

CSC2552: Review 5, Paper 1

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Ashton Anderson

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Thomas Hollis

Paper 1

This 2014 paper by Burke and Kraut is a *digital observational study* attempting to investigate the dynamics of activity on Facebook, more specifically related to Facebook activity correlation with tie strength. The main results suggest that around half of the four research-question hypotheses were confirmed, most notably that directed communication and passive consumption are correlated with increasing reported tie strengths.

The most significant weakness of this paper is that it is incapable of demonstrating *causality*. This is due to the fact that this is an *observational study* rather than a digital field experiment. Indeed, this limitation is briefly mentioned at the end of the paper, and very cautious language was used throughout such as ‘linked to’ and ‘associated with’. As such, no *mechanism* can be identified as the paper can only suggest possible causality and possible mechanisms behind such causality. While the paper makes convincing claims by using hand-picked quotes from surveys of sampled users, these are prone to the *anecdotal fallacy* and *non-response bias*. Indeed, this also raises the issue of *heterogeneity* whereby this study could very well be showing the average effect but this effect may be very different for different users and may be subject to the *boomerang effect* [1]. Indeed, a digital field experiment could try to use a randomised controlled trial, which would ban a particular group from using Facebook while allowing another, to look at the rate of tie development. This however would require serious compromise on the strong ethical approach of this study and would also be less realistic thus less generalisable. Other notable weaknesses of this paper include unforeseen *latent variable* limitations as well as issues with a small timeframes making reported closeness of ties highly subjective. Indeed, the effect may be temporary or, as people have more social interaction with other users, they may only subjectively feel closer but this may not be reflected in reality if the friendship is tested offline at some later time not captured by the experimental timeframe.

In a contrast, a major strength of this paper is the methodology’s rigorous and structured design. Using the *partner-with-the-powerful* approach allows for otherwise *inaccessible data* and the strong comparison to other studies [2] greatly helps improve the informative content of the paper. Another strength is the clarity of the hypotheses made and of data either confirming, denying or partially supporting each hypothesis.

Implications of these results are particularly underwhelming. While they were interpreted with a favourable lens by the authors, perhaps biased by their connection to Facebook, I do not share this view. It does not seem to me that enough evidence was presented to suggest “relationships improve when people use Facebook”, as claimed in the last paragraph. In fact, Burke and Kraut’s subsequent study takes an experimental approach to try to back up this claim [3]. In [3], they conclude that uses of Facebook were associated with improvements in well-being but this is disputed by other studies [4].

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

[2] Haythornthwaite, C. (2002). Strong, weak, and latent ties and the impact of new media. The Information Society 18, 5. 385401.

[3] Burke, M. and Kraut, R.E. (2016). The relationship between Facebook use and well-being depends on communication type and tie strength. Journal of computer-mediated communication, 21(4), pp.265-281.

[4] Verduyn, P., Lee, D.S. et al (2015). Passive Facebook usage undermines affective well-being: Experimental and longitudinal evidence. Journal of Experimental Psychology: General, 144(2), p.480.