Data and Society

Lecture 9: Digital Rights and Regulation in the U.S.

4/15/16
Announcements

• If you’re interested in your grade so far, come talk to Fran. (Office hours: 1-2 or by appt.)

• **Bulent Yener** lectures on April 22 about Data Privacy, Anonymity and Cryptosecurity!

• It looks like we will have 5-6 slots during the last 2 classes for Data Roundtable “do-overs” – let me know if you’re interested
  
  – Ground rules:
    • Presentation / review graded like usual
    • Student gets the best 2 of 3 Roundtable grades
Today (4/15/16)

• Lecture 9: Data Rights and Regulations
• L8 Data Roundtable
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<th>Section 1: The Data Ecosystem - - Fundamentals</th>
<th>January 29</th>
<th>Class introduction; Digital data in the 21st Century (L1)</th>
<th>Data Roundtable / Fran</th>
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<td>February 5</td>
<td>Data Stewardship and Preservation (L2)</td>
<td>L1 Data Roundtable / 5 students</td>
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<td>February 12</td>
<td>Data-driven Science (L3)</td>
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<td>Future infrastructure – Internet of Things (L4)</td>
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<td>February 26</td>
<td>Section 1 Exam</td>
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<td>Section 2: Data and Innovation – How has data transformed science and society?</td>
<td>March 4</td>
<td>Paper assignment description</td>
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<td>March 11</td>
<td>Data and Health: Phil Bourne guest lecture (L5)</td>
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<td>March 18</td>
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<td>April 1</td>
<td>Big Data Applications (L7)</td>
<td>Privacy Panel / 6 students</td>
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<td>Section 3: Data and Community – Social infrastructure for a data-driven world</td>
<td>April 8</td>
<td>Data in the Global Landscape (L8)</td>
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<td>April 15</td>
<td>Digital Rights in the U.S. (L9)</td>
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<td>April 22</td>
<td>Bulent Yener: Review of Privacy, Anonymity, and Cryptocurrency (L10)</td>
<td>Digital Rights Forum / 6 students</td>
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<td>April 29</td>
<td>Digital Governance and Ethics (L11)</td>
<td>L10 Data Roundtable / 5 students</td>
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<td>May 6</td>
<td>Section 3 Exam</td>
<td>L11 Data Roundtable / 5 students</td>
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Lecture 9: Digital Rights and Regulation
Data Rights and Regulations in the U.S.

- Data and Data Privacy Laws in the U.S.
- Transparency in Govt. -- the DATA Act
- Copyright
- Digital Millennium Copyright Act
- Viacom vs. YouTube/Google
- Creative Commons
Data and the Law

• **Wikipedia:** “Law is a system of rules that are enforced through social institutions to govern behavior. ... The law shapes politics, economics, history and society in various ways and serves as a mediator of relations between people.”

• In a digital society, laws around ownership, rights and the use of data are critical to help society create a framework for digitally-enabled efforts.

• The ubiquity and replicability of digital content makes the development of this framework extremely complex
  – Many players involved
  – Great potential for distinct interpretations, conflict between distinct laws, unintended consequences
  – Benefits, value, usefulness relative to various stakeholders
U.S. Laws and Personal Data

- No single, comprehensive federal U.S. law regulating the collection and use of personal data.
- US has a patchwork system of federal and state laws, and regulations that can sometimes overlap, dovetail and contradict one another. Also government agency guidelines that are considered “best practices”.
- The combination of an increase in interstate and cross-border data flow, together with the increased enactment of data protection-related statutes highlights the risk of privacy violations and creates a significant challenge for a data controller to negotiate the onerous and often inconsistent requirements for each state, when operating at a national level.
Fair Information Principles

- Current U.S. Federal Trade Commission (FTC) version of the Fair Information Principles are only recommendations and are not enforceable by law.
  - Principles form the basis of many federal and state laws and serve as a model for privacy protections in developing areas (i.e. smart systems).
- Enforcement of and adherence to these principles is principally performed through self-regulation.
- FTC has recommended that the United States Congress enact legislation that, in conjunction with continuing self-regulatory programs, will ensure adequate protection of consumer privacy online.

### Fair Information Principles

- **Notice/Awareness**  Consumers should be given notice of an entity's information practices before any personal information is collected from them. This requires that companies explicitly notify some or all of the following:
  - identification of the entity collecting the data;
  - identification of the uses to which the data will be put;
  - identification of any potential recipients of the data;
  - the nature of the data collected and the means by which it is collected;
  - whether the provision of the requested data is voluntary or required;
  - the steps taken by the data collector to ensure the confidentiality, integrity and quality of the data.

- **Choice/Consent**  Choice and consent in an on-line information-gathering sense means giving consumers options to control how their data is used. Specifically, choice relates to secondary uses of information beyond the immediate needs of the information collector to complete the consumer's transaction. The two typical types of choice models are 'opt-in' or 'opt-out.'

- **Access/Participation**  Access includes not only a consumer's ability to view the data collected, but also to verify and contest its accuracy. This access must be inexpensive and timely in order to be useful to the consumer.

- **Integrity/Security**  Information collectors should ensure that the data they collect is accurate and secure.

- **Enforcement/Redress**  There must be enforcement measures In order to ensure that companies follow the FIPs. The FTC has identified three types of enforcement measures: self-regulation by the information collectors or an appointed regulatory body; private remedies that give civil causes of action for individuals whose information has been misused to sue violators; and government enforcement that can include civil and criminal penalties levied by the government.

Information from https://en.wikipedia.org/wiki/FTC_Fair_Information_Practice
U.S. Data Privacy Laws -- Timeline

The following are some of the laws, regulations and directives related to the protection of information systems and private information in the U.S. up to 2002:

- 1970 U.S. Fair Credit Reporting Act
- 1970 U.S. Racketeer Influenced and Corrupt Organization (RICO) Act
- 1974 U.S. Privacy Act
- 1974 Family Educational Rights and Privacy Act (FERPA)
- 1980 Organization for Economic Cooperation and Development (OECD) Guidelines
- 1984 U.S. Medical Computer Crime Act
- 1986 U.S. Electronic Communications Privacy Act (ECPA)
- 1988 U.S. Video Privacy Protection Act
- 1990 United Kingdom Computer Misuse Act
- 1992 OECD Guidelines to Serve as a Total Security Framework
- 1994 Communications Assistance for Law Enforcement Act
- 1996 U.S. Economic and Protection of Proprietary Information Act
- 1996 Health Insurance Portability and Accountability Act (HIPAA) (requirement added in December 2000)
- 1998 U.S. Digital Millennium Copyright Act (DMCA)
- 1999 U.S. Uniform Computer Information Transactions Act (UCITA)
- 2000 U.S. Congress Electronic Signatures in Global National Commerce Act ("ESIGN")
- 2001 U.S. Provide Appropriate Tools Required to Intercept and Obstruct Terrorism (PATRIOT) Act
- 2002 Homeland Security Act (HSA)
U.S. Data Privacy Laws -- HIPAA

Health Insurance Portability and Accountability Act (HIPAA) (42 U.S.C. §1301 et seq.) Regulates medical information. Can apply broadly to health care providers, data processors, pharmacies and other entities that come into contact with medical information.


• HIPAA enacted by Congress in 1996.

• Basic idea of HIPAA is that an individual who is a subject of individually identifiable health information should have:
  - Established procedures for the exercise of individual health information privacy rights.
  - The use and disclosure of individual health information should be authorized or required.

• Challenges:
  - Consent is problematic under HIPAA, because the medical providers simply make care contingent upon agreeing to the privacy standards in practice.
  - There must be a mechanism to authenticate the patient who demands access to his/her HIPAA data. As a result, medical facilities have begun to ask for Social Security Numbers from patients, thus arguably decreasing privacy by simplifying the act of correlating health records with other records.
U.S. Data Privacy Laws -- ECPA

- Electronic Communications Privacy Act (18 U.S.C. §2510) and the Computer Fraud and Abuse Act (18 U.S.C. §1030) Regulate the interception of electronic communications and computer tampering, respectively.

- ECPA establishes criminal sanctions for interception of electronic communication.
  - Loopholes are large enough to render the Act effectively meaningless. For example, consent can be implied to any reading of electronic communications by accepting employment with an organization that practices surveillance against its employees.
U.S. Data Privacy Laws – FCRA

- Fair Credit Reporting Act (15 U.S.C. §1681) (and the Fair and Accurate Credit Transactions Act (Pub. L. No. 108-159) which amended the Fair Credit Reporting Act) Applies to consumer reporting agencies, those who use consumer reports (such as a lender) and those who provide consumer reporting information (such as a credit card company).

  - FCRA applies the principles of the Code of Fair Information Practice to credit reporting agencies. The FCRA allows individuals to opt out of unwanted credit offers and obtain a free annual credit report.

  - The Fair Credit Reporting Act has been effective in preventing the proliferation of specious so-called private credit guides.

  - The Fair Credit Reporting Act provides consumers the ability to view, correct, contest, and limit the uses of credit reports.

  - The FCRA also protects the credit agency from the charge of negligent release in the case of misrepresentation by the requester.
More Common Federal Privacy Laws

  *Federal consumer protection law that prohibits unfair or deceptive practices and has been applied to offline and online privacy and data security policies.*
  - FTC has brought many enforcement actions against companies failing to comply with posted privacy policies and for the unauthorized disclosure of personal data.
  - The FTC Act and most US privacy laws (except the HIPAA and some California laws) do not generally provide data subjects with specific access rights to their data.

• **Children's Online Privacy Protection Act (COPPA) (15 U.S.C. §§6501-6506)**
  *Applies to the online collection of information from children, and the Self-Regulatory Principles for Behavioral Advertising.*
  - Children's Online Privacy Protection Act allows a parent to view the personal information collected by a website about a child, and to delete and correct that information. FTC is the primary enforcer.

• **The Financial Services Modernization Act (Gramm-Leach-Bliley Act (GLB)) (15 U.S.C. §§6801-6827)**
  *Regulates the collection, use and disclosure of financial information.*
  - It can apply broadly to financial institutions such as banks, securities firms and insurance companies, and to other businesses that provide financial services and products.
  - GLB limits the disclosure of non-public personal information, and in some cases requires financial institutions to provide notice of their privacy practices and an opportunity for data subjects to opt out of having their information shared.

  *Regulates the collection and use of e-mail addresses and telephone numbers, respectively.*
Federal Privacy Bills Introduced in 2015

- **S. 1158 (Consumer Privacy Protection Act)** (Referred to committee in 4/2015)
  - Would establish a federal security breach notification law and provides protection for many types of data including social security numbers, financial account information, online usernames and passwords, unique biometric data (including fingerprints), information about a person's physical and mental health, information about a person's geo-location, and access to private digital photographs and videos.
  - Bill would pre-empt weaker state laws while leaving stronger state privacy laws in place.

- **H.R. 2092 (Student Digital Privacy and Parental Rights Act)** (Referred to committee in 4/2015)
  - Would prohibit operators of websites, applications and other online services from selling students' personal information to third parties and using or disclosing students' personal information to tailor advertising to them.
  - Bill would also give parents access to information held about their children and allow them to correct it, delete information about their children that schools do not need to retain, and to download any material their children have created.

- **S. 668 (Data Broker Accountability and Transparency Act)** (Referred to committee in 4/2015)
  - Would require data brokers to establish procedures to ensure the accuracy of the personal information they collect, assemble, or maintain; and any other information that specifically identifies an individual, (unless the information only identifies an individual's name or address);
  - Would require data brokers to provide individuals' a cost-free method to review their personal or identifying information;
  - Would allow individuals to dispute the accuracy of their personal information with a written request that the data broker make a correction.
State Privacy Laws

• There are many laws at state level that regulate the collection and use of personal data, and the number grows each year.

  – Some federal privacy laws pre-empt state privacy laws on the same topic. Companies may find themselves in the position of complying with both.

• Most states have enacted some form of privacy legislation, however California leads the way in the privacy arena, having enacted multiple privacy laws, some of which have far-reaching effects at a national level. Unlike many federal privacy laws in the US, California's privacy laws resemble the European approach to privacy protection.

  – California is one of only a handful of states to create an Office of Privacy Protection (www.privacy.ca.gov).
California Privacy Laws

• **Shine the Light law (Cal. Civil Code. §§1798.83-1798.84)**  Requires companies to disclose details of the third parties with whom they have shared their personal information.

• **Data security law (Cal. Civil Code §1798.81.5)**  Requires businesses to implement and maintain reasonable security procedures to protect personal information from unauthorized access, destruction, use, modification, or disclosure.

• **Security Breach Notification law (California Civil Code §1798.82)**  Requires any person or business that owns or licenses computerized data that includes personal information to disclose any breach of the security of the system to all California residents whose unencrypted personal information was acquired by an unauthorized person.
  – California was also the first state to enact this
  – Most of the early state security breach notification laws mirrored California's law, and tended to be reactive, that is, they established requirements for responding to a security breach. More recently, a handful of state laws were enacted that are prescriptive and preventative, that is, these laws are more stringent and actually establish requirements to avoid a security breach.
  – The best example of a preventative-type of law is the Massachusetts Regulation (201 CMR 17.00), which prescribes in detail an extensive list of technical, physical and administrative security protocols aimed at protecting personal information that affected companies must implement into their security architecture, and describe in a comprehensive written information security program.
Transparency in Government – the Digital Accountability and Transparency Act (DATA) of 2014

• DATA Act is a law that aims to make information on federal expenditures more easily accessible and more transparent.

• Law requires U.S. Department of Treasury to
  – establish common standards for financial data provided by all government agencies and
  – expand the amount of data that agencies must provide to the government website, USASpending.
Bi-partisan support for transparency

• 2014 DATA Act
  – Provides more and better information on Government spending data
  – Creates standards for comparison of spending between programs, agencies, etc.
  – Strengthens government accountability and exposes opportunities for innovation
  – Complements Obama’s 2013 Executive Order on making federal government data open and machine readable by default
Data Act Facts

https://www.usaspending.gov/Pages/Default.aspx

• Bill signed into law in May, 2014. 2 year pilot program to develop recommendations. In 2017, Treasury Secretary accountable for ensuring information is posted on-line.

• Provisions of the bill:
  – Expand the Federal Funding Accountability and Transparency Act of 2006 by disclosing federal agency expenditures and linking federal contract, loan, and grant spending to federal programs
  – Establish government-wide data standards for financial data and make it searchable on USASpending.gov
  – Simplify reporting for entities receiving federal funds
  – Improve the quality of data submitted to USASpending.gov by holding federal agencies accountable
  – Apply approaches developed by the Recovery Accountability and Transparency Board to spending across the federal government
Bill directs Treasury Secretary and OMB to establish government-wide financial standards for federal funds and entities receiving federal funds:

- Incorporate widely accepted common data elements in searchable, computer-readable format
- Include government-wide universal identifiers
- Be updatable
- Produce consistent and comparable data
- Establish standard methods of reporting

**Costs and Challenges:**

- Congressional Budget Office (CBO) estimates that implementing the bill would cost $300M over 2014-2018.
- Developing standards is hard ...
  - Need to find agreement on metadata, formats, etc.
  - To make agencies programs and expenditures comparable, need to harmonize different kinds of data with different kinds of purposes
- Need to develop privacy / openness guidelines
  - Ensuring security / integrity of data critical
- Need to develop useful discovery, access, visualization and other kinds of SW tools and systems to make the data most useful
What is Copyright?

- **Wikipedia:** “Copyright is a **legal right** created by the law of a country that **grants the creator of an original work exclusive rights to its use and distribution, usually for a limited time**, with the intention of enabling the creator to receive **compensation** for their intellectual effort.

- The exclusive rights are, however, **not absolute** and **do not give the creator total control** of their works because they are limited by limitations and exceptions to the copyright law.”
What is copyright?

- **Copyright is a form of intellectual property.**
  - Can be shared among multiple authors, each of whom holds a set of rights to use or license the work.
  - “Rights” include reproduction, control over derivative works, distribution, public performance, and “moral rights” (e.g. attribution)

- Copyright came about with the invention of the printing press and wider literacy. Its legal origins were in Britain at the beginning of the 18th century.

- **U.S. Constitution provides for the protection of copyrights** “to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries” (1787)
  - Modern intent of copyright is to promote the creation of new works by giving authors control of and profit from them

- **Copyrights are “territorial”** – do not extend beyond the territory of a specific jurisdiction unless that jurisdiction is party to an international agreement
  - Many aspects of copyright standardized internationally but each country’s copyright laws have unique features

- Once copyright expires, the work enters the public domain and can be freely used or exploited by anyone.
Copyright in the U.S. and around the world

- For most of the world, the **duration of copyright generally the whole life of the creator + 50-70 years from the creator’s death** (or a finite period for anonymous or corporate creations)
  - Original length of copyright in U.S. was 14 years and it had to be explicitly applied for. Afterwards, work was in the public domain

- **Some jurisdictions have required formalities to establishing copyright, most recognize copyright in any completed work without formal registration.**

- **Copyright covers form and manner that ideas are expressed but not the ideas themselves.**
  - E.g.: Copyright of Mickey Mouse cartoon restricts others from making copies of the cartoon or creating derivative works of MM. MM is not copyrighted because characters cannot be copyrighted.
  - Patents and trademarks used in areas that copyright doesn’t cover

- **1989 Berne Convention Implementation Act** amended U.S. 1976 Copyright Act to conform to most of the provisions of the Berne Convention
  - Berne Convention provides for recognition of copyright among sovereign nations, rather than bilaterally
  - Copyright is automatic and does not require registration. Foreign authors treated equivalently to domestic authors in any country signed onto the Convention
Fair Use (in the U.S.)

- Wikipedia: Fair use is a limitation and exception to the exclusive right granted by copyright law to the author of a creative work.
  - Fair use permits limited use of copyrighted material without acquiring permission from the rights holders.

- Fair use is one of the traditional safety valves intended to balance the public's interest in open access with the property interests of copyright holders.

- Fair use of a copyrighted work for purposes such as criticism, comment, news reporting, teaching, scholarship, or research, is not an infringement of copyright.

- In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include:
  - the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
  - the nature of the copyrighted work;
  - the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
  - the effect of the use upon the potential market for or value of the copyrighted work.
Copyright infringement
Extending copyright to digital content -- 1998
Digital Millennium Copyright Act (DMCA)

• DMCA is U.S. copyright law that implements two 1996 treaties of the World Intellectual Property Organization (WIPO).

• DMCA
  – Criminalizes production and dissemination of technology, devices or services intended to circumvent digital rights management (DRM) measures that control access to copyrighted works.
  – Criminalizes the act of circumventing an access control (even if there is no infringement of the copyright itself)
  – Heightens penalties for copyright infringement on the Internet.

• **DMCA amended Title 17 of the U.S. code to extend the reach of copyright while limiting the liability of online service providers** and other intermediaries for copyright infringement by their users
DMCA -- Motivation and Complexity

• DMCA bill was heavily supported by the content industries—Hollywood, the music business and book publishers—during its legislative journey through the U.S. Senate and House of Representatives.

• DMCA was written in order to strengthen existing federal copyright protections against new threats posed by the Internet and by the democratization of high technology.
  – Key provision was “safe harbor”, granting companies operating platforms for user-contributed content protection from liability for acts of copyright infringement by those users.

• It was this provision that the operators of file-sharing platforms like Grokster and Napster tried to leverage during their unsuccessful attempts to defend themselves against DMCA-inspired litigation in the early 2000s.
Copyright Infringement: Viacom v. YouTube, Google Inc.

• March 13, 2007: Viacom files a lawsuit against YouTube and its corporate parent Google for copyright infringement, seeking $1B in damages

• Viacom (owner of Paramount, Dreamworks, some cable channels) claimed that YouTube was engaging in “massive intentional copyright infringement” for making available 160,000 unauthorized clips of Viacom’s entertainment program.
  
  — Viacom: “"YouTube appropriates the value of creative content on a massive scale for YouTube's benefit without payment or license."

• Google claimed that the DMCA’s safe harbor provision shielded them from liability.
Different perspectives

- **Viacom**: "YouTube has deliberately chosen not to take reasonable precautions to deter the rampant infringement on its site," ... "Because YouTube directly profits from the availability of popular infringing works on its site, *it has decided to shift the burden entirely onto copyright owners* to monitor the YouTube site on a daily or hourly basis to detect infringing videos."

- **Viacom source**: "More and more of the company's resources are going to this," the source said. "The company basically is paying for an entire new department to watch YouTube."

- **Google**: Google relying on 1998 DMCA to shield the company from liability. One provision of that statute generally says *companies are off the hook if they remove copyrighted content promptly* when it is brought to their attention.

- **Google**: Internet services benefit from *safe harbor* if they also meet a four-pronged test. Conditions include not being "aware of facts or circumstances from which infringing activity is apparent" and not receiving "financial benefit directly attributable to the infringing activity."

- Counsel for **YouTube / Google** confident their actions were on solid legal ground. "We meet those requirements and go above and beyond them in helping content providers identify copyright infringements."
Legal trajectory

• Case originally filed in March, 2007 in the District Court for the Southern District of New York.

  – Court held that YouTube is protected by the safe harbor of the DMCA.
  – Viacom appealed to the U.S. Court of Appeals for the Second Circuit.

• On April 5, 2012, the federal Second Circuit Court of Appeals vacated Judge Louis Stanton's ruling, and instead ruled that Viacom had presented enough evidence against YouTube to warrant a trial, and the case should not have been thrown out in summary judgement.

• Court did uphold the ruling that YouTube could not be held liable based on "general knowledge" that users on its site were infringing copyright.

• Case was sent back to the District Court in New York

• On April 18, 2013, Judge Stanton issued another order granting summary judgment in favor of YouTube.

• Case is now over; no money changed hands.
Electronic Frontier Foundation criticisms of the DMCA

- **Electronic Frontier Foundation**: “Years of experience with the "anti-circumvention" provisions of the DMCA demonstrate that the statute reaches too far, chilling a wide variety of legitimate activities in ways Congress did not intend. ““Congress meant to stop copyright infringers from defeating anti-piracy protections added to copyrighted works and to ban the "black box" devices intended for that purpose. In practice, the anti-circumvention provisions have been used to stifle a wide array of legitimate activities, ...”

- EFF: “DMCA has developed into a serious threat to several important public policy priorities”
  - **The DMCA Chills Free Expression and Scientific Research**
    - Professor Ed Felten at Princeton participated in Secure Digital Music Initiative Public Challenge. Was told that he should not publish his research as publication “could subject you and your research team to actions under the Digital Millennium Copyright Act”
  - **The DMCA Jeopardizes Fair Use**
    - EFF: “By banning all acts of circumvention, and all technologies and tools that can be used for circumvention, the DMCA grants to copyright owners the power to unilaterally eliminate the public's fair use rights. Already, the movie industry's use of encryption on DVDs has curtailed consumers' ability to make legitimate, personal-use copies of movies they have purchased.”
  - **The DMCA Impedes Competition and Innovation**
    - EFF: “Rather than focusing on pirates, some have wielded the DMCA to hinder legitimate competitors. For example, the DMCA has been used to block aftermarket competition in laser printer toner cartridges, garage door openers, and computer maintenance services. Similarly, Apple has used the DMCA to tie its iPhone and iPod devices to Apple's own software and services.”
  - **The DMCA Interferes with Computer Intrusion Laws**
    - EFF: “DMCA has been misused as a general-purpose prohibition on computer network access, a task for which it was not designed and to which it is ill-suited.”

Quotes from: https://www.eff.org/wp/unintended-consequences-under-dmca
Rights and Licensing: The Creative Commons (CC)

- Wikipedia: “Creative Commons (CC) is a non-profit organization devoted to expanding the range of creative works available for others to build upon legally and to share.”

- CC has released several copyright-licenses known free of charge to the public. The licenses allow creators to communicate which rights they reserve, and which rights they waive for the benefit of recipients or other creators.

- CC licenses do not replace copyright, but are based upon it. They replace individual negotiations for specific rights between copyright owner (licensor) and licensee, which are necessary under an "all rights reserved" copyright management, with a "some rights reserved" management employing standardized licenses for re-use cases where no commercial compensation is sought by the copyright owner.
  - Result is an agile, low-overhead and low-cost copyright-management regime, profiting both copyright owners and licensees.

- The organization was founded in 2001 by Lawrence Lessig, Hal Abelson, and Eric Eldred
Creative Commons in their own words

https://www.youtube.com/watch?v=BlhJUJ9DC4A

(6.5 minutes)
Creative Commons Licenses

- Work licensed under a Creative Commons license is governed by applicable copyright law. This allows Creative Commons licenses to be applied to all work falling under copyright, including: books, plays, movies, music, articles, photographs, blogs, and websites.
  - Creative Commons does not recommend the use of Creative Commons licenses for software

- CC provides a number of copyright options to the public, free of charge.
  - Licenses allow copyright holders to define conditions under which others may use a work and to specify what types of use are acceptable.
  - Creative Commons licenses are non-exclusive and non-revocable. Any work or copies of the work obtained under a Creative Commons license may continue to be used under that license

- As of November 2014 there were an estimated 880 million works licensed under the various Creative Commons licenses.
  - As of March 2015, Flickr alone hosts over 306 million Creative Commons licensed photos.
CC license conditions

- The CC licenses all grant the "baseline rights", such as the right to distribute the copyrighted work worldwide for non-commercial purposes, and without modification.
- The details of each of these licenses depends on the version, and comprises a selection out of four conditions:

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<th>Icon</th>
<th>Right</th>
<th>Description</th>
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<td>☑</td>
<td>Attribution (BY)</td>
<td>Licensees may copy, distribute, display and perform the work and make derivative works based on it only if they give the author or licensor the credits in the manner specified by these.</td>
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<tr>
<td>➔</td>
<td>Share-alike (SA)</td>
<td>Licensees may distribute derivative works only under a license identical to the license that governs the original work. (See also copyleft.)</td>
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<td>👑</td>
<td>Non-commercial (NC)</td>
<td>Licensees may copy, distribute, display, and perform the work and make derivative works based on it only for noncommercial purposes.</td>
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<tr>
<td>✋</td>
<td>No Derivative Works (ND)</td>
<td>Licensees may copy, distribute, display and perform only verbatim copies of the work, not derivative works based on it.</td>
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Table from Wikipedia, http://en.wikipedia.org/wiki/Creative_Commons_license
Common CC licenses

- Wikipedia: Mixing and matching these conditions produces sixteen possible combinations, of which eleven are valid Creative Commons licenses and five are not. Of the five invalid combinations, four include both the "nd" and "sa" clauses, which are mutually exclusive; and one includes none of the clauses. Of the eleven valid combinations, the five that lack the "by" clause have been retired because 98% of licensors requested attribution, though they do remain available for reference on the website.

- This leaves six regularly used licenses:

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A free cultural work is one which has no significant legal restriction on people’s freedom:
- to use the content and benefit from using it,
- to study the content and apply what is learned,
- to make and distribute copies of the content,
- to change and improve the content and distribute these derivative work

Similar to “open content”

Table from Wikipedia, http://en.wikipedia.org/wiki/Creative_Commons_license
All in one slide ...

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<tr>
<td><img src="https://en.wikipedia.org/wiki/Creative_Commons_license" alt="Attribution" /></td>
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Other CC licenses

• *International Use:* CC licenses have been translated to reflect local laws ("porting")
  – CC licenses have been ported to over 50 jurisdictions world-wide
  – Versions 4.0 of CC licenses (released November, 2013) are generic licenses that apply to most jurisdictions and do not require ports – acts as a single global license

• *CC Public Domain:* CCO is a legal tool for waiving as many rights as legally possible, world-wide, effectively releasing content into the public domain.
  – Complexity in using CCO for open source software and this is not yet recommended by Open Software Initiative (OSI)
Creative Commons Criticism

• Critical perspectives on CC:
  – All CC licenses (except the CCO Public Domain Dedication tool) require attribution, which can be inconvenient for works based on multiple other works.
  – CC could erode the copyright system over time
  – Lack of rewards for content producers could dissuade artists from publishing their work
  – CC fails to establish a “base level of freedom” that all CC licenses must meet
  – CC only a service provider for standardized license text. Responsibility of CC system rests entirely with those using licenses
  – Licenses do not address differences among media or additional author concerns
  – Non-commercial licenses not compatible with many open-content sites and are too vague about what uses count as “commercial” vs. “non-commercial”

• Lessig: CC created to provide a middle ground between copyright protection – “all rights reserved” and “no rights reserved”
Lecture 7 Sources (not already on slides)

- “Unintended Consequences – Twelve years under the DMCA” Electronic Frontier Foundation, https://www.eff.org/wp/unintended-consequences-under-dmca
- Creative Commons website, http://creativecommons.org/
- Wikipedia entries on copyright, fair use, digital millennium copyright act, safe harbor, Creative Commons, Creative Commons licenses, DATA Act of 2014, information privacy law.
- Electronic Frontier Foundation website https://www.eff.org/
Data Roundtable: April 29 – NEED VOLUNTEERS


- “Does the U.S. Need a Legal Right to be Forgotten?”, Huffington Post, http://www.huffingtonpost.com/brad-reid/does-the-us-need-a-legal_b_9659746.html (James B.)


- “Led Zeppelin’s Stairway to Heaven may be partly Stolen”, The Guardian, http://www.theguardian.com/music/2016/apr/12/stairway-to-heavens-opening-chords-may-have-been-stolen-judge-says (Levin H.)
April 22 Forum: Where do/could the Candidates Stand?
Questions/topics from the Electronic Frontier Foundation

https://www.eff.org/deeplinks/2016/02/putting-digital-rights-spotlight-2016

• **EFF Questions/Topics for the Presidential Candidates (Clinton, Cruz, Kasich, Sanders, Trump)**
  – Each student takes a topic; talks for 7 minutes and answers questions for 5 minutes
  – In your talk,
    • Describe the topic and the issues in some detail
    • Describe the views of the candidates based on whatever information you can obtain or infer.
  – Each student also writes a 3-4 page review on the area and the candidates’ views and turns it in on April 22

• **Topics (continued on next slide) – each student do only one**

  – **Surveillance (Ethan B.)**
    • What are your views regarding further restrictions on domestic surveillance to [finish the job that Congress started](https://www.eff.org/deeplinks/2016/02/putting-digital-rights-spotlight-2016) with the USA Freedom Act?
    • What are your views regarding the authority for domestic NSA surveillance under [executive order 12333](https://www.eff.org/deeplinks/2016/02/putting-digital-rights-spotlight-2016), which was announced in 1981 to authorize foreign intelligence collection but revealed in 2013 by a State Department whistleblower to have been frequently cited as a legal basis for secret domestic surveillance?

  – **Privacy**
    • Where do you stand regarding efforts by intelligence agencies to [undermine encryption tools](https://www.eff.org/deeplinks/2016/02/putting-digital-rights-spotlight-2016), such as the [FBI's demands of Apple](https://www.eff.org/deeplinks/2016/02/putting-digital-rights-spotlight-2016)?
    • What are your views regarding efforts to update the [Electronic Communications Privacy Act](https://www.eff.org/deeplinks/2016/02/putting-digital-rights-spotlight-2016) to reflect recent reforms already adopted in states including [California](https://www.eff.org/deeplinks/2016/02/putting-digital-rights-spotlight-2016)?
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• **The Trans-Pacific Partnership (TPP)** (Evan F.)
  – Do you support the proposed TPP agreement? Why or why not?
  – The TPP text was finally posted online after more than five years of negotiations. What are your views regarding whether to make trade agreements more transparent and democratic?

• **Open access** (Aima M.)
  – Through various departmental grant programs, our federal government funds billions of dollars’ worth of grants intended to benefit the public. Do you think that federally funded research, educational materials, and cultural works should be made freely available to the public? Why or why not?
  – What are your views regarding federal mandates requiring open licensing for federally funded content?

• **Copyright** (Theo B.)
  – Looking forward, one of the most crucial digital freedom issues is: who will control the hardware in your home, in your pocket, and in your own body. Will you work to protect consumers' right to circumvent access controls on products they own and otherwise defend our freedom to tinker, repair, re-use and modify our stuff?
  – Section 1201 of the Digital Millennium Copyright Act forbids users from breaking DRM (digital rights management) on works subject to copyright, even if the purpose is a clearly lawful fair use. What are your views regarding reforms to address this issue?

• **Patent reform** (Aesa K.)
  – Would you endorse a comprehensive patent litigation reform bill to protect innovators from patent trolls?
  – Would you endorse a venue reform bill, making it more difficult for parties in patent suits to shop for favorable forums?

• **Transparency**
  – What are your views regarding whistleblowers who risk their careers to expose secret information important to the public interest?
  – Under your administration, will there be consequences for intelligence officials who mislead Congress in response to direct questions at oversight hearings, or for agencies that misuse technology to cover up crimes, like when the CIA hacked into Congressional files to steal evidence of international human rights abuses?
Data Roundtable
April 15: L8 Data Roundtable


• “The Crypto Wars are Global“, Motherboard, http://motherboard.vice.com/read/the-crypto-wars-are-global (Sri I.)

• “This student put 50 million stolen research articles online. And they’re free,” Washington Post, https://www.washingtonpost.com/local/this-student-put-50-million-stolen-research-articles-online-and-theyre-free/2016/03/30/7714ff8b4-eaf7-11e5-b0fd-073d5930a7b7_story.html (TK W.)