

Ethics and Computer Science

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(Based on Aurélien Tabard's slides)

UCBL
2018



This Class

- Ideal goal: encourage you to ask yourself relevant questions (probably unrealistic)
- My goal: give you concrete examples. If you ever cite any of these examples in a discussion → mission accomplished for me.
- Why do that:
 - The world is changing because/thanks to us
 - We have a responsibility in what it's becoming



World is Changing

- Greatest market capitalization (Q2 2018):

Apple Inc. 909 B\$
Amazon.com 824 B\$
Alphabet Inc. 774 B\$ (parent company of Google)
Microsoft 757 B\$
Facebook 562 B\$
Tencent 478 B\$
Alibaba Group 476 B\$

Berkshire Hathaway 463 B\$ ← finally a bank!

- 2 similar ways to make money

► AccorHotel, 1st French group, 6th worldwide, 4 100 hotels et 240,000 employees, created in 1967. 12 B\$ capitalization.
► AirBNB, no hotel, 3,100 employees. Founded in 2008. 30 B\$ capitalization.



Experimental evidence of massive-scale emotional contagion through social networks

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Edited by Susan T. Fiske, Princeton University, Princeton, NJ, and approved March 25, 2014 (received for review October 23, 2013)

Significance

We show, via a massive ($N = 689,003$) experiment on Facebook, that emotional states can be transferred to others via emotional contagion, leading people to experience the same emotions without their awareness. We provide experimental evidence that emotional contagion occurs without direct interaction between people (exposure to a friend expressing an emotion is sufficient), and in the complete absence of nonverbal cues.

Abstract

Emotional states can be transferred to others via emotional contagion, leading people to experience the same emotions without their awareness. Emotional contagion is well established in laboratory experiments, with people transferring positive and negative emotions to others. Data from a large real-world social network, collected over a 20-y period suggests that longer-lasting moods (e.g., depression, happiness) can be transferred through networks [Fowler JH, Christakis NA (2008) *BMJ* 337:a2338], although the results are controversial. In an experiment with people who use Facebook, we test whether emotional contagion occurs outside of in-person interaction between individuals by reducing the amount of emotional content in the News Feed. When positive expressions were reduced, people produced fewer positive posts and more negative posts; when negative expressions were reduced, the opposite pattern occurred. These results indicate that

Scandale Volkswagen : de la prison pour un ingénieur

Paris Match | Publié le 25/08/2017 à 18h49 | Mis à jour le 25/08/2017 à 18h52

▼ La Rédaction avec AFP



Stockées sur un parking de Pontiac, dans le Michigan, des dizaines de voitures que Volkswagen a été contraint de racheter à ses clients trompés.
JEFF KOVALSKY / AFP

Un ex-ingénieur de Volkswagen a été condamné vendredi à 40 mois de prison et 200 000 dollars d'amende pour son implication dans le scandale des moteurs diesel du groupe automobile allemand.

Google engineer fired for 'sexist memo' last year is suing the tech giant alleging it discriminates against conservative white men

- Google fired software engineer James Damore in August after his controversial internal memo went viral
- He is now suing the tech firm claiming they discriminated against conservative white men
- Lawsuit states that Google's efforts to make its workplace more diverse and close the paygap was 'extreme — and illegal'
- Damore also complained he was 'singled out, mistreated, and systematically punished and terminated' after his ten page internal memo was leaked
- The controversial document said women could not get ahead at Google because of physiological differences such as they were naturally more neurotic
- Damore also claimed that Google stifles opinions that don't fit its 'left-wing bias'
- CEO Sundar Pichai said the engineer had violated Google's code of conduct by 'advancing harmful gender stereotypes'



Ada Lovelace
1e algo exécuté

Grace Hopper
1e compilateur

Margaret Hamilton
lead dev. sur Apollo

Adele Goldberg
Smalltalk team

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Why Minorities DataAI Dark Patterns Conclusion

Stereotypes Today (1/2)

FACEBOOK?

THIS ISN'T A BOOK AT ALL

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Why Minorities DataAI Dark Patterns Conclusion

Stereotypes Today (2/2)

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Stereotypes Vs Hard Data

<https://phys.org/news/2017-05-gender-bias-open-source.html>

- How good are women in development? One measure: acceptance ratio of pull-requests on GitHub.
♂: 74.6 % ♀: 78.7 %
Conclusion 1: *women are better coders*
- Hmm, let's have a closer look. Acceptance ratio for developers outside the project:
♂: 61 % ♀: 58 %
Conclusion 2: actually, *men are better coders*, insiders get their code merged thanks to their non-coding skills (?)
- Wait, how do you know they were ♂/? Previous numbers=it's clear on their profile (picture, name, ...). Gender-neutral profiles:
♂: 65 % ♀: 70 %
- Final conclusion: *gender bias does exist in open-source programming* :-).

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About Sexism in Developers: the Linux Kernel

- Frankness/Directness or Insulting/Sexist ...
 - Linus Torvalds: *I fart in your general direction and call your mother a hamster.*
 - Linus Torvalds: *the patches are COMPLETE AND UTTER GARBAGE. [...] WHAT THE F*CK IS GOING ON?*
- Not everybody finds it funny:
 - Sarah Sharp: *I need communication that is technically brutal but personally respectful. I need people to correct my behavior when I'm doing something wrong (either technically or socially) without tearing me down as a person.*
(<http://sarah.thesharps.us/2015/10/05/closing-a-door/>)
 - Linus Torvalds: *My flippant attacks in emails have been both unprofessional and uncalled for. Especially at times when I made it personal. [...] I need to change some of my behavior*
(<http://lkml.iu.edu/hypermail/linux/kernel/1809.2/00117.html>)

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Little Things You Can Do

- (Obviously: be nice to everybody)
- Use gender-neutral formulation ("The user clicks OK, then he does")
- Avoid slang (especially below-the-belt one) when unsure how it will be taken
- Enforce/follow a code of conduct. Example (<https://opensource.guide/code-of-conduct/>):
Why do I need a code of conduct?
A code of conduct is a document that establishes expectations for behavior for your project's participants. [...]
A code of conduct empowers you to facilitate healthy, constructive community behavior. Being proactive reduces the likelihood that you, or others, will become fatigued with your project, and helps you take action when someone does something you don't agree with.

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Composite heterosexual faces Composite gay faces Average facial landmarks

INDY/TECH

ARTIFICIAL INTELLIGENCE CAN IDENTIFY 'GAY FACES' FROM A PICTURE, STUDY CLAIMS

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Reconnaissance de visages masqués

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Les humains derrière le machine learning

Et derrière les bots, le labelling de photos, et pleins d'autres "IA"

L'IA est aujourd'hui grandement basée sur les données :

- ▶ Il faut produire des jeux de données propre
- ▶ Il faut entraîner les algorithmes
- ▶ Il faut avoir des palliatifs en cas de problèmes

Why Minorities Data/AI Dark Patterns Conclusion

Everything Can be Bought, Even Artificial Intelligence



Why Minorities Data/AI Dark Patterns Conclusion

Everything Can be Bought, Even Artificial Intelligence



Amazon Mechanical Turk (MTurk) operates a marketplace for work that requires human intelligence. The MTurk web service enables companies to programmatically access this marketplace and a diverse, on-demand workforce. Developers can leverage this service to build human intelligence directly into their applications.

While computing technology continues to improve, there are still many things that human beings can do much more effectively than computers, such as identifying objects in a photo or video, performing data de-duplication, transcribing audio recordings or researching data details. Traditionally, tasks like this have been accomplished by hiring a large temporary workforce (which is time consuming, expensive and difficult to scale) or have gone undone.

<https://www.mturk.com/>

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How Uber Uses Psychological Tricks to Push Its Drivers' Buttons

The company has undertaken an extraordinary experiment in behavioral science to subtly entice an independent work force to maximize its growth.

By NOAM SCHIEBER and graphics by JON HUANG | APRIL 2, 2017

The secretive ride-hailing giant Uber rarely discusses internal matters in public. But in March, facing crises on multiple fronts, top officials convened a call for reporters to insist that Uber was changing its culture and would no longer tolerate "brilliant jerks."

Notably, the company also announced that it would fix its troubled relationship with drivers, who have complained for years about falling pay and arbitrary treatment.

"We've underinvested in the driver experience," a senior official said. "We are now re-examining everything we do in order to rebuild that love."

<https://www.nytimes.com/interactive/2017/04/02/technology/uber-drivers-psychological-tricks.html>

Why Minorities Data/AI Dark Patterns Conclusion

The Copenhagen Letter

<https://copenhagenletter.org/>, 2017

- Tech is not above us
- Progress is more than innovation
- Let us build from trust
- Design open to scrutiny
- Let us move from human-centered design to humanity-centered design

