A tale of two sites: Twitter vs. Facebook and the personality predictors of social media usage

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ABSTRACT

Social networking sites (SNS) are quickly becoming one of the most popular tools for social interaction and information exchange. Previous research has shown a relationship between users' personality and SNS use. Using a general population sample ($N = 300$), this study furthers such investigations by examining the personality correlates (Neuroticism, Extraversion, Openness-to-Experience, Agreeableness, Conscientiousness, Sociability and Need-for-Cognition) of social and informational use of the two largest SNS: Facebook and Twitter. Age and Gender were also examined. Results showed that personality was related to online socialising and information seeking/exchange, though not as influential as some previous research has suggested. In addition, a preference for Facebook or Twitter was associated with differences in personality. The results reveal differential relationships between personality and Facebook and Twitter usage.

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1. Introduction

The internet has become an essential component in the navigation of everyday life (Amichai-Hamburger & Vinitzky, 2010). The internet influences all aspects of human endeavour from the way in which organisations operate to the way people shop and spend their leisure time. Yet, perhaps the biggest transformations have been in the way in which we socialise and seek-out and spread information (Amichai-Hamburger & Ben-Artzi, 2000). Via the internet, vast amounts of information can be disseminated to worldwide audiences in an instant, whilst the web simultaneously offers an arena for public and private social interaction.

At the heart of online information transfer and social interaction (Raacke & Bonds-Raacke, 2008) are the most popular and fastest growing types of internet site (Nielsen-Wire, 2010): Social network sites (SNS). SNS can be defined as virtual collections of user profiles which can be shared with others. Despite the prominence of the internet and social networking in modern life, research concerning the antecedents of SNS use has been limited. However, there is now a small, but growing body of evidence that suggests individual differences are influential in guiding on-line behaviour (e.g. Amiel & Sargent, 2004; Ryan & Xenos, 2011).

In the current study, we seek to investigate further, the role of individual differences in the use of SNS. Specifically, we examine how the personality traits of the Big-Five (Neuroticism, Extraversion, Openness-to-Experience, Agreeableness and Conscientiousness), Sociability and Need-for-Cognition relate to the social and informational use of the two largest SNS: Facebook and Twitter.

1.1. Facebook and Twitter

Facebook's popularity has grown exponentially over recent years, from 5.5 million active users in 2005 to around 500 million active users in 2011 (Facebook, 2011). Facebook allows users to create a profile where they can post information about themselves ranging from their occupation, to their religious and political views to their favourite movies and musicians. On this profile, both the user and their 'friends' can post web links, pictures and videos of interest. Further, Facebook also offers the facility to send private and public messages to other users and even engage in real time instant messaging. All of these features coupled with the creation of applications, groups and fan pages make Facebook broadly popular for online socialising.

Although Facebook is the largest SNS, there are others. All social networking sites facilitate online, social interaction, yet they do not all offer the exact same services or have the same focus. The newest and perhaps most interesting SNS is Twitter, as its focus seems to be on the sharing of opinion and information (Kwak et al., 2010) rather than on reciprocal social interaction (Huberman, Romero, & Wu, 2009).

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Twitter allows users to update their account with short statements named "tweets" limited to 140 characters. Other users are able 'follow' these updates. The service is rapidly growing with recent statistics suggesting that in January 2010 alone Twitter attracted 73.5 million unique viewers, and from 2009–2010 it demonstrated an annual membership growth rate of 1105% (TechCrunch.com, 2010). Twitter currently has in the region of two-hundred million registered accounts (Twitter, 2011).

Twitter, unlike Facebook offers the opportunity to reinstate some of the anonymity previously sought in online communication (Huberman et al., 2009). Users do not need to post information about themselves to find 'friends' and thus the site focuses less on 'who you are' and more on what you have to say (Huberman et al., 2009). The reduction of social pressure brought about by anonymity may mean that reasons for using Twitter differ from Facebook. It is expected that these differences will be evident in the relationships between personality and Twitter and Facebook usage.

1.2. Personality and internet use

The following sections will review previous research linking the personality factors investigated here and internet use. There have been several studies that have researched links between personality and Facebook (e.g. Amichai-Hamburger & Vinitzky, 2010; Ross et al., 2009; Ryan & Xenos, 2011). However, there are currently no studies linking Twitter use to personality. It must be noted that much of the extant research concerning personality and the internet has been conducted using small (<100), predominantly student samples. Thus, caution must be advised when interpreting the results obtained from any individual study.

1.2.1. The big five

In investigating the role of personality in the use of the internet, researchers have tended to use the Five-Factor-Model or Big-Five (e.g. Goldberg, 1990). The Big-Five consists of five broad personality traits, namely, Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness. Although the theoretical and methodological underpinnings of the model are not completely without dispute (see Block, 1995, 2010), it is regarded as acknowledging at least some of the essential aspects of personality (McCrae & Costa, 1999).

1.2.2. Neuroticism

Neuroticism is defined as a measure of affect and emotional control, with low levels suggesting good control over emotions and stability, whereas individuals with high levels may be somewhat sensitive and nervous with a propensity to worry (Costa & McCrae, 1992). Early opinions suggested that those high in Neuroticism were likely to avoid the internet (Tuten & Bosnjak, 2001). However, empirical enquiry has failed to support this hypothesis. It is now considered that those high in Neuroticism use the internet frequently, mostly to avoid loneliness (e.g. Amichai-Hamburger & Ben-Artzi, 2003; Butt & Phillips, 2008). Indeed, positive correlations have been found with the amount of time spent on Facebook ($r = .20$; Ryan & Xenos, 2011) and frequency of instant messenger use ($r = .12$; Correa, Willard, & Gil de Zúñiga, 2010).

The loneliness theory is also supported by research demonstrating modest correlations with the social use of Facebook ($r = .08$; Ryan & Xenos, 2011) and the internet more generally ($r = .57$; Amichai-Hamburger & Ben-Artzi, 2000). Amichai-Hamburger and Ben-Artzi (2003) found high levels of Neuroticism in females was correlated with social usage of the internet ($r = .32$). In the same study, a negative relationship was reported between Neuroticism and use of the internet for informational purposes ($r = -.27$).

Thus, previous research has shown Neuroticism to be related to greater internet use particularly in relation to social uses. It appears that those high in Neuroticism use the internet as a tool to decrease feelings of loneliness and create a sense of group belonging (Amichai-Hamburger & Ben-Artzi, 2003; Butt & Phillips, 2008). It may thus be hypothesised that those who score highly on Neuroticism will use Facebook and Twitter more often, primarily for socialising (H1).

1.2.3. Extraversion

Extraverts are typically adventurous, sociable and talkative, whereas introverts are typically quiet and shy (Costa & McCrae, 1992). Extraversion has been shown to correlate with the use of instant messing and SNS ($r = .14$; Correa et al., 2010). Within Facebook, those high in Extraversion have been shown to be members of significantly more 'groups' (Ross et al., 2009) and have significantly more 'friends' (Amichai-Hamburger & Vinitzky, 2010). Many of these 'friendships' it seems were not initiated online however. Extraverts tended to make the friends offline, then use the internet to keep in touch (Ross et al., 2009), suggesting that Extraverts do not see online socialisation as a substitute for offline communication.

Ryan and Xenos (2011) found significantly higher levels of self-reported Extraversion in Facebook users compared to non-users and also found Extraversion to be correlated with the social use of Facebook ($r = .14$). Amichai-Hamburger and Ben-Artzi (2000) also found a significant correlation between social use of the internet and Extraversion, however only for females. Issues concerning sample size must be readdressed here as the sample of females was twenty-seven. The same authors also report a whole sample ($N = 72$) correlation between Extraversion and informational use of the internet ($r = .24$; Amichai-Hamburger & Ben-Artzi, 2000).

On the basis of previous research, it is hypothesised that there will be a positive correlation between Extraversion and the social use of Facebook (H2). However, the relationships may not be so straightforward between Extraversion and Twitter. It might be expected that the potential for increased anonymity (i.e. through alias usernames) and the reduced emphasis on social interaction offered by Twitter may appeal to those who report themselves lower in Extraversion (H3).

1.2.4. Openness-to-experience

Individuals who demonstrate high Openness-to-experience (Openness) have broad interests and seek novelty, with low ratings linked to preferring familiarity and convention (McCrae & Costa, 1987). Openness has been shown to correlate with the use of instant messaging and SNS ($r = .10$; Correa et al., 2010) and with the use of a wider variety of Facebook features (Amichai-Hamburger & Vinitzky, 2010). Further, Openness has been shown to be related to information seeking (McElroy, Hendrickson, Townsend, & DeMarie, 2007). Thus, it may be hypothesised that positive correlations will be observed between Openness and both social and informational uses of SNS (H4).

1.2.5. Agreeableness

Agreeableness is seen as a measure of how friendly people are, with high ratings being associated with individuals who are kind, sympathetic and warm (Costa & McCrae, 1992). It has been suggested that less agreeable individuals would have greater numbers of online contacts as the internet provides a means to build friendships that may prove difficult to initiate and maintain offline (Ross et al., 2009). However, Agreeableness has been included in several studies relating to internet and social media usage and has generally been found to be unrelated (Ross et al., 2009; Correa et al., 2010; Amichai-Hamburger & Vinitzky, 2010). The kind and warm nature of Agreeable persons may result in a positive correlation