CSC2552: Review 8, Paper 1

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Paper 1

This 2014 paper by Kramer, Guillory and Hancock is a now-infamous *digital experimental study* examining the contagion of emotion on Facebook. The main results suggest that emotion indeed can be induced in users by limiting either positive or negative posts in their news feed and that if emotional content is suppressed this leads to less posting activity.

The major limitation of the methodology used in this study is the highly controversial *ethical* issues present here. The first ethical compromise comes from the lack of *informed consent* acquired by Facebook staff from the participants thus impinging on the *Respect for Persons* principle [1]. Another ethical violation present here is the lack of respect of the *Respect for Beneficence* principle [1]. This limitation occurred as the Facebook study did not use *power analysis* to limit its participant size which resulted in an excessively large pool of impacted people thus exposing unnecessarily many people to risk. An alternative approach would have been to estimate the risk involved, calculate the largest needed participant pool size by power analysis and get informed consent before proceeding. However, this is a compromise as it is likely that, in this case, informed consent would damage the strength of the results. Another weakness of this study is the use of suspicious phrasing such as "reduced positive emotional content". Such language tries to hide the fact negative posts where prioritised, reducing *transparency* of the paper and failing to abide by the *Respect for Public Interest* principle [1]. Nonetheless, this study may ultimately have helped Facebook's ethical review process [2].

In a contrast, a major strength of this paper that was made possible by using minimal ethical restrictions is the *causal* nature of this experimental methodology. As the first of its kind, this paper uses various similar studies to strengthen the methodology which yields results than can be believed to be highly *generalisable*. Another significant strength of this paper is the strong ethical compliance with the *Respect for Law* and *Respect for Justice* principles [1]. Indeed, all the experiment was done using a random sample and consistently with Facebook's Data Use policy, although some subsequent papers believe that this experiment may have been illegal in the state of Maryland [1].

Implications of these results are worrying as they reveal how much of an impact Facebook can have on the online and offline lives of its users by simple manipulations of the News Feed algorithm, an algorithm that is experimented on "continually" by Facebook through *A/B testing*. While this paper indeed presents interesting results that have some potential benefits for mental health, I believe that not enough was done to offset the ethical implications. Aside from the aforementioned critiques, the lack of usage of an IRB or of a counsel of non-Facebook staff is troubling [3]. An easy alternative method that could have shielded from such criticism would be the use of an *ethical response survey* in order to help with *ethical decisions in uncertainty* [1].

[1] Salganik, M. J. (2017). Bit by bit: social research in the digital age. Princeton University Press.

[2] Bishop, L. (2016). Facebook's responsibilities to research subjects. 3 Quarks Daily.

[3] Grimmelmann, J. (2015). The law and ethics of experiments on social media users. Colo. Tech. LJ, 13, 219.