CIS 381: Social & Ethical Issues of Computing

Intellectual Property

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Addressing Problems Related to the Internet

- Legislation:
  - Criminalization: Identity Theft, Revenge Porn
  - Limits: Gaming Addiction
- Censorship:
  - Direct: Government, Licensing/Registration
  - Self: Movies, TV, Games
- Web filters: Libraries
- Sting Operations
What Is Intellectual Property?

• Intellectual property: any unique product of the human intellect that has commercial value
  - Books, songs, movies
  - Paintings, drawings
  - Inventions, chemical formulas, computer programs

• Intellectual property ≠ physical manifestation: the piece of paper a formula is printed on is not the intellectual property

• Does right to own property extend to intellectual property?
Intellectual Property Protection

• Benefits:
  - Giving creators rights to their inventions stimulates creativity
  - Allure of wealth can be an incentive for speculative work
  - Some people are not altruistic

• Limits:
  - Some people are altruistic
  - Society benefits most when inventions in public domain: everyone can have better mousetraps

• Authors of U.S. Constitution recognized benefits to limited intellectual property protection

• Congress has struck compromise by giving authors and inventors rights for a limited time

[M. J. Quinn]
Test 1

• Next Wednesday, February 27
• Material: Chapters 1–4 plus 5.1-5.x
• Format:
  - Multiple Choice
  - Free Response
• Samples:
  - Explain how to use act utilitarianism to judge whether to build a new bot to handle customer service tasks instead of people.
  - Why is relativism not useful for society to decide whether a new technology is moral?
  - Give an example of technology changing society, and then society creating a new technology to address this
Intellectual Property Protections

- Trade Secrets
- Trademarks (and Service Marks)
- Patents
- Copyrights
"Happy Birthday to You" Copyright
# Prices Fall When Works Become Public Domain

<table>
<thead>
<tr>
<th>Artist</th>
<th>Work</th>
<th>Previous Rental Fee</th>
<th>Year Became Public Domain</th>
<th>Purchase Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ravel</td>
<td>Daphnis et Chloe Suite no. 1</td>
<td>$450.00</td>
<td>1987</td>
<td>$155.00</td>
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<tr>
<td>Ravel</td>
<td>Mother Goose Suite</td>
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<td>1988</td>
<td>70.00</td>
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<tr>
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<td>Daphnis et Chloe Suite no. 2</td>
<td>540.00</td>
<td>1989</td>
<td>265.00</td>
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<tr>
<td>Griffes</td>
<td>The White Peacock</td>
<td>335.00</td>
<td>1993</td>
<td>42.00</td>
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<td>Puccini</td>
<td>O Mio Babbino Caro</td>
<td>252.00</td>
<td>1994</td>
<td>26.00</td>
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<tr>
<td>Respighi</td>
<td>Fountains of Rome</td>
<td>441.00</td>
<td>1994</td>
<td>140.00</td>
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<tr>
<td>Ravel</td>
<td>Le Tombeau de Couperin</td>
<td>510.00</td>
<td>1995</td>
<td>86.00</td>
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<tr>
<td>Respighi</td>
<td>Ancient Aires and Dances Suite no. 1</td>
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<td>1996</td>
<td>85.00</td>
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<tr>
<td>Elgar</td>
<td>Cello Concerto</td>
<td>550.00</td>
<td>1997</td>
<td>140.00</td>
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<td>Holst</td>
<td>The Planets</td>
<td>815.00</td>
<td>1997</td>
<td>300.00</td>
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<td>Ravel</td>
<td>Alborada Del Gracioso</td>
<td>360.00</td>
<td>1999</td>
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</tr>
</tbody>
</table>
Trade Secret

• Confidential piece of intellectual property that gives company a competitive advantage
• Example: Coca-Cola's syrup recipe
• Never expires
• Not appropriate for all intellectual properties
• Reverse engineering allowed
• May be compromised when employees leave firm
Trademarks and Common Nouns

If a trademark is misused it could come undone.

If you didn’t know zipper was a trademark, don’t worry, it’s not. But it used to be. It was lost because people misused the name. And the same could happen to ours, Xerox. Please help us ensure it doesn’t. Use Xerox only as an adjective to identify our products and services, such as Xerox copiers, not a verb, “to Xerox,” or a noun, “Xeroxes.” Something to keep in mind that will help us keep it together.

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Trademark & Service Mark

- Trademark: Identifies goods
- Service mark: Identifies services
- Company can establish a “brand name”
- Does not expire
- If brand name becomes **common noun**, trademark may be lost: zipper, Xerox and Kleenex trying to stop this
- Companies advertise to protect their trademarks
- Companies also protect trademarks by contacting those who misuse them
Patent

• A public document that provides detailed description of invention
• Provides owner with exclusive right to the invention
• Owner can prevent others from making, using, or selling invention for 20 years
Copyright

• Provides owner of an original work the rights for:
  - Reproduction
  - Distribution
  - Public display
  - Public performance
  - Production of derivative works

• Copyright-related industries represent 6% of U.S. gross domestic product (> $900 billion/yr)

• Copyright protection has expanded greatly since 1790
Copyright Creep

[Diagram showing the increase in copyright protection periods over time, with specific years and types of works highlighted.]
Copyright Creep

• Since 1790, protection for books extended from 28 years to 95 years or more

• Some say latest extension done to prevent Disney characters from becoming public domain

• Group of petitioners challenged the Copyright Term Extension Act of 1998, arguing Congress exceeded Constitutional power

• U.S. Supreme Court ruling
  - CTEA does not create perpetual copyrights
  - CTEA is constitutional
Against Intellectual Monopoly

• Authors: Michele Boldrin and David K. Levine
• "Intellectual property is a government grant of a costly and dangerous private monopoly over ideas"
• Watt and the Steam Engine
  - Major part of the Industrial Revolution
  - Did the patent help society?
  - What evidence was there for this?
  - What happened after the patent expired?
"Information wants to be free"

vs.

"A world without intellectual property is a world without new ideas"
Scenarios

- Steam Engine (e.g. Hornblower)
- Blackberry Patent for “pushing information from a host system to a mobile data communication device"
- Freely downloading music and musicians making a living
Patents and Copyright

- Two ingredients
  - Right to buy and sell copies of ideas
  - Right to control how other people make use of their copies
- Second creates an "intellectual monopoly"
- "Neither the internet nor the jet engine were invented in hopes of securing exclusive rights"
- Are inventors only rewarded through patents?
- How else could they be rewarded?
- What would the world be like without patents and copyrights?
"Intellectual property is an unnecessary evil"
— Boldrin and Levine
What type of ethical framework do the authors seem to be using throughout their writing?