How Computing is Changing Who We Are

Professional Ethics in Computing

Lecture 09

(Largely based on lecture by J. Cartlidge)

Module Plan & Progress

Teaching Week	Date	Contents
2	26 Sep	*Lecture 1: Introduction and Administration*
4	8 Oct	Lecture 2: Critical Reasoning and Moral Theory 1
5	15 Oct	Lecture 3: Critical Reasoning and Moral Theory 2
6	22 Oct	Lecture 4: Computing Professionals and Professional Ethics
7	29 Oct	Lecture 5: Privacy
8	5 Nov	Lecture 6: Intellectual and Intangible Property
9	12 Nov	Lecture 7: Critical Thinking
10	19 Nov	Lecture 8: Trust, Safety and Reliability
11	26 Nov	Lecture 9: How Computing is Changing Who We Are
12	3 Dec	Lecture 10: Computing and Vulnerable Groups
13	10 Dec	Lecture 11: Autonomous and Pervasive Technologies

1.	Theory	DONE
2.	Professional codes of conduct	DONE
3.	Real World issues	To do

Coursework 2 Deadline: **23:59** on **12/12/2018** (submitted by Moodle)

Notes: Group 9

Computing & Change

- Previously: how computing (and Internet in particular) has changed society?
  - Technology has eroded 20th century concept of privacy and changed the way we think of property
  - Harm that software (failures) can inflict; safety in software often taken less seriously than safety in physical products
- Today: how is computing changing us **as people?**
  - Personal identity and inter-personal relationships (Facebook / Tinder)
  - Changing how we construct knowledge (Google / Wikipedia)

THE INTERNET & THE SELF
CHANGING WHO WE ARE

The Self-Concept

- We all intuitively know meaning of "my self"
- Here, we will be thinking about "self-concept"

*"From a classical sociological perspective, the self is a relatively stable set of perceptions of who we are in relation to ourselves, to others, and to social systems. The self is organized around a self concept, **the ideas and feelings that we have about ourselves**"*

[Blackwell Dictionary of Sociology, Allen Johnson, Writer and Activist]

- Important to instill positive self-concept in children
  - Can help to avoid e.g., depression, eating disorders, …
  - Undeservedly positive can lead to narcissism, irresponsible behaviour, …
- Self-concept shapes our behaviours and interactions with others

Health Warning for Fashion Photos

- Ralph Lauren "Blue Lines" clothing (2009)
- Model Filippa Hamilton digitally modified
- Movements in UK, France, & other countries to consider "Health warnings" for heavily modified images: *"Photograph retouched to modify the physical appearance of a person"*

Qu: Should there be such a law requiring health warning?

Qu: How is digital image manipulation different to traditional "airbrushing"?

Carrie Melago**, Ralph Loren model Filippa Hamilton: I was fired because I was too fat!** *NY Daily News*, Oct 14, 2009
http://www.nydailynews.com/life-style/fashion/ralph-lauren-model-filippa-hamilton-fired-fat-article-1.381093

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http://www.boingboing.net/2009/09/29/ralph-lauren-opens-n.html

- Many mocked the image (e.g., a post on BoingBoing.net)
- Ralph Lauren attempted to block criticism by filing DMCA infringement claims
- Boing Boing's ISP decided image was "Fair Use"

Multiple Online Personas

- Health warning for digitally manipulated images is a specific threat to self-concept

- Next, we consider more broader challenges:
  - increasing use of aliases
  - multiple online personas

Online Personas

– Bill on Facebook.com and Fark.com—A professional in his 40s who should be approached in a professional way

– TrakBurner115 on CarSpace.com—A potential car buyer who focuses on a car's performance specifications when deciding whether or not to buy a car

– NecroticOne1 on MySpace.com—A music fan who likes heavy metal; he is inclined to buy things that make him feel unique and noticeable

- These online personas all have traits and desires unique to their personalities. *But they are all the same person!*

- "Sell to the persona, not the person" [Sarner, Gartner Group]

- Counter productive to think of people having "true selves" that explain all of their actions, likes, and dislikes

Context Shapes Personas

- How a person acts is shaped by context
  - At the office
  - On a business trip
  - At the doctor's
  - At a basketball game
- The Internet is causing people to adopt much greater number & variety of personas
  - In 1980s/1990s work/life balance (ie 2 personas)
  - Now not uncommon to have up to 12 distinct personas
- Morality based on reason: multiple personas allow a person to have mutually incompatible value systems
  - E.g., Run a charity by day, be a pirate in online game at night

Authentic Self

- Many believe having separate personas is harmful
  - To be good/happy: eliminate incompatibilities between different selves

- The "authentic self"—the ideal of having only **one persona**

  [TV Host, Dr. Phil McGraw]

- A person with multiple personas risks becoming a hypocrite
  - (i.e., claim one moral code but act contrary to that code)

Qu: Do your (online) personas share common set of values/or conflicting?

Qu: Is having multiple personas with conflicting values *inherently* immoral?

Qu: Is it sometimes *necessary* to do certain jobs? (cf. def. of "professional")

Sociopathic Behaviour on Internet

- Personas often used as cover for online bullying and harassment.

- Is the internet encouraging people to develop sociopathic tendencies?
  - Is cyberbullying just bullying in a new form?
  - Or is Internet tech causing bullying to expand?

- Sociopath—someone who suffers from dissocial personality disorder:
  - *"disregard for social obligations... unconcern for feelings of others... low tolerance to frustration.. Low threshold for discharge of aggression, including violence... tendency to blame others" [ICD-10, p. 204]*

[ICD-10: World Health Organization. *The ICD-10 Classification of Mental and Behavioural Disorders:* Clinical Descriptions and Diagnostic Guidelines. 1st Ed. Geneva: World Health Organisation, 1992]

Cyberbullying

- **Cyberbullying**—using the internet to harass a particular target. Often target known to bully.
  - Long Island woman charged with aggravated harassment after she posted an ad offering sexual services on Craigslist, giving the name and number of her daughter's rival
  - Girl targeted only 9 years old!
  - More than 20 harassing calls to girl's home

Griefing

- **Griefing**—online version of a "spoil sport". Someone who takes pleasure in making others not enjoy their experience (schadenfreude).
- **Organised griefing**—Internet enabled a griefing culture to arise
  - EVE Online, role playing game. Titan spaceship, the most powerful in the game, costs equivalent of $10,000 to make, so few in existence.
  - GoonFleet (self-described griefers) organised an attack set on finding and destroying the first Titan
  - *"The ability to inflict that huge amount of actual, real-life damage on someone is amazingly satisfying"* [GoonFleet's leader]
  - Less worrying than cyber harassment, but games developers take it seriously

Trolling

- **Trolling**—make a deliberately offensive or provocative online posting with the aim of upsetting someone or eliciting an angry response from them.

- Like griefing, target usually random, or ideological
  - Many sites on the Internet allow users to post comments, questions/answers
  - It is common for a troll to post bad advice to a question
  - E.g., "Press Ctrl-Alt-Delete" or "Press Alt+F4", which cause reboot or window close, possibly resulting in unsaved work

Bullying / CyberBullying

- Some griefers argue their behaviour is morally permissible.

- Others argue cybersociopathy is a mental illness
  - National Institute of Health (2010) found physical bullies significantly more likely to be depressed than the victims
  - For cyberbullying, the opposite is true
  - Therefore physical bullying/cyberbullying are different
  - [Since not face-2-face bullying] *"cyber-victims may be more likely to feel isolated, dehumanized or helpless at the time of the attack"*

- **Normalisation—**Computers are changing the way we interact, perceive ourselves, and perceive what is normal.
  - The prevalence of griefing/harassment is causing some to see them as normal. This makes it harder to stop

Online (Behavioural) Addictions

- **Behavioural**—addictions to gambling, video games, internet surfing, sex, extreme sports,…

- Is it possible to be "addicted" to these things?
    - American Psychological Association (APA) gathering evidence

- Internet enabled addictive behaviours more likely:
    - **No face-2-face**—don't need to go out and meet a drug dealer / prostitute / enter a casino—therefore less fear of getting caught
    - **Convenience**—it's easy to do any time, any place.

- Substance abuse, problem gambling, sex addiction have existed for 1,000s years, but the Internet is increasing our opportunities to engage in these behaviours.

- Also gives rise to new behaviours (online gaming)

THE INTERNET: CHANGING **HOW** WE KNOW

Epistemology

- **Epistemology—**study of the nature of knowledge and how we know what we know
  - We use reason, senses, language
  - Most knowledge acquired indirectly (e.g., teaching)
  - Scientific model/enlightenment—society depends on experts to apply reason to construct knowledge
  - When experts in consensus, society tends to agree
- **Internet is changing this model**
  - Some Internet technologies use *intentional bias*
    - Negative—Some say this is disastrous
    - Positive—Some say it "levels the playing field"

Homophily / Personalisation

- **Homophily**—we tend to be friends with people with similar interests, views, and educational backgrounds
  - You become friends with someone with shared experience and interests
  - You exert influence on each other and become more alike over time
- Facebook uses homophily to increase effectiveness of online advertising
  - Every time you press "like" Facebook learns something about your attitudes and preferences
  - It can then target you with things that your "friends" like
  - This is "**instant personalisation**"

Personalising the Echo-Chamber

- **Search Engine**: Bing.com—Searches the Web, and also users' Facebook friends to find items the friend likes that match search query
- **Movie Review**: RottenTomatoes.com—Provides movie ratings and recommendations based on Facebook friends
- **Music Site**: Pandora.com—Makes it easy to listen to music that is "liked" by Facebook Friends
- **Location-based search and review**: Yelp.com—if you search local restaurants, you receive reviews written by Facebook friends

- These search sites all use homophily to provide information

Qu: What happens if/when search engines re-order results based on politics/views of your friends? How does that affect society?

Crowdsourcing—Wikipedia

- **Qu: Is wikipedia an authoritative source?**
  - **Primary source—**close to topic/factual (e.g., letters written by a historical figure)
  - **Secondary source—**discusses information presented elsewhere (e.g., a book written by subject expert)
  - **Tertiary source—**survey/summary without evidence/technical details that points to another source
- Wikipedia—largely tertiary, but some articles may be considered authoritative secondary sources
- Wikipedia is **crowd sourced** (it is created / edited by the **public**)
  - Tends to focus on subjects of popular interest: John Locke (Philosopher) 4,500 words; John Locke (Fictional TV character from Lost) 4,500 words!
  - Quick turn-around (updated within seconds of an event)
  - Prone to errors / vandalism

UNDERSTANDING MEDIA

New Media Forms

- One of most powerful disruptive consequences of computing and the Internet is growth of new media
  - Web, Twitter, Facebook, e-mail, Google, e-books, word processing, computer spreadsheets, podcasts, video games, apps
  - None existed 30ish years ago
- How does media change society?
  - Marshall McLuhan (Prof. Univ. Toronto) *Understanding Media: The Extensions of Man (1964)*
  - Media is an extension of humanity
    - "*The book is an extension of the eye … electronic circuitry is an extension of the central nervous system .. The wheel is an extension of the foot … Clothing is an extension of the skin*"

McLuhan: Understanding Media

- **Media**—any new technologies—**are extensions of humanity**

- **The medium is the message**; the contents are always less important than the medium itself

- **Media are often overlooked** because people are focused on the contents, not the medium

- **McLuhan's tetrad**:

    1. What does the artifact enhance/intensify/make possible/accelerate?

    2. What is pushed aside or obsolesced by the new "organ"?

    3. What older, previously obsolesced ground is brought back and inheres in the new form?

    4. What is the reversal potential of the new form?

McLuhan's tetrad: "*Washing Machine*"

1. Enhances Speed of doing laundry	**4. Reverses into** Process: continuous laundry
3. Retrieves Antiseptic house	**2. Obsolesces** Scrub board and tub

- Introduction of washing machine (1920s USA)
- Final result: increase in amount of work involved in laundry!

Ruth Schwartz Cowan (1985), *More Work for Mother*, Basic Books

Summary

- Computer tech influences individual's **self-concept**

- Social networking has potential to change self-concept from single true self (**authentic-self**) to multiple explicit **personas**

- New forms of **Internet sociopathy** on the rise

- Computers and Internet intensify **behavioural addictions**

- Social networks encourage **homophily** (we interact with people like ourselves) and creates **echo chambers**

- McLuhan equates "**media**" with "**technology**". His "**tetrad**" is useful for analysing or predicting the effects of new media

For Workshop

Think about <u>all the different ways</u> that computers and the Internet <u>may have had an effect</u> on the US election <u>campaign and result</u>

Additional Reading

Book Chapters:

- Chapter 6 of *Ethics in a Computing Culture* (Brinkman and Sanders, 2013)
- Chapter 4 of *Ethics and Computing* (Bowyer, 2001)

Available on Moodle:

- ❑ The Autistic Hacker. David Kushner, *IEEE Spectrum*, 27 June 2011.
- ❑ Online Deception in Social Media. Michail Tsikerdekis, Sherali Zeadally *Communications of the ACM*, Vol.57, No. 9, pp. 72-80, September 2014
- ❑ Ethics and Tactics of Professional Crowdwork. M. Six Silberman, Lilly Irani, Joel Ross, *ACM XRDS Magazine*, Vol.17, No. 2, pp. pp. 39-43, 2010.
- ❑ Turkopticon: Interrupting Worker Invisibility in Amazon Mechanical Turk. Lilly C. Irani, M. Six Silberman, *Proceedings of the ACM SIGCHI Conference on Human Factors in Computing Systems* (CHI 2013), pp. 611- 620, 2013