Profiling Facebook: Identifying Extraversion and Introversion

Alexandra Canlas, Tiffany Clancy, & Nicholas Mulville
Old Dominion University

Abstract

The scope of this project was to determine the possibility of using the information found on Facebook profiles to determine if a person is an extravert or an introvert. We hypothesized that there would be a positive correlation between "extraversion" on Facebook and extraversion in real life, and "introversion" on Facebook and introversion in real life. Participants in the study documented their Facebook activity and completed a survey which measured their level of extraversion. The study found that there is a weak positive correlation between extraversion scores and all three Facebook measures examined: posts, likes, and comments.

Introduction

Social media platforms are used by millions of people each day, with each individual potentially sharing personal information. What can be learned from this information?

The results of several studies suggest that the information shared might reflect real life personality characteristic.

- Bachrach, Kosinski, Graepel, Kohli, and Stillwell (2012) found that Facebook profile characteristics (e.g., number of published photos, items "liked", groups/events created, friend network) were correlated with actual personality characteristics and behaviors. Facebook data was best at predicting narcissism and extraversion.

- Carpenter (2012) also found relationships between narcissism – the socially disruptive elements – and Facebook activity. Grandiose exhibitionism was correlated with higher numbers of status updates, photos, and friends. Entitlement/exploitativeness was correlated with anti-social behaviors like retaliation and seeking social support but not providing it.

- Ivcevic and Ambady (2012) also examined the Big Five personality traits. They found that the number of likes, status updates, and group affiliations are positively correlated with Openness to Experience but negatively correlated with Conscientiousness. Extraversion was positively correlated with number of Facebook friends and public sharing of life updates.

The objective of our study is to see if Facebook usage – posts, like, and comments within an individual's friend list – can be used to identify an individual's level of introversion and extroversion. By using a subscale of the EPQ-R and self-report of Facebook activity, we predicted that we would find a positive correlation between Facebook usage and extraversion.

Methods

Participants

346 Old Dominion Psychology students participated in this study varying in age from 18 to 50. Out of the participants, 51 were male, 290 female, and 5 preferred not to answer. A majority of our participants were white/Caucasian, followed by Black or African American, Latino/a, Hispanic, and Asian.

Materials

The study used a correlational design so there were no independent variables. An online survey was administered via Qualtrics asking participants a few descriptive questions (e.g., age, sex, year of education, ethnicity).

Facebook Usage

Participants were asked to review their Facebook activity log for the previous week tallying how many posts, comments, and likes they engaged in. These responses were used to quantify Facebook activity level. Higher levels were predicted to indicate extraversion.

Eysenck Personality Questionnaire-Revised (EPQ-R)

The Extraversion subscale of the EPQ-R (1985) was used to measure extroversion/introversion. Participants answered a series of Yes/No questions such as the following:

> *Do you like to go out a lot?*
> *Are you a talkative person?*
> *Do you prefer reading to meeting people?*
> *Do you like mixing with people?*
> *Can you get a party going?*

The extroversion score was computed by summing the responses to each question. Higher scores represent higher levels of extroversion.

Procedure

Participants completed an online survey containing these materials as well as other measures of social media use and person perception in exchange for extra credit in a psychology course.

Responses were anonymous and the survey was completed at the participants' discretion on their own.

Correlational tests were used to find the relationship between Extraversion and specific Facebook Activities. We tallied participants' weekly Facebook Posts, Likes, and Comments. Due to missing data, 260 out of the 346 participants were included.
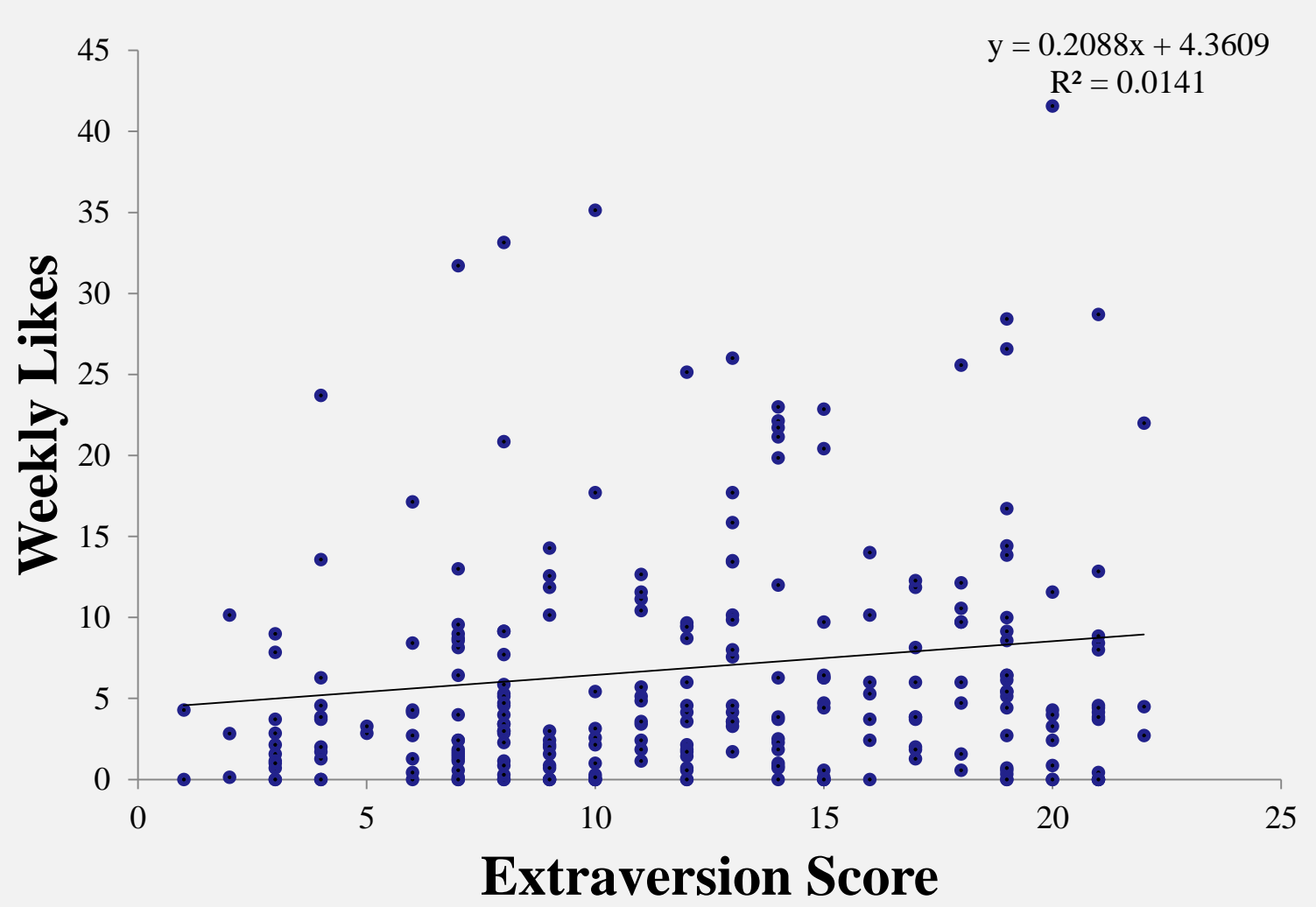
Results

$y = 0.1245x + 0.2968$
$R^2 = 0.0193$
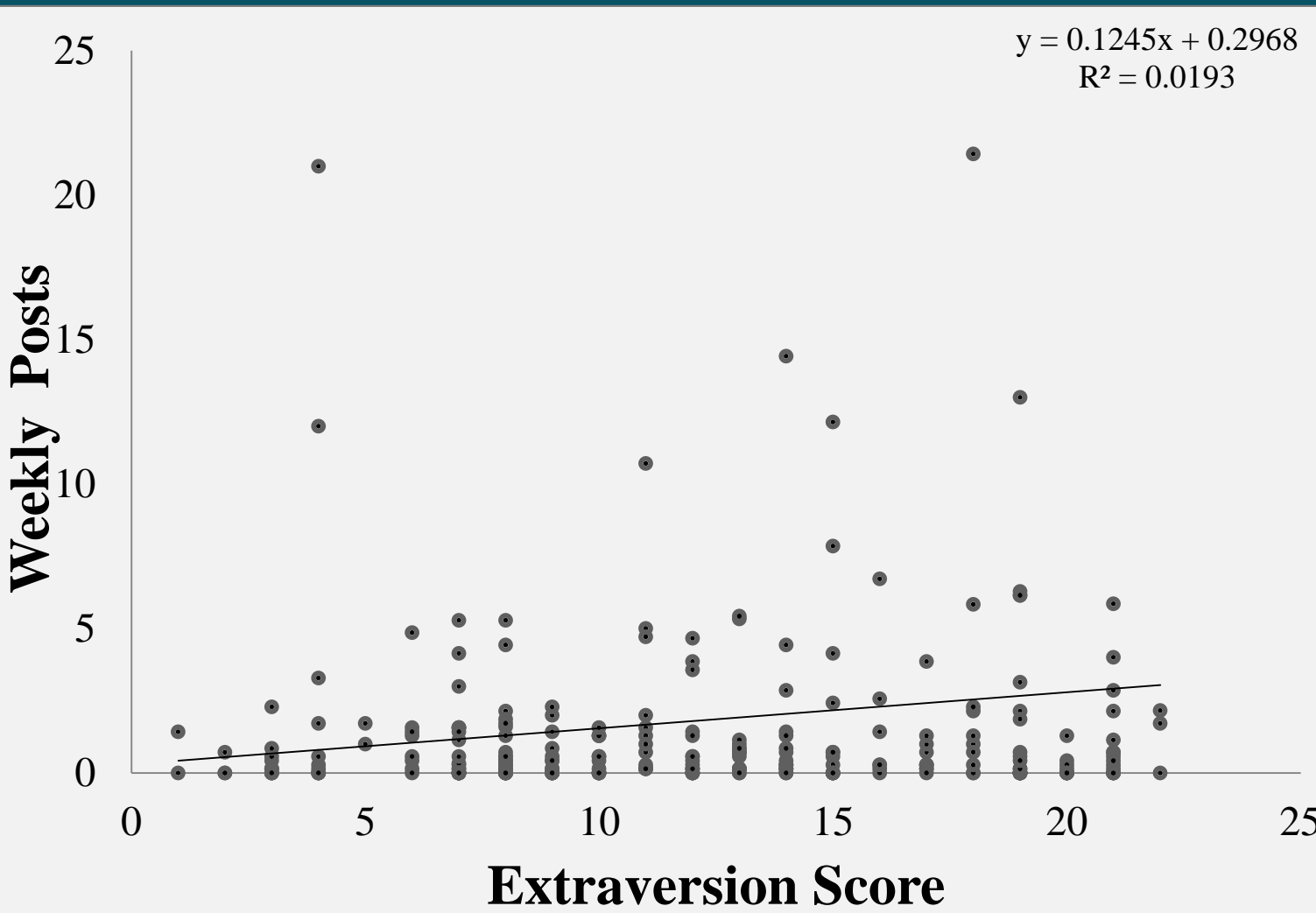
Posts
We found a weak, positive correlation between extraversion and weekly number of posts, $r(258) = .139$.

Outliers (e.g., 50+ posts) were excluded from the figure.

$y = 0.2088x + 4.3609$
$R^2 = 0.0141$

Likes
We found a weak, positive correlation between extraversion and weekly number of posts, $r(258) = .119$.

Outliers (e.g., 80+ likes) were excluded from the figure.

$y = 0.0679x + 0.9173$
$R^2 = 0.0125$
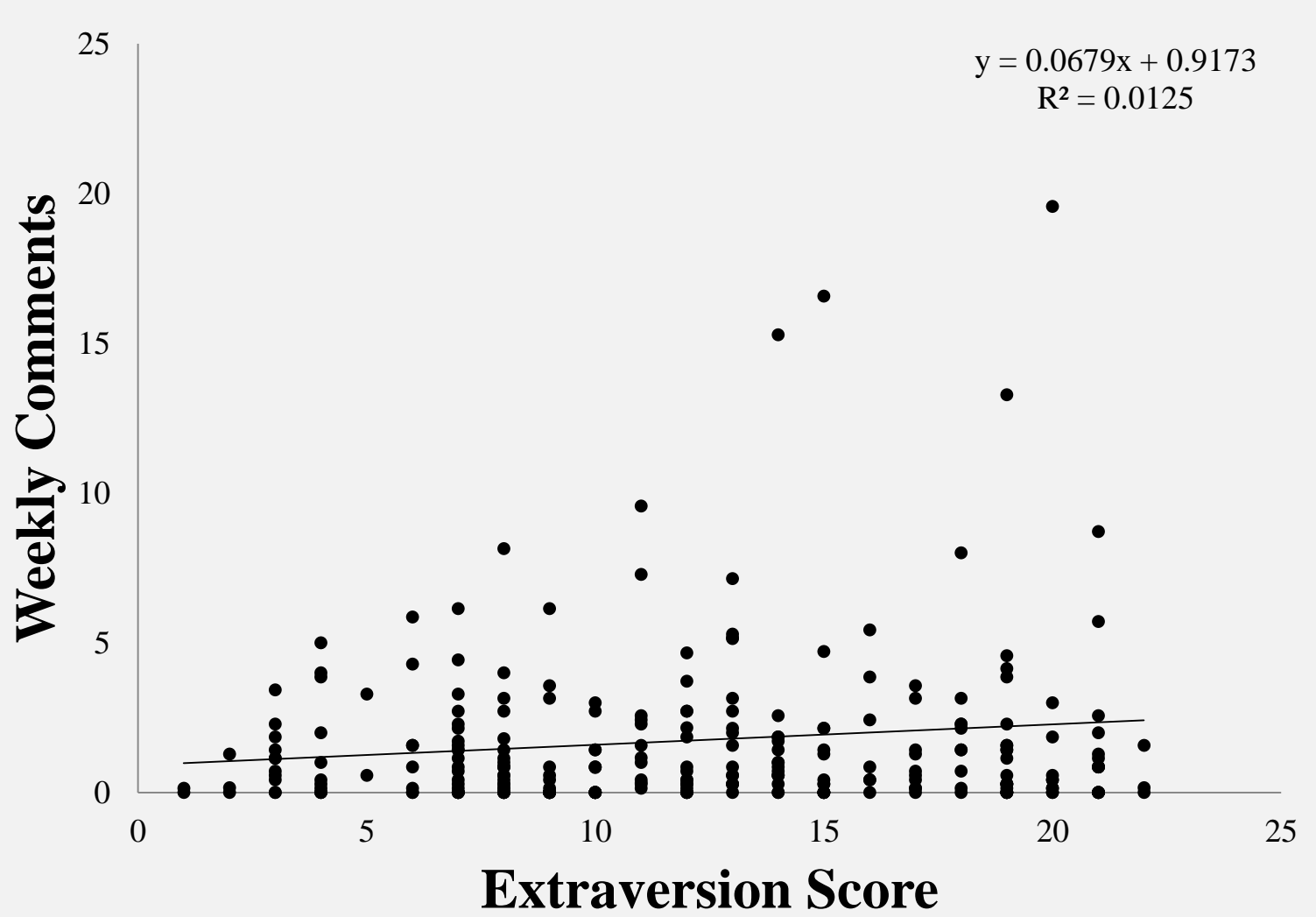
Comments
We found a weak, positive correlation between extraversion and weekly number of posts, $r(258) = .112$.

Outliers (e.g., 40+ likes) were excluded from the figure.

Conclusions

Although the correlations were all in the predicted direction, the results do not support the hypotheses because the relationships were too weak to be statistically significant.

Social media activity, specifically as measured by Facebook activity, may not be a reliable predictor of extraversion because other factors influence activity level – work schedule, social network, activity on other social media sites.

Accuracy of self-report may have been an issue; there were several outliers that may have affected the correlation. Future research should use observation instead of self-report

References

Bachrach, Y., Kosinski, M., Graepel, T., Kohli, P., & Stillwell, D. (2012). Personality and patterns of Facebook usage. In *WebSci'12 Proceedings of the 4th Annual ACM Web Science Conference* (pp. 24-32). Evanston, Illinois: Association for Computing Machinery.

Carpenter, C. J. (2012). Narcissism on Facebook: Self-promotional and anti-social behavior. *Personality and Individual Differences, 52,* 482-486. doi: 10.1016/j.paid.2011.11.011

Ivcevic, Z. & Ambady, N. (2012). Personality impressions from identify claims on Facebook. *Psychology of Popular Media Culture, 1*(1), 38-45. doi:10.1037/a0027329