

# Personality Impressions Based on Facebook Profiles

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## Abstract

Although still largely the province of teenagers and college students, Online Social-Networking Websites (OSNWs) like MySpace and Facebook are increasingly used by people in the 24-54 year age range and many employers now use them to check out prospective employees. For many people, these websites have changed the dynamics of how individuals become acquainted. Indeed, viewing an individual's profile on MySpace or Facebook now features early in the process of getting to know others, often serving as the very first exposure. But how accurate are the impressions based on OSNW profiles? Our previous research on personal websites suggests OSNW profiles should provide more information about targets than most other sources, including actually meeting the person. Here we examine impressions based on 133 Facebook profiles, comparing them with how the targets see themselves and are seen by close acquaintances. As in our previous research, results show generally strong patterns of convergence, although the accuracy correlations vary considerably across traits. Findings are discussed with regard to the increasing role of technology-borne social information in everyday interpersonal interactions

## Keywords

Personality, impressions, accuracy, consensus, self-enhancement, meta-accuracy, social media tools, social network analysis.

## 1. Introduction

Impressions of others based on OSNWs, like Facebook and MySpace are now a common source of first impressions. But how accurate are such impressions? Do we portray ourselves accurately or do we attempt to present ourselves in a positive light? And do we have any idea how we are viewed by others? The purpose of the research described here is to examine these questions by comparing personality assessments made solely on the basis of Facebook profiles to a series of other measures of personality.

### 1.1 OSNWs and Facebook

Many users claim that the online social networking service (OSNW), Facebook.com, is a great way to find out more about someone you have just met [1]. Facebook is an online community, much like MySpace or Friendster, that allows anyone

with an email address to create a profile complete with pictures and a variety of specific personal information. Personal information is voluntarily supplied by the user and usually contains information such as Major, Hometown, Relationship Status, Political Views, Interests, Favorite Music/Movies/Books/Quotes, and an "About Me" section which contains a short description of the user [6]. Facebook, is comprised mostly of college students, although it has recently opened up to the public, and allows users to send and post messages, browse other users' profiles, and establish visible links via friend requests, which can be confirmed or denied. Almost all the information presented in a Facebook profile is linked such that when someone clicks on a specific profile entry, such as a user's high school or favorite movie, they are sent to a page that allows them to browse through a list of other users with the same entry.

Facebook has experienced phenomenal growth since its creation in early 2004; it now boasts over six million US college student accounts with an additional 20,000 new accounts created daily [1]. Sixty percent of Facebook users logon daily; for some it has "become an obsession" [3]. Facebook has gained recent attention in the media for its use in aiding criminal investigations and college disciplinary hearings [8]. It has also been used by companies to screen job applicants and by campus police to monitor the college party scene [2]. But despite its prevalence in the popular media and the potentially enormous implications that have come with its startling growth, no formal investigations of impressions based on Facebook have been published.

### 1.2 Personality expression in OSNWs

In the context of physical environments, like bedrooms and offices, Gosling, Ko, Mannarelli, and Morris (2002) proposed two mechanisms by which an individual's personality can become expressed in an environment: Identity claims and behavioral residue. *Identity claims* are the symbolic declarations that individuals make to themselves or others in an attempt to convey how they would like to be seen. Examples of identity claims range from subtle clues found in an individual's clothing choice to more direct claims, like bumper stickers or explicit verbal statements made about beliefs. *Behavioral residue* refers to the inadvertent clues left by one's behavior. For example, a neatly organized movie collection reflects an individual's tendency to organize, even if the organizing behavior was not performed to specifically to convey that information.

Gosling et al. developed their model in the context of physical spaces but it can be applied to other contexts of expression too, such as music preferences [11], everyday behavior [10], and personal websites [12]. For example, Vazire and Gosling (2004)

[12] used the model to explore consensus, accuracy, and impression management in personal websites. Their findings suggested that the identity claims found in personal websites convey substantial amounts of information about their authors. Vazire and Gosling found that: (a) website observers generally agreed about website authors' personalities; that is, there were high levels of inter-observer consensus; (b) website observers were generally accurate in their assessments of website authors' personalities; and (c) website authors tended to enhance their Extraversion and Agreeableness. Vazire and Gosling's (2004) findings serve as the foundation for the present research.

### *1.2.1 Parameters of personality impressions*

Drawing on past research on interpersonal perception [7], we examined four parameters associated with personality impressions.

#### *1.2.1.1 Inter-observer consensus*

Consensus is the degree to which independent observers show agreement in their personality impressions. In the context of the present study, consensus is defined as the average level of agreement among independent assessments made solely on the basis of Facebook profiles.

#### *1.2.1.2 Observer accuracy*

Accuracy is the degree to which observer impressions converge with accuracy criteria for what the targets are really like. In the context of the present study, accuracy is defined as the level of agreement between the Facebook-based observer impressions and an accuracy criterion comprised of self and informant reports on the profile authors.

#### *1.2.1.3 Meta-accuracy*

Meta-accuracy is the degree to which an individual is aware of the impression he or she conveys. In the context of the present study, meta-accuracy is defined as the agreement between how the profile author believes he or she is viewed by Facebook observers and how he or she is actually viewed by the observers.

#### *1.2.1.4 Self-enhancement*

Self-enhancement is the degree to which an individual attempts to portray him or herself in an overly positive light. In the context of the present study, self-enhancement is assessed by comparing profile's ideal-self views with Facebook-based observer impressions, after controlling for the accuracy criterion (see above).

## **2. Method**

### **2.1 Procedure**

Participants were run in groups of five friends. Upon arriving at the laboratory, each group was taken by an experimenter to a group room. Participants were given the rating forms with which to rate themselves and their four well-acquainted friends, as well as manila folders to be used to hide their answers from their group members. Participants then embarked upon a series of assessments that are not pertinent to the findings discussed here. Eight months later, participants were contacted again by email and asked to complete a package of measures which included ideal-self ratings and ratings of how the targets believed they were

viewed on the basis of their Facebook profiles. 114 (86%) of the participants returned these forms.

#### *2.1.1 Targets*

Thirty-three groups of five-well acquainted friends participated in this study (N=165). All participants were enrolled as undergraduate students at The University of Texas at Austin. 100 (61%) were female. Of those that indicated their ethnicity, 70 (43%) reported being Asian, Asian-American, Indian, or Pacific Islander, 65 (40%) reported being White or Caucasian, 18 (11%) reported being Hispanic or Latino/a, 9 (5%) reported being Black or African-American, and 2 (1%) indicated other. Participants received \$10 compensation for their participation, were entered into a lottery with a 12% chance of winning \$100, and received partial fulfillment of course requirements if they were enrolled in Introductory Psychology (76 of them were). Participants were also provided with feedback about their personality when the study was completed.

#### *2.1.2 Facebook profiles*

Facebook profiles were identified for 133 (81%) of the participants. To ensure that participants did not alter their Facebook profiles as a result of being in the study, the profiles were saved onto a disc before making any mention of Facebook to the participants. These saved profiles served as the stimuli for the current study. The saved profile pages were identical to the targets' actual profiles except that the links within the profiles were not active. Judges could only peruse a target's main profile page and a sample of the target's photos. Because Facebook users routinely look through other users' picture galleries, we felt that judges should be able to consider a target's photos when making personality assessments. Due to data and time constraints, we included up to 10 photos randomly selected from the galleries linked to a user's main page.

#### *2.1.3 Observer ratings*

Nine undergraduate research assistants independently rated personality traits of all 133 targets based solely on an examination of the targets' Facebook profiles. To counter the effects of fatigue, judges made the ratings in sessions lasting no more than two hours. It took observers an average of 16 hours each to complete all the ratings over a period of 5 weeks. Observers were asked to identify any targets with whom they were acquainted. Two judges reported being acquainted with one target each and so ratings were not made in these cases.

#### *2.1.4 Accuracy criteria*

Accuracy criteria were created by combining the self- and informant reports of the targets. The reports were averaged and weighted equally such that self-reports comprised one-fifth of the accuracy criterion and the friend-reports made up the remaining four-fifths.

#### *2.1.5 Instruments*

Targets, informants, and observers made their ratings on the Ten Item Personality Inventory (TIPI, [5]) which measures the Big Five personality dimensions (Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience; [9]) with two items tapping each dimension. The TIPI has shown high levels of convergence with the commonly used

Big Five Inventory (BFI), with convergent correlations of .87, .70, .75, .81, and .65 for Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience, respectively.

## 2.2 Analyses

For each of the Big Five dimensions (Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Openness to Experience), the following indices were computed.

### 2.2.1 Inter-observer consensus

Inter-observer consensus was determined by computing the pair-wise intraclass correlation (ICC) among observers' Facebook-based ratings of the targets.

### 2.2.2 Observer accuracy

Two forms of observer accuracy were computed. Overall observer accuracy was determined by the correlation between the aggregated observer ratings and the accuracy criterion; this index reflects the accuracy of the group of observers as a whole. Single-observer accuracy was determined by the mean pair-wise correlation between each observer and the accuracy criterion; this index reflects the mean accuracy levels of a single observer.

### 2.2.3 Meta-accuracy

Meta-accuracy was determined by computing the correlation between each target's meta-perception rating (i.e., how he or she believed he or she was judged on the basis of his or her Facebook profile) and the aggregated observer ratings (i.e., how the target was actually judged on the basis of his or her Facebook profile).

### 2.2.4 Self-enhancement

Self-enhancement was determined by simultaneously regressing the targets' ideal-self ratings and the accuracy criteria onto the aggregated observer ratings. The standardized regression coefficients for the ideal-self ratings reflect self-enhancement because they reflect the overlap between the ideal-self ratings and the observer ratings that is not accounted for by reality (as indexed by the accuracy criterion).

## 3. Results

Big Five dimension	Consensus	Observer accuracy	Single-observer accuracy	Meta-accuracy
Extrav.	.30	.46	.28	.45
Agreeab.	.09	.20	.09	.18
Conscien.	.18	.27	.15	.06
Em. Stab.	.05	-.13	-.05	.08
Openness	.16	.39	.18	.18

**Table 1:** Consensus, accuracy, and meta-accuracy of personality impressions based on Facebook profiles

## 3.1 Inter-observer consensus

The intraclass correlations (ICCs) were positive and significant for each of the Big Five dimensions, mean  $ICC(2,1) = .15$ . However, as shown in Table 1, consensus varied across the dimensions. Extraversion showed the strongest consensus, followed by Conscientiousness and Openness to Experience. Consensus levels for Agreeableness and Emotional Stability were substantially weaker.

## 3.2 Observer accuracy

Observer accuracy was positive and significant for all dimensions except for Emotional Stability; the average accuracy correlation was .23 across the Big Five dimensions. As shown in the second column of Table 1, Extraversion and Openness to Experience showed the highest levels of accuracy while Conscientiousness and Agreeableness were also significant but weaker.

The mean single-observer accuracy correlation was .13. As expected on psychometric grounds, these correlations are lower than the overall observer accuracy correlations (see Table 1); nonetheless, single-observer accuracy remained significant for Extraversion and Openness to Experience.

## 3.3 Meta-accuracy

As shown in the fourth column of Table 1, Extraversion was the only Big Five trait that showed evidence for meta-accuracy; that is, profile authors were only aware of the impressions they conveyed for Extraversion and not for the other Big Five dimensions.

Big-Five dimension	Step 1	Step 2	
	Accuracy criterion	Accuracy criterion	Ideal-self rating
Extrav.	.46	.28	.17
Agreeab.	.20	.22	.04
Conscien.	.27	.21	.10
Em. Stab.	-.13	-.10	.27
Openness	.39	.31	.26

**Table 2:** Self-enhancement in Facebook profiles: Standardized regression coefficients for observer ratings on ideal-self ratings and accuracy criterion

## 3.4 Self-enhancement

As shown by the standardized regression coefficients in Table 2, the profile authors did engage in some self-enhancement. The first data column shows the first-step regression coefficients for the accuracy criterion (these numbers are the same as those presented in the second data column of Table 1). The last two data columns of Table 2 show the regression coefficients for the accuracy criterion and the ideal-self ratings when entered together. After removing the reality component from the ideal-self ratings, Emotional Stability and Openness to Experience remained significant.

## 4. Discussion

The findings presented here show: (a) that Facebook-based personality impressions show some consensus for all Big Five dimensions, with particularly strong consensus for Extraversion; (b) the impressions show some accuracy, with the exception of Emotional Stability; (c) that observers are aware only of how they are seen in terms of Extraversion; and (d) profile authors did engage in some self-enhancement for the Big Five domains of Emotional Stability and Openness to Experience.

As the notion of personality expressed in online contexts becomes increasingly relevant to everyday interpersonal perception, the need for exploratory work into such social networks becomes greater. The data presented here suggest that the online social networking websites are, in fact, a relevant and valid means of communicating personality. Future research should focus on examining the specific cues that elicit impressions of personality and the cues that are actually valid indicators of what someone is like. In addition, as OSNWs begin to play a greater role in the social landscape, studies are needed to examine the real-world effects of the impressions that are gleaned from OSNWs and how OSNW authors use their profiles to negotiate their identities in daily life.

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## References

- [1] Arrington, M. 85% of college students use Facebook *Techcrunch*. Retrieved March 17, 2006, from <http://www.techcrunch.com/2005/09/07/85-of-college-students-use-facebook>. (Sept. 7, 2005)
- [2] Brady, E., and Libit, D. Alarms sound over Facebook time; Students see website as a friendly community; Schools fear postings make athletes vulnerable. *USA Today*, p. 1C. (Mar. 9, 2006).
- [3] Forrest, K. Facebook has Russert and college coeds in hot water. *Washingtonian*, 11. (Feb. 2006)
- [4] Gosling, S. D., Ko, S. J., Mannarelli, T., and Morris, M. E. A room with a cue: Personality judgments based on offices and bedrooms. *Journal of Personality and Social Psychology*, 83, 3 (2002), 379-398.
- [5] Gosling, S. D., Rentfrow, P. J., and Swann Jr., W. B. A very brief measure of the big-five personality domains. *Journal of Research in Personality*, 37 (2003), 504-528.
- [6] Gross, R., and Acquisti, A. Information revelation and privacy in online social networks. In WPES Conference *Proceedings*, pages 71-80. November 2005.
- [7] Kenny, D. A., Albright, L., and Malloy, T. E. Consensus in interpersonal perception: Acquaintance and the big five. *Psychological Bulletin*, 116, 2, (1994) 245-258.
- [8] Kornblum, J, and Marklein, M. B. What you say online could haunt you; Schools, employers scrutinize social websites such as MySpace and Facebook. *USA Today*, (Mar. 9, 2006), 1A.
- [9] McCrae, R. R., and Costa, P. T., Jr. A five-factor theory of personality. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality theory and research*. New York: Guilford Press, 1999, 139-153.
- [10] Mehl, M. R.; Gosling, S. D., and Pennebaker, J. W. Personality in its natural habitat: Manifestations and implicit folk theories of personality in daily life. *Journal of Personality and Social Psychology*, 90, 5, (2006), 862-877.
- [11] Rentfrow, P. J., and Gosling, S. D. Message in a ballad: The role of music preferences in interpersonal perception. *Psychological Science*, 17, 3, (2006) 236-242.
- [12] Vazire, S., and Gosling, S. D. e-Perceptions: Personality impressions based on personal websites. *Journal of Personality and Social Psychology*, 87, (2004), 123-132.