

# Lab Exercise 15: Ethics and Property

## CS 2334

Dec 7, 2017

### Introduction

As software professionals, we deal regularly with intellectual property (IP) – not only do we create new IP, but we also make use of and modify existing IP. As we are planning and executing software projects, it is important to be aware of, reason about and act appropriately in the face of ethical and legal issues that can arise around the question of property.

### Learning Objectives

By the end of this laboratory exercise, you should be able to:

1. read and analyze ethical principles from a range of sources, and
2. apply ethical principles to making decisions in intellectual property scenarios.

### Problem Context

For this lab, you may use the following sources:

- Your ethics book
- US Declaration of Independence:  
<http://www.ushistory.org/declaration/document/>

- US Bill of Rights:  
<https://www.billofrightsinstitute.org/founding-documents/bill-of-rights/>
- The ACM code of ethics:  
<http://www.acm.org/about/code-of-ethics>
- The Creative Commons licensing options:  
<https://creativecommons.org/licenses/>

## Exercise Process and Proper Academic Conduct

We will solve each of the cases in three phases:

1. The first phase is to be done individually (15 minutes). As you formulate answers to the questions below, you may consult the resources listed above. However, you may not discuss your answers with anyone in the lab other than the TAs. You may also not use a search engine to look for answers on the net.
2. After individuals complete the first phase and submit their answers, pairs will work together to refine their answers to the same case (8 minutes).
3. After pairs have submitted their answers, the class will discuss the case.

For each question that you answer, there could very well be more than one reasonable answer (in fact, we might not agree on what the reasonable answers are). Your answers should be short, but make sure to make appropriate references to the ethical principles that support your answers.

## Short Answers

Name(s) and ID(s):

1. Describe the ethical principles that support the idea that individuals should be granted intellectual property protections. List at least two.

*Discussion points:*

- (a) *Right to property*
- (b) *Right to benefit from ones own work.*

2. Describe the ethical principle that supports the idea that intellectual property protections should only extend for a limited period of time.

*Discussion points:*

- (a) *Benefit larger society*

3. Putting aside from the questions of legalities (and any costs thereof), does the use of open-source code necessarily increase utility? Why or why not?

*Discussion points:*

*Not necessarily. While the use of open-source code can often increase utility, there are a few scenarios where it may not:*

- (a) *The code may not be a good match for the problem that needs to be solved.*
- (b) *The code may contain so many bugs that one spends more time (utility) on fixing the bugs than solving the problem outright.*
- (c) *The code may contain vulnerabilities that can be exploited at a later time, resulting in a reduction of utility for the customers.*

4. What is the *natural rights* perspective on using an *opt-out* approach to deciding whether to collect position data about a user?

*Discussion points:*

- (a) *Natural rights require an affected person to be able to make a choice and to knowingly make that choice.*
- (b) *While **opt-out** does provide a user with choice, it explicitly requires the user to take specific action to prevent herself from being tracked. This could be seen as not giving the person a proper opportunity to make a choice.*

5. What ethical principle supports the *fair use doctrine* as applied to a copy of something that you own?

*Discussion points:*

- (a) *Fair use is the idea that one should be able to reasonably use some copy of a piece of IP that you own. The **right to property** can be invoked here.*

## CASE 1: Creative Commons

Name(s) and ID(s):

A non-profit company creates and distributes educational materials under the Creative Commons, non-commercial license.

1. Under this license, may a public school make printed copies of these materials and use them in the classroom? Why or why not?

*Discussion points:*

- (a) *Because this is not a commercial enterprise, the public school is free to use these materials.*

2. May a publisher take the educational materials, make changes, print and then sell them to the public school? Why or why not?

*Discussion points:*

- (a) *The publisher in this case is clearly a commercial enterprise. This is disallowed by the license.*

- (b) *We did not say whether derivative works were allowed. If they are not, then this is another violation of the license.*

3. Suppose the public school hires a printing service to make copies of the educational materials. Does the license allow this action? Provide arguments for both sides and give your opinion as to what the correct answer is.

*Discussion points:*

- (a) *Against: the printer is making a profit from the action of making the copies.*
- (b) *For: 1) the profit that the printer makes would presumably not be any more than just for making the copies, so one could argue that there is no profit on the IP itself; 2) the copies will still be made, but we have to rely on the teachers themselves or other school staff to perform the copying. This action also has costs associated with it (supplies; maintenance of the copy machines; staff time).*
- (c) *One possible test: is the cost to the school the same for this CC licensed material as for an equivalent school-owned document?*
- (d) *Note: Great Minds vs FedEx: Great Minds sued FedEx because it was hired by schools to make copies of the educational materials created by Great Minds, claiming that FedEx must pay licensing fees. The Creative Commons Foundation filed a brief with the court, arguing that this was not the intent of the Creative Commons license, and that by allowing the suit, the court would dramatically damage the CC licensing system. In March of this year, the judge threw out the case, but clearly indicated that work was needed on the CC license.*

4. Which configuration of the Creative Commons License enables an IP holder to allow free non-commercial use, but to collect licensing fees for commercial use?

*Discussion points:*

- (a) *There is no version of the CC license that will allow this arrangement. In general, the CC licensing system is about providing mechanisms for the free sharing of information, but with restrictions.*
- (b) *On the other hand, sharing something that is CC-NC does not disallow the owner of the IP from licensing the IP for commercial purposes under other mechanisms.*

## Case 2: Capstone Project

Name(s) and ID(s):

As part of your degree in computer science at OU, you will take a capstone project class, in which you collaborate with a number of students to solve a software problem. Because this is a class, you have paid money for tuition and fees associated with the units. Most likely, the project that you select will be one that is posed by a local company that has given money to the School of Computer Science for the privilege of posing the problem and of interacting with you. At the end of the semester, the company wants to take the code that you have developed for its own use.

Note: in answering the questions below, you may use the net to search **OU web sites only**.

1. Who owns this intellectual property?

*Discussion points:*

- (a) *OU policies state that any class work done by a student is the property of the student. Neither OU nor the company have direct claim to the software.*

2. What avenues exist that would allow the company to use the software that has been developed?

*Discussion points:*

- (a) *The students, as owners of the intellectual property, could arrange an outright transfer or a licensing agreement with the company.*
- (b) *Note: OU (through the CCEW or OTD) would be more than happy to broker this agreement. Likely, OU would ask for partial ownership of the intellectual property for this privilege.*

3. Suppose the company then hires one of the students in the original group to develop a similar project? What legal rules and ethical principles must be considered?

*Discussion points:*

- (a) *Without permission of the other students, the code could still not be transferred.*
  - (b) *Respect property rights; avoid harm to others; be honest and trustworthy; give proper credit for intellectual property.*
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4. Suppose that the hired student does not copy the original code base, but implements a similar code base, possibly with consultation of the original code. Are there any legal or ethical issues to be considered in this case? What are they?

*Yes, there are still potential problems.*

*Discussion points:*

- (a) *Intellectual property rules can be interpreted as including the processes that are codified in the code base. Hence, doing this without permission is still problematic.*
- (b) *The ACM code of ethics still requires us to respect property rights; avoid harm to others; be honest and trustworthy; give proper credit for intellectual property*



5. Is there a conflict of interest in the Computer Science department's collection of funds from students for taking the class while also collecting funds from the companies? Why or why not?

*The students can argue either way here.*

*Discussion points:*

- (a) *Yes. In this context, the department's primary mission is that of education; collecting funds from companies is contrary to this mission and allowing companies to bias this educational process is problematic. The department could bias the selection of projects toward companies who promise to or who traditionally give more money.*
- (b) *No. The department is providing a real match-making and educational service that benefits both parties. The companies determine how much money they contribute to the department (no specific value is required). Collected funds are used to support programs for students and do not benefit individuals working for the department.*