

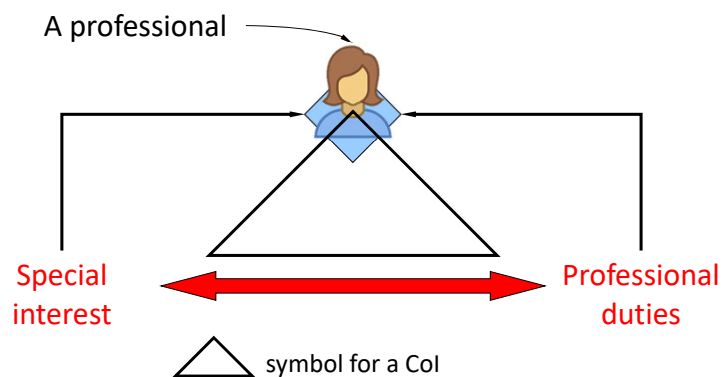
APPLIED SCIENCE 450

Professional Engineering Practice

Conflicts of Interest
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Conflict of Interest

A situation in which a professional has a special interest that influences the objective exercise of professional duties



Slide 2

The usual special interests

- Self-interest
 - job
 - career goals
 - financial
 - reputation
- Financial relationships with family or friends
- Loyalty to a group
- Emotional connection

Anything that renders a professional's judgement less reliable than it would be otherwise

Slide 3

Professional duties

- Duty of care and standard of care
- Maintain confidentiality
- Impartiality
 - e.g., in decisions, evaluations, and design choices
- Fiduciary duties
 - duty arising out of an obligation to act in best interest of someone or some group
- Third parties who may rely on or be affected by your advice or judgment
 - e.g., users of product sold by a distributor

Slide 4

It is important to avoid Cols

Engineers are employed for their expertise and skill

Advice and judgment must be reliable – many may depend on it and trust the engineer to make unbiased decisions

The usual results of a Col:

- Damage to reputation, career, future business
- Damage to work colleagues or company
- Damage to the profession
- Criminal and civil charges in some extreme cases

Slide 5

A conflict of interest is not ...

A conflicting interest:

Jane likes her engineering job, but also likes to play soccer and drink foamy brown fluids; she cannot decide which she wants to do.

Not a Col even if professional obligations are involved

Conflicting legitimate obligations:

Emily designs widgets. She has an obligation to the public to make safe widgets, but she also has an obligation to her employer to ensure that the widgets are manufactured at the lowest possible cost.

These obligations should not be in conflict

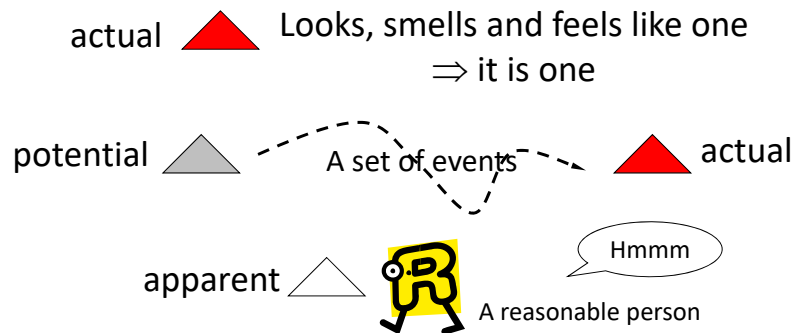
An ethical dilemma or conflict:

Honesty versus honesty causing harm or a conflict between professional duties and personal morals

This you have to sort out yourself: What's paramount to you?

Slide 6

Types of conflict of interest



What kind it is really doesn't matter,
they are all bad news.

Slide 7

COI: Scenario 1

John is an engineer working for JayCo. For the past 50 years, John's family has owned Bolts R Us, a company that makes bolts. JayCo needs to purchase 500,000 bolts for a large construction project. John recommends that JayCo purchase the bolts from Bolts R Us and because of this, John's shares in Bolts R Us increase by 15%.

Does John have a conflict of interest?

It would be difficult for John to argue that his recommendation was not affected by the possibility of a financial gain. This is an actual COI.

Slide 8

COI: Scenario 2

John is an engineer working for JayCo. For the past 50 years, his fiancée's family has owned Bolts R Us, a company that makes bolts. JayCo needs to purchase 500,000 bolts for a large construction project. His fiancée could gain financially (and so could John) if he recommends that JayCo purchase the bolts from Bolts R Us.

Does John have a conflict of interest?

Being in a personal relationship with his fiancée means there already is a potential Col. If John is not the person in JayCo who recommends bolts, at least an apparent Col remains. Perception is reality.

Slide 9

COI: Scenario 3

John is an engineer working for JayCo. For the past 50 years, John's family has owned Bolts R Us, a company that makes bolts. Ten years ago, John had a fight with his family and has not spoken to them since. John owns no stock in the bolt company. JayCo needs to purchase 500,000 bolts for a large construction project.

Does John have a conflict of interest?

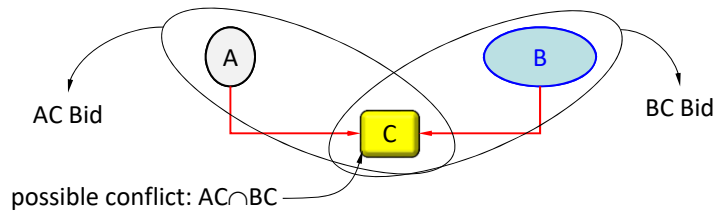
More subtle, but the assumption is that John has forgotten all the bad feelings and would be objective about ordering bolts from his family's company. If not, ... ? It's an apparent Col.

Slide 10

What is this?

Companies A and B are competitors bidding on a project. Each forms a joint venture with Engineering Company C to prepare their bids.

Is C in a conflict of interest? If so, what kind?



Bit of potential and apparent Col. If methods and costs are the same in both bids, then perhaps there is no problem. However, this is unlikely since A and B may want to build the project differently.

Slide 11

And this?

Engineering company EE is designing manufacturing plants for two companies X and Y that compete in the same market. The same people in EE will be working on both design projects.

What is this?

Again this is somewhere between an apparent and potential Col but if X and Y knowingly engage EE to do the design, it is a conflicting legitimate obligation for EE. EE should not allow the same people to work on the two projects.

Slide 12

This is very common

Company M is asked to provide a feasibility study for an industrial project, including preliminary design, cost estimates, and economic analyses. If the feasibility study is favorable, M knows that it may be asked to bid on the final design and/or construction management.

What should M do?

M should take either the feasibility study or the possibility of bidding on the project, not both. Because M knows they will be asked to bid on the final design, they may be inclined to favorably bias the feasibility study, or at least there may be a perception that they will be biased. Such perceptions are not good.

Sometimes these situations are unavoidable because the available talent and experience is limited to a few companies.

Slide 13

What EGBC says about ColS

APEGBC Code of Ethics, Principle 4:

[Professional Engineers and Geoscientists shall:]

Act as faithful agents of their clients or employers, maintain confidentiality and avoid conflicts of interest but, where such conflict arises, fully disclose the circumstances without delay to the employer or client.

Slide 14

What other professions say about Cols

College of Physicians and Surgeons of British Columbia :

Physicians are expected to take steps to manage and avoid situations where a conflict of interest might occur and, in the event that a conflict of interest arises, disclose this to the patient.

BC Association of Social Workers (Principle 7):

A social worker who engages in another profession, occupation, affiliation or calling shall not allow these outside interests to affect the social work relationship with the client professional judgment, independence and/or competence.

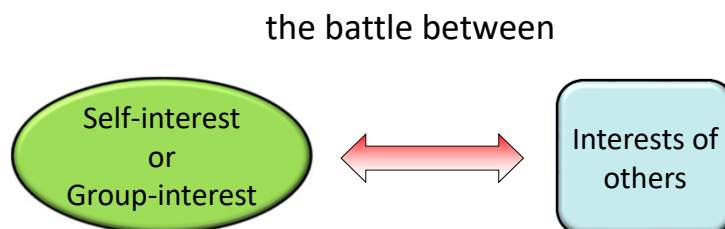
Law Society of British Columbia

has lots to say about COIs.

See links in notes

Slide 15

Cols are caused by



Let's look at self-interest

Slide 16

Sources of self-interest

- Automatic mental processes
- Automatic processes lead to *latent biases*:
 - self-perception
 - implicit prejudice
 - favoritism of group

Actually very pervasive, but often dismissed

Origins are primal, the primitive “lizard brain” dealt only with survival, a useful self-interest

They do make life interesting

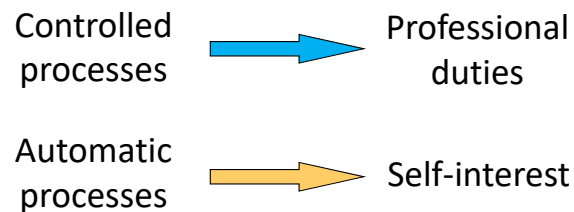
Slide 17

Automatic and Controlled Mental Processes

Automatic Processes	Controlled Processes
Fast (parallel processing)	Slow (serial processing)
Effortless	Effortful
Involuntary	Voluntary
Not accessible to introspection	Accessible to introspection

Slide 18

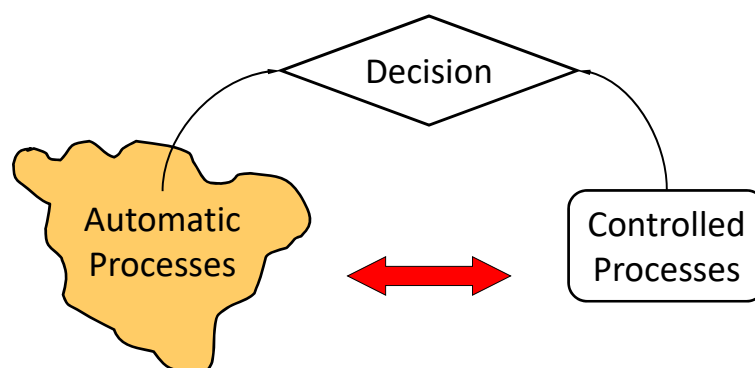
What these processes do



i.e., you have to think to be ethical and understand your professional duties

Slide 19

Decision-making with mental processes



Usually these processes work together in decision-making, but conflict is possible leading to bias

Slide 20

The problem of automatic processing

Automatic processing done unconsciously

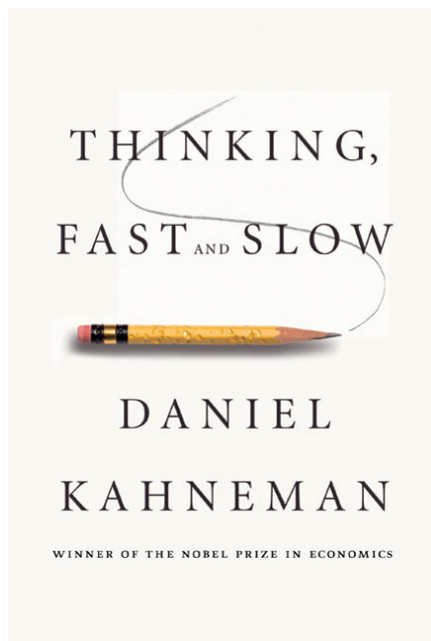
its influence on decision-making is difficult to eliminate or correct and so ...

self-interest often prevails even if conscious effort is made to be ethical and professional

⇒ Conflicts of interest are inevitable

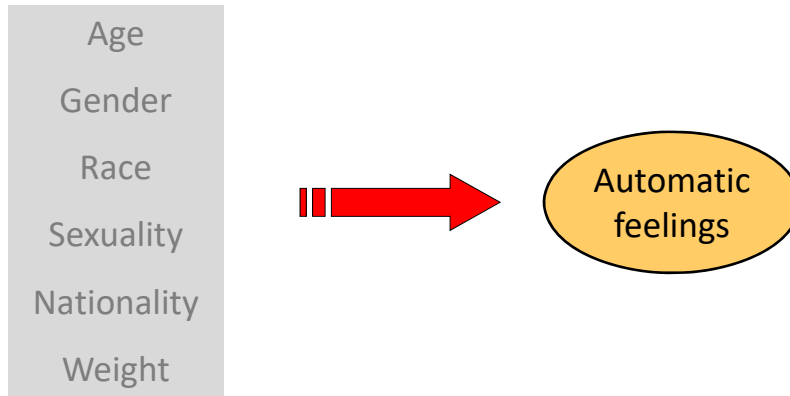
Slide 21

Very readable discussion of the way automatic processes help us survive, but also cause us to make incorrect decisions.



Slide 22

The effect of latent biases



Try the Implicit Association test

<https://implicit.harvard.edu/implicit/langchoice/canada.html>

Slide 23

Latent biases are everywhere

- Criminological studies focus on street crime and delinquency
 - Result is racist and classist stereotypes
- Windows vs Android vs Linux vs MacOS/iOS :
 - Bias to Windows is (was?) because of market domination
- North American engineers are more free-thinking and flexible than engineers from other countries
 - Demonstrably false
- Well dressed, articulate – must be a nice person
 - Lots of counter-examples

Slide 24

This is very common – again

Company M is asked to provide a feasibility study for an industrial project, including preliminary design, cost estimates, and economic analyses. If the feasibility study is favorable, M knows that it may be asked to bid on the final design and/or construction management.

What should M do?

Feasibility studies are expensive so that the owner would only spend the money if there was a good chance the project was indeed feasible. If this is the perception before the study begins, how can the owner be sure that it does not lead to biases that would favor the feasibility?

Slide 25

So if you see a Col coming ...

- Try to avoid it
- Disclose it to all concerned
 - EGBC code of ethics, Principle 4
- Recuse – disqualify yourself from any decisions

Slide 26

What about disclosure?

It is assumed that with disclosure

- The professional is free of latent bias or the effects of self-interest
- Client will understand the Col and be able to discriminate biased from unbiased advice

But

- Is the effect of the Col on a professional's judgment any less as a result of disclosure?
- Does the client really have the ability to discriminate good and bad advice?

Slide 27

And this? - Again

Engineering company EE is designing manufacturing plants for two companies X and Y that compete in the same market. The same people in EE will be working on both design projects.

What is this?

Even if EE discloses the situation and it is accepted by X and Y, how can EE be sure it will have no effect on their design decisions or choices made for either manufacturing plant?

EE should have different people working on each project.

Slide 28

Summary

- Conflicts of interest should be avoided
 - actual, potential, and apparent – all bad
 - sometimes hard to recognize
- Conflicts of interest are inevitable due to
 - automatic vs controlled mental processes
 - latent biases
- Disclosure of COI does not eliminate or mitigate COI
 - makes it more difficult to maintain the perception of objectivity

Slide 29

Here's a question

Subject to legislated restrictions, lawyers are allowed to charge contingency fees in personal injury cases. This means that their fees for legal work are related to the amount of the damages award (e.g., a percentage).

Should engineers be allowed to charge contingency fees? For example, should the fee be related to the benefits of the engineer's work to the client?

Slide 30