

A decorative graphic consisting of blue lines and circles, resembling a circuit board or data flow, extending horizontally across the middle of the slide. The lines are composed of straight segments and right-angle turns, with small circles at various points along the paths.

RESPONSIBLE DATA SCIENCE

INTELLECTUAL PROPERTY AND CONTRACT LAW

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WELCOME

- Week 6: Introduction to legal issues in data science
- **Week 7:** Intellectual property and contract law
 - Contract formation
 - Contract operation
 - Contract vitiating factors
 - Patents
 - Copyright
 - Trade marks
 - Trade Secrets
 - Database Rights
 - Licencing
- Week 8: Privacy and cybersecurity law

WELCOME

- Readings posted on Blackboard. Main and additional (optional) readings
- Quiz (10%) on 21/09/2021, covering lecture content
- Tutorials this week will include mock quiz

RECAP

- Separation of powers
- Laws are systems of rules, with primary rules regulating conduct, and secondary rules for identifying, changing, and adjudicating them
- Laws are made by **parliament** (**statute/legislation**), and carried out by the **executive**
- Laws are interpreted and enforced by the **judiciary**
- Previous judicial decision are legally binding (**common law**)
- Legal judgement exists somewhere between **legal formalism** and **purposive interpretation**

A NOTE ON COMPANIES

- Companies have legal personhood
- They have many of the same legal rights as people
- Can enter into contracts
- Can own property (including intellectual property)

CONTRACT LAW

- A contract is a **legally binding agreement**
- In Australia, contract law is primarily governed by common law rules
- Can cover almost anything (not illegal conduct)
- Only legally binding on the parties who made the agreement
 - This is called **privity** of contract

CONTRACT LAW: EXAMPLE

- Bob asks Anna, in person, if she would like to buy his website (FlatBook, a social media network for Flat Earth conspiracy theorists) for \$8,500
- Anna agrees to this. They shake on it, and make arrangements to transfer the website next week
- The next day, Anna is overcome with regret when she realises just how terrible Bob's website is. She informs Bob that the deal is cancelled
- Bob argues that they had a legally-binding agreement
- **Has a contract been formed?**



CONTRACT LAW: ANSWER

- Yes, a contract has been formed
- Contracts can be made verbally
- There has been an **offer** and an **acceptance**



CONTRACT FORMATION: OFFER AND ACCEPTANCE

- A contract requires agreement: an **offer** and **acceptance** of that offer
- Contracts can be made verbally, in writing, through conduct, or in any other way
- Contracts made verbally may be difficult to prove
- Some types of contracts must be made in writing

CONTRACT FORMATION: OFFER

- An offer is a **communication** which indicates willingness to enter into a contract
- An offer can be made to an individual, a group, or even to the world at large
- An offer is not the same as an invitation to deal or negotiate
 - An invitation to negotiate cannot be accepted to create a contract

CONTRACT FORMATION: OFFER

An offer can be terminated in five ways:

1. It can be **withdrawn** prior to being accepted
2. It can be **rejected** by the offeree
3. It can **lapse** (run out of time), if a time period is specified
4. It can be terminated by **death** of the offeror
5. It can terminate on **failure of a specified condition**

CONTRACT FORMATION: ACCEPTANCE

- Unequivocal (unambiguous) statement or conduct agreeing to the offer
- This must be communicated to the offeror
- A contract is then formed, as long as the other legal requirements are met

CONTRACT FORMATION: REQUIREMENTS

- Contract must be sufficiently **certain** and **clear** about important matters
 - Things like price, scope of work, identity of objects
- There must be **consideration** from both sides (some kind of payment)
 - Can be something tiny
- There must be an **intention** to create legal relations
- The parties must have **capacity** to make the contract
- Any legislative **formalities** must be complied with
 - (For consumer credit, motor vehicles, land, tenancies, building contracts, door-to-door sales, ect)

CONTRACT LAW: EXAMPLE

- A SaaS (software as a service) business circulated a price list for different tiers of the data storage service they offer
- There was a phone number and email address listed
- Bob sends an email accepting the service at the listed price, but the business states that they cannot currently supply that particular service
- Bob argues that a contract has been formed
- Is the price list an offer that a customer can accept to form a contract?

CONTRACT LAW: ANSWER

- No, a price list is not an offer
- Price lists, advertisements, listed prices, brochures and so on are **offers to negotiate, NOT contractual offers**
- They therefore cannot be accepted to form a contract

CONTRACT LAW: EXAMPLE

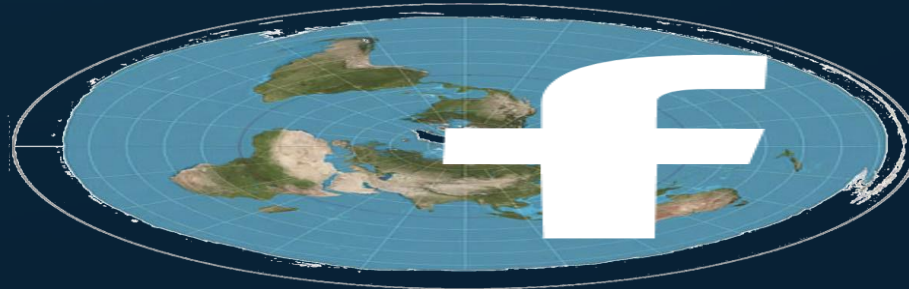
- FlatBook hired Zhao, a data scientist, to perform a specified amount of consulting work
- A written contract was prepared by the company, which Zhao received but never signed
- There is no recorded evidence that Zhao verbally agreed to a contract
- The company transferred Zhao a \$15,000 advance, which he kept, and Zhao had begun work before realising that he did not want to be associated with FlatBook
- **Has a contract been formed?**

CONTRACT LAW: ANSWER

- Yes, a contract has been formed, even though the written contract was not signed
- Offers can be accepted by **unambiguous conduct**
- Accepting and keeping the payment, and beginning work, would constitute accepting the offer

CONTRACT LAW: EXAMPLE

- FlatBook makes a deal with a graphic design company to produce a new logo, and associated merchandise (calendars, shirts, and maps)
- They agree on a price, but cannot agree on the design, style, and content of the logo and merchandise
- The graphic design company wants to end the agreement, but FlatBook argues that a contract exists
- **Has a contract been formed?**



CONTRACT LAW: ANSWER

- A contract has probably not been formed here
- A contract needs to be sufficiently **clear** and **certain**
- As the design, style and content of the work has not been agreed upon, this certainty probably does not exist

CONTRACT LAW: INTERPRETATION

- The **terms** of a contract can be interpreted by a court, and even modified if necessary
- Courts attempt to give effect to the '**presumed intention**' of the parties, as would be understood by an objective observer

CONTRACT LAW: BREACH OF CONTRACT

- If a contract is **breached** (not followed), the injured party can claim **compensation** for the **damages** they suffered
- The goal is to put the injured party into the position they would be in if the contract had been carried out
- If the term breached is important enough, the other party has a right to terminate the contract

CONTRACT LAW: VITIATING FACTORS

- **Misinformation**: mistake, misrepresentation, misleading or deceptive conduct
- **Abuse of power**: duress, undue influence, unconscionable dealing, unconscionable and unjust conduct under statute
- **Illegality**

CONTRACT LAW: MISINFORMATION

- **Mistake:** a party entered the contract under the influence of their own mistake.
Usually no remedy
- **Misrepresentation:** one party was misled by the other, and relied on that misrepresentation in making the contract
- **Misleading or deceptive conduct:** Similar to misrepresentation but broader and only covers trade or commerce. Created by legislation

CONTRACT LAW: ABUSE OF POWER

- **Duress:** Illegitimate pressure amounting to compulsion of will to enter into a contract
- **Undue influence:** exploitation of a relationship of influence (parent-child, doctor-patient, solicitor-client, ect.)
- **Unconscionable dealing:** exploiting a special disability of the other party (age, capacity, language ability, lack of understanding, ect.)
- **Unconscionable and unjust conduct** under statute: conduct which is clearly unfair or unreasonable

CONTRACT LAW: EXAMPLE

- James agrees to purchase a hot air balloon from Morgan on FlatBook Marketplace
- The price is listed as \$80,000, which James mistakenly reads as \$8,000
- They both sign a written agreement for the sale of the hot air balloon
- When Morgan arrives to drop the balloon off, James argues he does not have to pay
- **Has a contract been formed? Are there any vitiating factors?**

CONTRACT LAW: ANSWER

- A contract has been formed, and cannot be rescinded
- A mistake by a party is usually not a vitiating factor, unless the other party has knowledge of that mistake

CONTRACT LAW: EXAMPLE

- If James had messaged Morgan the message “\$8k is a small price to prove the round-Earth conspiracy wrong”, would the outcome have been different?

CONTRACT LAW: ANSWER

- Now the contract can be rescinded
- Morgan had knowledge of James's mistake but did not correct him
- This would fall within misleading and deceptive conduct

CONTRACT LAW: EXAMPLE

- FlatBook hires a developer, Sruthi, to rebuild their failing website
- They agree on a price of \$20,000 for the work
- Halfway through, Sruthi informs FlatBook that the work is taking longer than necessary and will cost an additional \$10,000
- Afraid that the website will be left half-finished, FlatBook agrees, but later attempts to have the contract rescinded
- Has a contract been formed? Are there any vitiating factors?

CONTRACT LAW: ANSWER

- A contract has been formed, but could probably be rescinded
- The company had no real option to decline Sruthi's renegotiation, since she had control over the website
- This would probably be **duress** – illegitimate pressure amounting to compulsion of will
- Specifically, this is **economic duress**

CONTRACT LAW: SUMMARY

- Contracts require an **offer** and an **acceptance**
- They require **certainty, consideration, intention** to create legal relations, statutory **formalities**, and the parties must have **capacity** to make the contract
- A **breach** of contract can result in **damages** being paid
- The presence of **vitiating factors** can result in the contract being rescinded

INTELLECTUAL PROPERTY LAW

- Creates **property rights** over **intangible** things
- Property rights allow the owner to control how their property is used, and who can use it
- Many different types of intellectual property law
- Objects can be covered by multiple different types of intellectual property protection

INTELLECTUAL PROPERTY LAW

- Patent: covers useful **inventions**
- Copyright: covers **creative expressions**
- Trade mark: covers **signs** indicating commercial origin or ownership
- Trade secret: covers **confidential information**
- Database rights (EU only): covers **databases**

INTELLECTUAL PROPERTY LAW

- Intangible property: not specific objects but an **abstract class** of objects
- Patents cover any specific objects that falls within the patent description
- Copyright covers any work that is substantially copied from another work

INTERNATIONAL IP LAW

- International treaties are increasingly important
- Key treaties:
 - World Trade Organisation (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)
 - Patents: Patent Cooperation Treaty; Paris Convention
 - Copyright: Berne Convention

PATENTS

- Can be granted for inventions which are:
 - **Novel:** Not already publicly known or available
 - **Useful:** Patents do not cover artistic works, and must be makeable from the patent disclosure
 - **Patentable:** Some types of things cannot be patented at law
 - **Inventive:** The invention must not be obvious; there must be an “inventive step”
 - Invention must be **non-obvious** to a **person skilled in the relevant art**, in light of the **common general knowledge (prior art)** at the time of the invention

PATENTS

- Must be approved by each country's patent system
 - Done by a government body – part of the **executive** branch of government
 - Often expensive and complicated, and usually require a regular fee to maintain
- Prevent unauthorised use of the invention (Australia has an experimental use exemption)
- Last for 20 years in most countries
- Can be sold or licenced

PATENTS

- What kinds of inventions might be patented within the area of data science?
- <https://padletuq.padlet.org/hamishmacdonald/df7yqgdhkos5ayyv>

PATENTS: EQUATIONS, DISCOVERIES, IDEAS, BUSINESS METHODS, ALGORITHMS

- Abstract ideas, equations, facts, discoveries, algorithms, and business methods (such as financial transaction structures) are **not patentable** in most countries
- Must result in 'an artificially created state of affairs' (*NRDC v Commissioner of Patents*)
- There must be some 'concrete effect or phenomenon or manifestation or transformation' (*Grant v Commissioner of Patents*)

PATENTS: COMPUTER PROGRAMS

- **Patentable** in many countries, including Australia, China, the United States, the European Union, and the United Kingdom
- No single definition or conceptualisation of “computer programs” or “software”:
 - Abstract instructions for a computer?
 - Physical computers transformed by program?

PATENTS: COMPUTER PROGRAMS

- Alice Corp. v CLS Bank International (U.S. case): using a computer to implement an abstract idea, business method or algorithm does not make it patentable
- The use of the computer must add something beyond the abstract idea in order to make it patentable

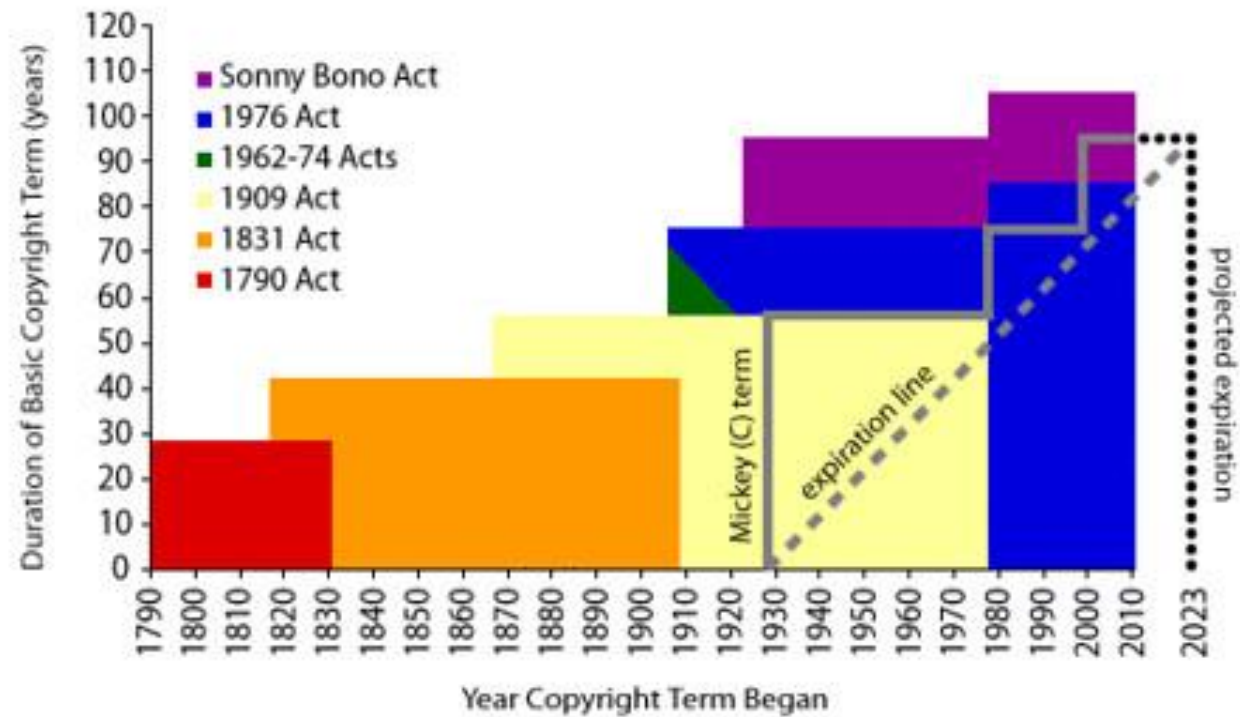
PATENTS: GENES, BIOLOGICAL MATERIALS, METHODS OF MEDICAL TREATMENT

- **Patentable** but controversial and unsettled
- Line between discovery and invention is very difficult to draw
- Patentability varies by jurisdiction, and by how the invention is conceptualised:
 - A new chemical product?
 - Pre-existing genetic information?
 - A diagnostic correlation?

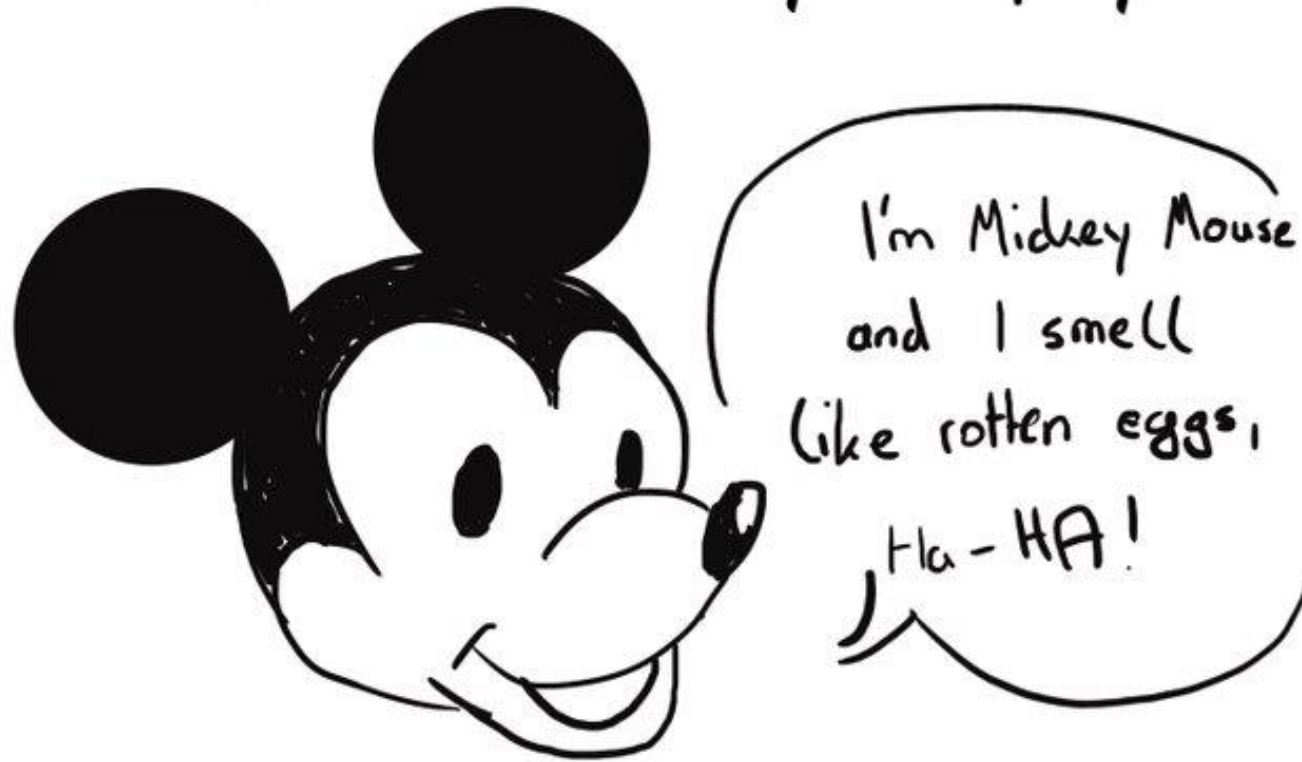
COPYRIGHT

- Protects creative **works**
- A particular expression is protected, not the idea behind it – this is called the **'idea/expression dichotomy'**
- Automatic (no need to apply)
- Duration: life of the author plus an additional **70 years**

Copyright Duration and the Mickey Mouse Curve



NOT LICENSED BY
THE WALT DISNEY COMPANY



This is NOT a parody!
We committed copyright infringement
and want to be sued by Disney.
We pay ALL court and tribunal fees.

COPYRIGHT

- Requirements of Australian copyright:
 - **Protectable subject matter** (literary, dramatic, musical or artistic works)
 - **Recorded** in material form
 - **Connected to Australia**
 - **Original** (author exercised some control and authorship over the material form of the work)

COPYRIGHT

- Computer programs, tables, databases, and compilations are protectable as literary works
- Originality may be an issue for works that use pre-existing information
 - This makes copyright over tables, databases, and compilations uncertain
- Only the specific expression is protected, not the information itself

COPYRIGHT: INFRINGEMENT

- Three questions for infringement:
 1. Did the defendant carry out the **exclusive rights** of the copyright owner?
(Reproducing, publishing, performing, disseminating, adapting, licencing, assigning)
 2. Was the infringing work **derived from the original copyrighted work**?
 3. Was at least a **substantial part** of the original copyrighted work copied?

COPYRIGHT: INFRINGEMENT

- Copyright can be infringed by **non-identical works**, and even by works in **different mediums**
- For instance, Harry Potter visual art can infringe the copyright in the Harry Potter books
- Indirect infringement is also possible (authorising infringement, dealing with infringing things)

COPYRIGHT: DEFENCES

- Fair dealing:
 - Research or education
 - Criticism, parody, or satire
 - News reporting
 - Judicial proceedings or professional legal advice
- Non-commercial use by public institution on payment of a statutory licencing fee
- For purposes of the normal use of computer programs (other computer-related exceptions)

TRADE MARKS

- Protect a **sign** used to signify the **commercial source** of goods or services
- Only covers signs which are used in ways which are likely to deceive

TRADE SECRETS (BREACH OF CONFIDENCE)

- Covers **confidential information**
- The information must have been communicated in a **confidential manner**
- Must prove that unauthorised use of the information caused a **detriment**

DATABASE RIGHTS

- Protects **databases**, even if they lack the originality required by copyright
- Exist in the European Union, United Kingdom, and Russia

LICENCING

- A contract giving somebody permission to use something – in this case, intellectual property
- Can be exclusive or non-exclusive
- Intellectual property rights can also be permanently transferred by contract

OPEN SOURCE MOVEMENTS

- Series of related movements: open source software, open access research, open data, creative commons, copyleft
- Based on ideals that information and knowledge should be freely accessible, and that collaboration and openness improves quality
- <https://opensource.org/osd>

OPEN SOURCE LICENCING

- Contracts can be used to help achieve open source goals
- Licencing agreements can be attached to software (or other works) to provide terms under which that intellectual property can be used
- Can allow open source use
- Copyleft licences require derivative works to have the same licence (with most copyright legal rights waived)

CONCLUSION

- Intellectual property law creates legal rights in intangible property
- Copyright and patents are most relevant to data science
- Contracts can be used to create licencing arrangements, including open source licencing