights only granted when they are necessary to encourage invention (limited in time and scope).
- Ratio of fixed cost to marginal cost much higher for information than goods → competition drives prices to marginal cost.
- Patent law should protect inventions and not discoveries.
- Copyright law protects only implementations and not ideas.
- IP laws create artificial scarcity.
- Intellectual property limited exception to free market competition.

Disadvantages if creators are overcompensated:
- Distorted markets: static inefficiencies.
- Disablement of other creators.
- Rent seeking behavior: socially wasteful.
- Weaker incentive for creativity (example: Verdi).
Intellectual property as capital

Capital
- Know-how.
- Ideas.
- Methodologies.
- Tools.
- Examples:
  - Internet.
  - Operating systems.

Consumables
- Implementations.
- Service.
- Availability.
- Usability.
- Examples:
  - Application development.
  - Courses.
Intellectual property as private property?

- Arguments against ownership of intellectual capital:
  - Property holders benefit may not coincide with benefit to other people or to society at large.
  - Difference between value and utility.
  -Usufruct.

- Specialty of IP:
  - Information has characteristics of a public good:
    - Consumed without depletion (copyright infringement is not theft).
    - Hard to identify those who infringe.
    - Hard to prevent infringement.
  - Very expensive enforcement by state.
  - Author/Creator builds on community knowledge.
  - Right to education.
  - Freedom of knowledge.
  - Every argument in favour of public libraries is in favour of pirating books. (Forcehimes)
  - Patents and copyrights on discoveries and ideas have become common.
  - IP benefit publisher but not the individual creator.
Biological patents

Protects material and intellectual property - regulated by the law.

- Biological related technology:
  - Software.
  - Hardware, e.g. pipetting robots.

- Biological products:
  - Genetically modified organisms (GMO), e.g. Monsanto soybean seed with resistance to the pesticide Roundup.

- Genetic material:
  - More than 4300 human gene patterns (20% of the human genome) have been claimed in last 20 years (USA).
Gene patents

- **BRCA1 and BRCA2**
  - Tumour suppressor genes.
  - Mutations give an 11 times increased risk for breast cancer and a 22 times increased risk for ovarian cancer.

- The **BRCA1** gene
  - Co-discovered by five universities and Myriad Genetics.
  - Published in Science 1990.

- **Myriad Genetics, Inc.**
  - **BRCA2** gene was discovered in 1994.
  - Patented the genes for 20 years in 1994 and 1995.
  - Developed clinical test for the heredity cancers, 1996.
  - Selling these gene test for about 3000 US dollars.
  - The only lab in USA to test for mutation in **BRCA1** or **BRCA2**.
Should genes be patented?

- Criticisms to gene patent:
  - Researchers gets inhibited in their work.

- Criticisms toward Myriad Genetics:
  - High prices.
  - Inability to get second opinions from other diagnostic labs.

- Association for Molecular Pathology took Myriad Genetics to court:
  - Between 2010-2013 several of the 23 patents were ruled invalid.
  - US supreme court (June 2013): a biological gene cannot be patented, but an artificial gene can.

- Myriad has been fighting in courts in Australia for patents on the BRCA genes.
Music file sharing

- Fallacies galore!
- Pirates make money off of others’ content.
- Artists lose control over distribution.
- “Something in unlimited supply can’t be stolen.” (Karl Sigfrid, Moderaterna Sthlm)
- But what about payment?
  - People pay what they think things are worth.
  - Giving incentive for payment often effective.
Arguments for file sharing

- Correlation: file sharing ↔ direct music sales.
- File sharing → increased artist visibility.
- Threat to music companies:
  - Losing distribution monopoly.
  - Losing money because of direct sales.
- Counter-measures:
  - False ad campaigns.
  - Scare tactics.
  - Corrupting judicial systems. (ex Pirate Bay)
Questions?

Is currently studying political science at Oslo university, and writing a book.

Has not been convicted. Is held in solitary confinement since June 2013, not allowed any reading material.