ASSOCIATIONS BETWEEN ONLINE AND OFFLINE SOCIAL FUNCTIONING IN EMERGING ADULTS

by

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Abstract

More so than any other age demographic, emerging adults are using social networking sites (SNS) such as Facebook, in addition to face-to-face interactions, to establish and maintain social relationships. Yet, despite a growing reliance on SNS, there is a dearth of research overall regarding the nature of online social interactions and how they may relate to face-to-face social functioning in emerging adulthood. Further, although psychopathology has been found to impact the face-to-face social functioning of emerging adults, it is unclear as to whether online social functioning may be similarly impacted. The current study documents different aspects of Facebook interactions and explores the associations between such aspects of Facebook interactions and important constructs in face-to-face relationships. In addition, I investigate the associations between these dimensions of online social functioning and common psychopathology, such as attention-deficit/hyperactivity disorder (ADHD) and anxious-depressive symptoms.

Participants were 240 international or Aboriginal first-year university students who attended a 2-week orientation program. Participants’ Facebook profiles and activity were observationally coded. Sociometric procedures within the orientation program indexed participants’ face-to-face social acceptance and reciprocated friendships. Participants also reported on their ADHD and anxious-depressive symptomatology.

Results revealed four aspects that constitute emerging adults’ Facebook activity: Facebook Involvement, Positive Facebook Interactions, Negative Facebook Interactions, and Narcissistic Self-Presentation. Emerging adults who reported more ADHD symptomatology had greater Facebook Involvement but more Negative Facebook Interactions. Emerging adults who
had more reciprocated friendships displayed greater Facebook Involvement and Narcissistic Self-Presentation. In contrast, more acceptance by peers predicted less Narcissistic Self-Presentation.

Findings from the current study suggest that online social interactions on Facebook are multi-faceted, with each facet uniquely associated with face-to-face peer relationships. Some of these facets may also represent social phenomena that only emerge in online environments. Psychopathology in emerging adulthood may also be associated with a greater degree of negativity in online social interactions. Implications and future directions are discussed.
Lay Summary

This study aimed to understand the way university students use online social networking sites like Facebook to communicate, and how students’ Facebook communication may relate to their face-to-face peer relationships and psychopathology. In a sample of first year students who moved away from home to attend university, I found that Facebook interactions could be understood by the degree of involvement on Facebook, the degree of negativity or positivity present in the interactions, and the narcissistic self-presentation displayed in said interactions. Individuals with greater ADHD symptoms who displayed greater Facebook involvement also experienced a greater number of negative Facebook interactions. Students who developed a greater number of friendships also displayed greater Facebook involvement and narcissistic self-presentation. In contrast, students who were more accepted by their peer group in general displayed less narcissistic self-presentation. Findings suggest that online social functioning is comprised of unique facets that are differentially associated with face-to-face functioning.
Preface

This thesis is submitted in partial fulfillment of the requirements for Master of Arts in Psychology at the University at the University of British Columbia. The identification and design of the research program, data analysis and the writing of this thesis has been conducted solely by the author. Dr. Amori Mikami, who is the principal investigator at the Peer Relationships in Childhood Laboratory, acted as the project supervisor and assisted with study design and data interpretation. The data used in the analyses of this study were collected as part of a larger study conducted by Dr. Mikami, which was approved by the Behavioral Research Ethics Board of the University of British Columbia (approval certificate number: H12-01850). The project reported in my thesis was approved by the Behavioral Research Ethics Board of the University of British Columbia (approval certificate number: H17-00158).
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**Introduction**

The entrance into emerging adulthood (defined as the age period between 18-25) is marked by potentially large changes in individuals’ social lives and support networks. In the emerging adult age period, it is typical to continue a progression begun in adolescence of increasing reliance on peers, relative to parents and family, as the primary source of support (Fraley & Davis, 1997; Hazan & Shaver, 1994). For emerging adults who move away from home to attend university, the successful transference of social support provision from family to peers is highly important. This is because new university students must not only learn to navigate novel social environments and unfamiliar educational curricula, but they must also cope with the separation from their families and existing friends, while simultaneously forming new peer relationships (Buote et al., 2007).

More so than any other age demographic, emerging adults utilize social networking sites (SNS), in addition to face-to-face experiences, for establishing and maintaining social relationships (Bourgeois, Bower, & Carroll, 2014). A national U.S. survey revealed that 83% of individuals between 18-33 use SNS (Zickuhr, 2010). Among SNS websites, Facebook is the most popular and is ubiquitous as a method of social interaction among this age group (Pew Research Center, 2016). Facebook use may be particularly entrenched in the social lives of emerging adult university students, with research suggesting that between 94-97% of undergraduate students use Facebook (Ellison, Steinfield, & Lampe, 2007; McKinney, Kelly, & Duran, 2012).

Yet, despite emerging adults’ growing reliance on SNS as a mechanism for developing and maintaining social relationships, there is a dearth of research overall regarding their social interactions online. Existing literature largely, if not nearly exclusively, only consider users’
amount of online social communication use (e.g., the number of hours in a day spent online) or their motivations for using SNS methods of communication. Crucially, the ubiquity of Facebook in the lives of emerging adults has translated into extremely little research on the nuances of their online social experiences, such as the different types of social interactions that may exist or the quality of those interactions in the online environment. This is in stark contrast to the rich research that exists documenting nuances in offline (face-to-face) peer relationships. Our understanding of if and how online social interactions may relate to the face-to-face peer relationships of this population is also limited. Thus, the current study aimed to document the nuances of online social interactions in emerging adults on the popular SNS Facebook, including the associations between different aspects of online social functioning with face-to-face social functioning and psychopathology.

**Nuances of Offline Social Functioning**

A considerable body of research underscores the importance of studying face-to-face peer relationships in emerging adulthood (Adams & Blieszner, 1995; Bagwell, Newcomb, & Bukowski, 1998; Hartup & Stevens, 1997). For example, a prospective study linked difficulties in face-to-face peer relationships during adolescence to exacerbated maladjustment 8 years later (Chango, Allen, Szwedo, & Schad, 2014). Other work in emerging adult populations suggests that individuals who are more liked and accepted by peers in a face-to-face context display more prosocial behaviours and less relational aggression (Lansu & Cillessen, 2012), and that positive face-to-face peer relationships facilitate students’ overall adjustment to university (Fass & Tubman, 2002). In summary, it is well-established that face-to-face relationships in emerging adulthood contribute to adjustment and well-being, including during the transition to university.
It is important to note, however, that face-to-face social functioning is not a monolithic construct, and rather is multidimensional, comprised of correlated yet distinct aspects (Bukowski & Hoza, 1989; Mikami, 2010; Parker & Asher, 1993). Two examples of such facets are social acceptance and reciprocated friendship. Social acceptance embodies the extent to which the peer group affectively likes an individual in that group. Friendship, on the other hand, indicates the presence of a reciprocal dyadic relationship between two people (Bagwell et al., 1998). Tests of discriminant validity have suggested that social acceptance and friendship constitute distinct aspects of the offline social experience (Larson, Whitton, Hauser, & Allen, 2007). Someone can be positively regarded overall by their peer group but have no close, reciprocated friends, or vice versa (Parker & Asher, 1993). Further, social acceptance and friendship may serve different functions. Social acceptance may stem from an individual’s sociability and reputation, and provide the recipient a sense of inclusion and companionship. By contrast, the experience of friendship which affords feelings of closeness and trust that may not be conferred by simply being well-regarded in the peer group may result from an individual’s capacity for intimacy and successful conflict resolution skills (Hartup & Stevens, 1999).

Supporting these distinctions, some research has found that social acceptance and friendship may also be differentially related to adjustment (Bagwell et al., 1998). Some work with children suggests that acceptance is more important than friendship for predicting later global self-worth, as well as internalizing and externalizing behaviours (Klima & Repetti, 2008). On the other hand, a study with emerging adults found that for the development of relationship skills, educational attainment, and reduced criminal behavior, friendships may be more important than being liked by the peer group (Larson et al., 2007).
Taken together, these findings suggest that specific features of an individual’s offline social experiences are important to differentiate. Unfortunately, we know little about whether similar distinctions exist in individuals’ online social experiences that are important for characterizing functioning in this medium. This is an oversight in the existing research base, given how much SNS such as Facebook have become involved in the daily social interactions of individuals, especially emerging adults. The current study aims to address this gap in the literature, beginning with documenting potential nuances in emerging adults’ online social interactions and their associations with different aspects of face-to-face social functioning.

**Concordance between Online and Offline Social Functioning**

There are some reasons to think that positive associations exist between the online and offline social functioning of emerging adults. First, emerging adults may be talking to many of the same people online as offline. Subrahmanyam, Reich, Waechter, and Espinoza (2008) found that in a sample of university students, there was considerable overlap in the members of the students’ social networks across both online and offline mediums. As opposed to using SNS to meet strangers, most emerging adults were using SNS as a way to connect with the friends they already knew from face-to-face contexts (Subrahmanyam et al., 2008). Facebook use was also found to be strongly associated with not only the maintenance of pre-existing close friendships, but also the facilitation of relationships with acquaintances (Ellison, Steinfield, & Lampe, 2007). Second, there are indications that personality or psychopathology may play out in the offline domain as well as the online domain. Findings from Zywica and Danowski (2008) suggest that extraverted individuals who are popular offline also appear to be popular on Facebook. In clinical populations, the expression of social anxiety also appears to be consistent across online and offline social environments (Weidman & Levinson, 2015). Collectively, these findings
suggest some continuity in the social functioning of emerging adults across online and offline mediums.

However, despite the consistency demonstrated between these different forms of communication, there are other reasons to think that the concordance between online and offline social functioning may not be exact. Social interactions on Facebook inherently differ in several respects from face-to-face interactions. For example, communication through online and digital mediums lack both verbal and non-verbal cues inherent in face-to-face interactions (McKenna & Bargh, 2000), such as facial expressions, gestures and inflections of the voice. The absence of these cues can lead to the misinterpretation of the sender’s message. In addition, when individuals receive a message or post on their Facebook timeline, they are not expected to respond immediately, allowing the opportunity to carefully craft responses. Furthermore, due to the online nature of SNS, it is easier for individuals to initiate interactions online. For example, one could add an acquaintance as a friend on Facebook and engage in a digital conversation almost instantly. In face-to-face contexts however, relatively more effort is required to approach, converse with, and befriend others. Consequently, these differences may encourage lonely and less socially skilled individuals to gravitate towards SNS as a method of developing and maintaining relationships (Ellison et al., 2007; Valkenburg & Peter, 2007). This divergence in the dynamics of online and offline interactions suggests that one medium may not merely be a mirror image of the other.

**Dimensions of Online Social Functioning**

As stated above, face-to-face social functioning has been found to be multi-faceted, with an important distinction between the function and purpose of social acceptance versus reciprocated friendship (Bukowski & Hoza, 1989; Parker & Asher, 1993). Owing to the
relatively recent introduction of SNS to our social interactions, to date, extremely few attempts have been made to delineate features of online social functioning. The study of online social functioning has largely been limited to factors such as the duration and frequency of use of Facebook, the motivations for that use, and the number of Facebook friends one has (Alhabash et al., 2012; Kalpidou, Costin, & Morris, 2011; Ryan & Xenos, 2011). To my knowledge, there are only a handful of studies that have attempted to elucidate distinct dimensions involving the content or quality of online interactions (Mikami et al., 2015; Szwedo, Mikami, & Allen, 2012; Weidman & Levinson, 2015).

However, it stands to reason that given the complexity of face-to-face peer experiences, online social functioning may be similarly protean. That is, I expect online interactions to also be comprised of related but ultimately distinct features. Despite the lack of extant literature, there are several ways in which I may conceptualize these different constructs that constitute online social functioning. First, social interactions on SNS such as Facebook can be characterized in terms of an individual’s online involvement. Existing studies have predominantly studied Facebook involvement (sometimes referred to as “Facebook intensity”; Ellison et al., 2007) by examining the size of an individual’s social network, amount of time spent on Facebook, and the number of interactions an individual has on this SNS (Ellison et al., 2007; Kalpidou et al., 2011; Steinfield, Ellison, & Lampe, 2008). An expanded social network on Facebook and a greater number of interactions has been suggestive of an increased use of the platform in order to form and maintain social relationships (Dunbar, 2016).

Existing research about Facebook involvement suggests that it is related to an individual’s sociability and extraversion, as well as peers’ impressions that the individual is popular. For instance, Kleck, Reese, Behnken, and Sundar (2007) presented participants with
mock-ups of Facebook profiles that varied in the number of friends displayed; a greater number of Facebook friends indicated on an individual’s profile influenced participants’ judgments of the target being more popular. Facebook involvement has also specifically been linked to the development of “weak ties” or loose, more superficial connections between individuals (Ellison et al., 2007).

As noted above, existing research has predominantly, if not nearly exclusively, focused on individuals’ degree of involvement in online social environments. However, online social functioning may alternatively be understood in terms of the quality of an individual’s Facebook interactions. The quality of face-to-face peer interactions varies greatly from one person to another (Hartup & Stevens, 1997) based on factors such as the amount of positivity (e.g., intimate disclosure and positive affect) and negativity (e.g., aggression and conflict) present in the interactions (Newcomb & Bagwell, 1995; Parker & Asher, 1993). Interactions on Facebook may similarly be characterized in terms of the degree of positivity and negativity in them. Crucially, although features of Facebook such as the relative ease of initiating interactions and the ability to connect with a greater number of people may facilitate the development and maintenance of positive social relationships (Ellison et al., 2007), those same features may also permit individuals to engage in the harassment and abuse of others (Pew Research Center, 2011). A recent study found that approximately 59% of Facebook users had experienced some form of cyberbullying through the online platform in the last year (Kwan & Skoric, 2013).

More recently, studies have begun to observationally code SNS profiles of participants in order to capture the degree of positivity and negativity of Facebook interactions, indexed by indicators of connection, support, and verbal aggression (see Mikami et al., 2015; Szwedo, Mikami, & Allen, 2012). Therefore, the quality of an individual’s Facebook interactions may be
another key facet of online social functioning, in addition to the individual’s degree of involvement on Facebook.

It is almost entirely unknown to what extent these nuances of online social functioning may correspond to different facets of offline social functioning, such as social acceptance versus reciprocated friendship in face-to-face relationships. An individual’s degree of Facebook involvement may align uniquely with social acceptance, as opposed to with reciprocated friendship. Acceptance reflects peers’ impressions of an individual as likeable and is highly influenced by an individual’s sociability. As described above, Facebook involvement has been linked with the establishment of weak social ties (Ellison et al., 2007); however, it does not appear to facilitate the formation of intimate relationships. Although frequent use of Facebook may lower the barriers to participation in social interactions and therefore help individuals to meet acquaintances, these types of relatively superficial interactions may not necessarily create close relationships such as friendships (Ellison et al., 2007). Furthermore, an individual may have a large number of Facebook friends in their social network but may not actually interact with all, or any, of them (Donath & Boyd, 2004). In sum, Facebook involvement is likely to be related to face-to-face social acceptance, because both are largely based on peers’ general impressions of an individual (which do not require close or intimate contact), and reflect an individual’s overall sociability and extroversion.

The degree of an individual’s involvement on Facebook may not speak to the nature of their Facebook interactions, which could range from largely one-sided superficial conversations to intimate and supportive discussions. The positivity and negativity occurring in individuals’ online social interactions, by contrast, may relate better to the formation of face-to-face dyadic friendships. Friendship requires mutual self-disclosure and intimacy from both parties. For
example, online interactions that convey support and intimacy can evoke norms of reciprocity and strengthen relationships between the two people involved in the conversation by encouraging self-disclosure, supportiveness and positivity (Oswald, Clark, & Kelly, 2004). Conversely, interactions that are narcissistic and aggressive may instead be met with reciprocal negativity and hinder the development of friendships between the people involved (Swenson, Nordstrom, & Hiester, 2008). In sum, dyadic friendships may best relate to online interactions where there is a mutual exchange of support and low levels of conflict, and not simply to any online interactions indiscriminate of their content.

**Psychopathology and Online Social Functioning**

As youth enter the developmental period of emerging adulthood, they not only face an increase in self-responsibility and independence but also a loss in parental supervision and structure. Youth in this age group must often adapt to changing environments (e.g. transitioning to university) and the establishment of new sources of social support from their peers. The presence of common psychopathology, such as attention-deficit/hyperactivity disorder (ADHD), depression, or anxiety symptoms, can influence emerging adults’ success in establishing intimate and supportive peer relationships.

ADHD occurs in approximately 5% of children and 4% of emerging adults (American Psychiatric Association, 2013; Norvilitis, Ingersoll, Zhang, & Jia, 2008), and social impairments associated with ADHD have been found to persist across the lifespan (Mannuzza & Klein, 2000). The hallmark features of ADHD (e.g. impulsivity and inattentiveness) may hinder the development of successful peer relationships by manifesting in behaviors that engender peers’ negative impressions. Emerging adults with ADHD may miss important social cues, interrupt conversations and express anger or other emotions in ineffectual ways. For example, female
undergraduate students with ADHD reported often impulsively blurting out hurtful comments to others (Meaux, Green, & Broussard, 2009). They also report greater difficulty in providing emotional support and managing conflict with peers (McKee, 2014). As a result, individuals with ADHD may continue to have friendships characterized by fewer positive features (e.g. intimacy and validation) and more negative features (e.g. relational aggression) relative to peers without ADHD (Blachman & Hinshaw, 2002; Heiman, 2005) even after transitioning into emerging adulthood (Bagwell, Molina, Pelham, & Hoza, 2001; Canu & Carlson, 2003).

The role of depression and anxiety symptoms in the impairment of social functioning has similarly been well-documented across a range of developmental periods (Henning, Turk, Mennin, Fresco, & Heimberg, 2007; Strauss, Frame, & Forehand, 1987; Tse & Bond, 2004). Anxious-depressive difficulties are common in emerging adults, and are suggested to affect approximately 15% of university students (Eisenberg et al., 2007). Crucially, anxious-depressive symptoms may be associated with social difficulties in ways unique from ADHD symptomatology. Whereas emerging adults with ADHD may struggle with the negative social impact of inattentiveness and impulsivity, peer problems experienced by individuals with anxiety and depression may instead stem from shyness, withdrawal, negative self-impressions and reassurance-seeking behaviour (Strauss, Frame & Forehand, 1987, Tse & Bond, 2004). As posited by Rubin and Burgess (2001), avoidant coping and social withdrawal due to anxiety may limit the opportunities of emerging adults to socialize with peers and to participate in normative positive social interactions. Similarly, individuals with depression may preferentially attend to negative information in social contexts, which may lead them to avoid future social interactions (Bouhuys, Geerts, & Gordijn, 1999; Tse & Bond, 2004). Thus, it may be that while ADHD symptoms may increase the likelihood of emerging adults engaging in negative social
interactions, symptoms of depression and anxiety may instead prevent engagement in positive social interactions.

As online social functioning is comprised of distinct aspects akin to the experiences in face-to-face social interactions, it is possible that the facets of online social interactions may also differentially relate to psychopathology. However, to my knowledge there is no existing work that has examined how ADHD and anxious-depressive symptoms may be differentially related to not only the frequency of online social communication, but also the quality of those interactions.

Existing literature utilizing self-reports of Facebook use have linked greater levels of ADHD symptoms to more time spent engaging with SNS and instant messaging services (Andreassen et al., 2016; Levine, Waite, & Bowman, 2013). It has been postulated that the constant feed of notifications and the interactive features of SNS may drive emerging adults who are easily distracted and impulsive to engage in SNS more excessively than their peers (Andreassen et al., 2016). In contrast, although youth who report greater anxious-depressive symptomatology endorse a greater preference for communicating online through SNS such as Facebook rather than face-to-face (Nishimura, 2003; Wright et al., 2012), they do not actually report greater SNS use relative to those without anxious-depressive symptoms (Davila et al., 2012; Feinstein, Bhatia, Hershenberg & Davila, 2012). Studies suggest that anxious-depressive symptoms are instead associated with passive Facebook activity (Tandoc, Ferrucci, & Duffy, 2015; Verduyn et al., 2015). That is, although SNS such as Facebook are designed to be socially interactive, individuals who are more withdrawn may engage in passive content consumption (e.g., browsing news feeds, profiles, and photos without commenting or liking).

Given the face-to-face social impairments commonly associated with ADHD, symptoms of inattention and impulsivity may also influence the quality of social interactions of emerging
adults within SNS. That is, negative interactions that colour the offline social contexts of emerging adults with ADHD may also manifest in the online domain. Although the asynchronous nature of Facebook allows individuals more time to compose messages to others (Szwedo et al., 2012), symptoms of impulsivity may still prevent emerging adults from moderating their posts and messages which may be interpreted as others as inappropriate or offensive. Similarly, emerging adults who are inattentive may also fail to detect the important social cues present in the messages and online activity of others. A prospective study utilizing observational data on Facebook use found that although emerging adult women with histories of childhood ADHD showed greater preference for online social communication, they also had fewer Facebook friends and Facebook interactions of lower quality relative to comparison women with no history of ADHD (Mikami et al., 2015). This may suggest that emerging adults with ADHD are not only at risk for greater negativity in their face-to-face social interactions but in their interactions online as well.

Similar to their social experiences in face-to-face contexts, individuals who display symptoms of anxiety and depression may also struggle to engage in and engender online positive interactions (Davila et al., 2012; Feinstein et al., 2012). That is, the withdrawal, shyness, and negative self-impressions that often characterize the face-to-face interactions of emerging adults with anxiety and depression may also emerge in their online social experiences. They may be less likely to post content or provide comments that display support and positivity, and likewise may be less likely to elicit these types of interactions from others in their online friend network.

**Moderating Role of Psychopathology**

Although literature on the topic is limited, some research has suggested that psychopathology and maladjustment may affect the association between offline and online social
functioning. Sheldon (2013) found that lonely university students had fewer real-life friendships, but not fewer Facebook friends, compared to less lonely peers. Another study found that compared to their non-anxious peers, socially anxious adolescents more strongly believed in the utility of online communication as a tool for developing intimacy (Valkenburg & Peter, 2007). These findings suggest that greater maladjustment may be associated with a weaker correspondence between online and offline social functioning. That is, maladjusted individuals with poor face-to-face relationships may attempt to compensate by facilitating more positive online interactions. This conjecture aligns with the social compensation hypothesis which posits that socially anxious or lonely adolescents (which may include those displaying ADHD symptoms) with poor friendships in real life will more likely turn to online communication channels (McKenna & Bargh, 2000).

However, other studies report contradictory findings. For instance, Ellison et al. (2007) found that for university students reporting lower self-esteem and life satisfaction, those who endorsed greater Facebook use were also more likely to self-report benefitting from their face-to-face social relationships. This association was absent in university students reporting high self-esteem and life satisfaction. These findings instead support the rich-get-richer hypothesis which suggests that well-adjusted individuals who already possess strong social skills may also communicate more frequently online and have better interactions within this medium (Kraut et al., 2002). Similarly, maladjustment may have a pervasive negative impact on social functioning not only in an individual’s face-to-face relationships, but also in their online interactions. This suggests that the correspondence between offline and online social functioning may instead be stronger for those experiencing maladjustment. In sum, the influence maladjustment may have on the association between online and offline social functioning remains unclear.
The Current Study

The present study aims to advance existing literature on the nuances of online social functioning occurring on Facebook among emerging adults in their first year at university. The study goals include documenting distinctions between different aspects of Facebook interactions (relative to existing research that largely considers only the quantity and motivations of use), and further, exploring associations between such aspects of Facebook interactions and important constructs in face-to-face relationships. In addition, I investigate the associations between dimensions of online social functioning and common psychopathology (ADHD and anxious-depressive symptoms). Finally, I explore the potential moderating role of psychopathology on the associations between online and offline social functioning.

The present study is also unique because of its use of observational measures of online social functioning. The majority of existing studies have been limited to self-report data of online activity. As several investigators have suggested, this methodology may be subject to biases (Kirschner & Karpinski, 2010; Spies Shapiro & Margolin, 2014). For example, individuals may inflate reports of the number of Facebook friends they have in order to appear more popular. Accurate estimates of the amount of time spent on Facebook may also be difficult to report. By integrating observational data of the emerging adults’ Facebook activity, I hoped to provide a more accurate view of the nuances of their online social functioning.

Study Aims and Hypotheses

To my knowledge, this is the first study to explore the nuances of online social functioning (using observations) and their associations with face-to-face social functioning and psychopathology. First, using principal component analysis (PCA), I examined the factor extractions from the number of Facebook friends the participants’ have, the number of posts and
likes on their timeline (from themselves and their friends), general impressions (positive emotion, negative emotion, narcissism, and excessive self-disclosure) from participants’ Facebook profiles and timeline, and the content of their interactions (degree of emotional support, connection, verbal aggression, and deviant content observed from participants’ and their Facebook friends’ posts). Next, I investigated the associations between the online social factors identified by PCA and both face-to-face peer relationships as well as psychopathology. Face-to-face peer relationships were indexed by the presence of sociometrically-assessed acceptance and newly formed reciprocated friendships with new university peers. Psychopathology was indexed by the level of ADHD symptomatology and anxious-depressive symptomatology.

**Hypothesis 1.** I hypothesized that PCA of variables of online social functioning on Facebook would extract at least three latent factors. I hypothesized that the first factor would represent the degree of an individual’s Facebook involvement (Facebook Involvement). I expected the two remaining factors to reflect the quality of these online interactions. I hypothesized that the second factor might represent the degree of positivity in online interactions (Positive Facebook Interactions) while the third factor would reflect the degree of negativity in online interactions (Negative Facebook Interactions).

**Hypothesis 2.** I hypothesized that ADHD symptoms would be positively related to Facebook Involvement and Negative Facebook Interactions. I did not expect ADHD symptoms to be related to Positive Facebook Interactions.

**Hypothesis 3.** I hypothesized that anxious-depressive symptoms would be negatively related to Facebook involvement and positive Facebook interactions. I did not expect anxious-depressive symptoms to be related to Negative Facebook Interactions.
**Hypothesis 4.** I hypothesized that face-to-face social acceptance would be positively related to Facebook Involvement. I did not expect it to be related to either Positive or Negative Facebook Interactions.

**Hypothesis 5.** I hypothesized that face-to-face reciprocated friendships would be positively related to Positive Facebook Interactions and negatively related to Negative Facebook Interactions. I did not expect it to be related to Facebook Involvement.

**Exploratory analysis.** In an exploratory manner, I investigated the role of ADHD symptoms and anxious-depressive symptoms in moderating the associations between online and offline social functioning. Owing to the limited state of literature on the topic, I chose not to make a directional hypothesis.
Method

Participants

The study relied upon existing data from a sample of 240 university students enrolled in a large public university in Canada. All participants were either new international or Aboriginal first year students who attended a 2-week orientation program created by the university with the purpose of helping these students make a successful transition to university. These students represent an ideal population to examine because they had moved far away from home and/or familiar cultural contexts to attend university, and likely did not know anyone at university before they arrived. Therefore, I expected high face-to-face and online social activity as the students sought to form and maintain peer relationships.

Procedure

The present study used data collected in the years 2012 to 2014. All international and Aboriginal students starting at the university were strongly encouraged by university administrators to join the orientation program, and approximately 75% did so. All students attending the orientation program were invited to take part in our study. Study procedures were approved by an institutional review board, and written consent was obtained by participants.

The orientation program occurred during the 2 weeks before the start of the school year. During the orientation program, students were separated into program groups of approximately 26.79 students (SD = 5.12) based on their academic interests (e.g., arts, forestry, sciences), and all students within a group were previously unacquainted. Activities were planned within these groups for approximately 8 hours each day, and group members lived on the same dormitory floor. Shortly after the orientation program concluded (approximately 2 weeks into the school year), participants were asked to complete an online survey about their adjustment and face-to-
face social interactions in university. I also requested permission to observe their Facebook timeline (if they had one). Consenting participants then accepted a Facebook friend request from the study, allowing trained research assistants to view the participant’s Facebook timeline.

Measures

**Online social functioning.** Trained research assistants coded the last month of participants’ Facebook timeline activity. I emulated the methodology of Mikami et al. (2015) by excluding participants with fewer than 10 total posts on their timeline in the month preceding the coding. This is because a lack of posts may reflect inactivity on Facebook and may not be an accurate reflection of their online social functioning. Posts made by the participant and posts received from friends (on the participant’s timeline) were also coded independently. Coders were kept unaware of all other data about the participant. All participants’ Facebook profiles and timelines were double coded and the final scores on the Facebook variables were averages of the two coders’ scores. In order to assess inter-rater reliability, I calculated intraclass correlation coefficients (ICC; Shrout & Fleiss, 1979). ICC conventions are: below .40 = poor; .40-.59 = fair; .60-.74 = good; .75 and above = excellent (Cicchetti, 1994).

**Number of Facebook friends.** Coders recorded the total number of friends listed on the participant’s Facebook profile (ICC = .99).

**Number of posts.** Coders recorded the total number of posts on the participant’s Facebook timeline within the past month. As mentioned, posts from participants and friends were calculated independently (Participant ICC = .99; Friends ICC = .99).

**Number of likes.** Coders also recorded the total number of likes (from the participant and friends) on the participant’s Facebook timeline (Participant ICC = .99; Friends ICC = .99). Likes are short-form clickable responses to content (posts, profile pictures, videos, etc.).
**Connection.** Coders recorded the number of posts on the participant’s Facebook timeline that suggested that the participant and their friend also communicated outside of Facebook and shared a genuine relationship outside of the SNS (Participant ICC = .97; Friends ICC = .99). For example, statements such as “It was so good seeing you last night!” or a photo of the participant and the friend, would suggest ‘connection’. This construct was conjectured to differentiate between online interactions with existing friends and interactions with strangers or acquaintances. The number of posts from friends suggesting connection has been found to be associated with greater observed positivity in face-to-face peer interactions (Mikami et al., 2010). I computed a proportion score by dividing the number of posts suggesting connection by the total number of posts made during the coding period.

**Verbal aggression.** Coders recorded the number of posts on the participant’s Facebook timeline (from the participant or friend) that criticized, insulted or belittled the recipient (Participant ICC = .91; Friends ICC = .97). For example, a post directed from a Facebook friend to the participant, “Hey you hussie, you better call me back”, would suggest verbal aggression. I again computed a proportion score of the number of posts with verbal aggression divided by the total number of posts made during the coding period.

**Emotional support.** Coders recorded the number of posts on the participant’s Facebook timeline that suggested the participant or a friend was conveying encouragement, compliments, sympathy or empathy to a recipient (Participant ICC = .99; Friends ICC = .91). For example, posts in which the friend said “I feel blessed and lucky that you are my friend” would suggest emotional support. I computed a proportion score of the number of posts with emotional support divided by the total number of posts made during the coding period.
**Deviant content.** Coders recorded the number of posts on the participant’s Facebook timeline (from participant or from friends) displaying profanity, drug or alcohol abuse, or references to illegal activities or sexual content (Participant ICC = .82; Friends ICC = .97). This code was intended to capture activities that employers or parents may consider embarrassing or inappropriate. I computed a proportion score of the number of posts with deviant content divided by the total number of posts made during the coding period.

**Global impressions of Facebook activity.** Overall impressions were derived from participant posts, friends’ posts, profile pictures and cover photos. Coders rated the extent to which positive emotion, negative emotion, narcissism and excessive self-disclosure were displayed on participant’s profile. These constructs were rated on a 5-point scale ranging from 1 (Does not describe the participant at all) to 5 (this construct dominates the participant’s Facebook profile and characterizes the majority of the content on their timeline).

*Positive emotion.* Coders rated the overall degree to which the participant appeared to be upbeat and happy based on the participant’s Facebook profile and timeline (ICC = .87).

*Negative emotion.* Coders rated the overall degree to which the participant seemed to be lonely, upset, sad, anxious or angry (ICC = .84).

*Narcissism.* Coders rated the overall display of participant narcissism on their Facebook profile and timeline (ICC = .80). This construct aimed to capture the participant’s interest in presenting him/herself favorably and attracting attention from friends.

*Excessive self-disclosure.* Coders rated the degree to which a participant was sharing information about their own personal life that most people would consider embarrassing or too private to share in public (ICC = .85). A post by the participant saying “My girlfriend is addicted
to sex. But I’m the best she’s ever had” or photos of the participant in revealing clothing or in which they are simulating sexual acts would suggest excessive self-disclosure.

**Offline social functioning.** Dimensions of offline social functioning were assessed through sociometric measures that were part of the survey distributed shortly after the end of the 2-week orientation.

**Face-to-face social acceptance.** Participants were asked to complete an unlimited sociometric rating procedure (see Coie, Dodge, & Coppotelli, 1982) wherein each participant indicated how much he/she liked each person within their orientation group (e.g. “For each person, please indicate how you feel about them”) using a 5-point scale (1 = like a lot; 3 = neutral; 5 = dislike a lot). This rating was completed by participants following approximately 1 month of acquaintance with peers in their orientation group (2 weeks after the orientation program ended). Ratings on this measure may therefore reflect the degree of a participant’s sociability, or their ability to present a good first impression to others. Each participant’s score was the average of all ratings of the participant received from the other members in their orientation program group. Scores were reversed so that higher scores represented greater social acceptance.

**Face-to-face reciprocated friendships.** In the same sociometric procedure, participants were also asked to nominate peers in their group whom they considered friends (e.g. “Please put a check mark next to this person if you feel like they are a friend in real life”). Nominations were completed by participants approximately 2 weeks after the end of the orientation program (i.e., after about 1 month of acquaintance). Hence, friendship nominations may speak to a participant’s competency in forming potentially intimate peer relationships, although I note that given how soon in the school year these nominations were obtained, friendships were unlikely to be deep. An index score was calculated by first determining the number of reciprocated
nominations (in which both the participant and another peer in the group nominated one another) and then dividing this number by the total number of peers that made nominations in that group, thereby creating a proportion score. Thus, a higher score indicated greater reciprocated friendships.

**ADHD symptoms.** Participants completed the Barkley Current Symptoms Scale (Barkley & Murphy, 2006), a self-report scale designed for assessing current ADHD symptoms in adults. Participants responded to nine items measuring inattention (e.g., “I don’t pay close attention to details, so I will make careless mistakes in my work”) and an additional nine items measuring hyperactivity/impulsivity (e.g., “I feel restless and want to get up and move about when I am supposed to sit still or wait for things”), with each item answered on a Likert-type metric (0 = never or rarely; 3 = very often). Alphas in my sample were .77 for the Inattention subscale and .78 for the Hyperactivity/Impulsivity subscale, values which are consistent with published research (Ladner et al., 2011). Scores for each subscale represent the mean score of all items endorsed. Because the two subscales were highly intercorrelated ($r = .71; p < .001$), a composite score of ADHD symptoms was calculated by taking the average of the scores of the Inattention and Hyperactivity/Impulsivity subscales.

**Anxious-depressive symptoms.** Participants completed the Depression and Anxiety subscales from the Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983). The BSI is a shortened version of the Derogatis Symptom Checklist (Derogatis & Unger, 2010) and has been widely used as a measure of self-reported psychological distress and psychopathology in both clinical and community samples (Derogatis & Savitz, 2000). Test-retest reliability of the BSI ranges from .68-.91 (Derogatis & Melisaratos, 1983). The subscales of the BSI also show excellent convergent validity with other measures of psychopathology such as the Minnesota
Multiphasic Personality Inventory (MMPI; Boulet & Boss, 1991). Both the anxiety and depression subscales contain 6 items each. Alphas in my sample for the subscales were .90 and .91 respectively. Each item is rated on a 5-point scale of distress from 0 (not at all) to 4 (very much). Scores for the Depression and Anxiety subscales reflect the mean score of all items in each subscale, with higher scores indicating greater symptomatology. The subscales were correlated .85 (p < .001) with each other. A composite score of anxious-depressive symptoms representing the average of the subscales was created.

Data Analytic Plan

Power analysis. An a-priori power analysis for linear multiple regression revealed that to achieve a medium effect size of 0.15 ($f^2$; see Cohen, 1992) with power set at .99, an N of approximately 164 would be needed to obtain statistical power. Although previous research with similar hypotheses to the current study have generally found large effects ($f^2 \geq .35$; Ellison et al., 2007; Steinfield et al., 2008), a more conservative power analysis was chosen. All power analyses were conducted using G*Power 3 software (Faul, Erdfelder, Lang, & Buchner, 2007).

Hypothesis 1. The factors underlying my measures of online social functioning were extracted using principal components analysis (PCA) with direct oblimin rotation. Following the recommendations of Costello & Osborne (2005), I retained factors that lay above the point of inflexion on the scree plot. I hypothesized that at least three factors would be extracted (Facebook Involvement, Positive Facebook Interactions, and Negative Facebook Interactions).

Hypothesis 2 and 3. I conducted hierarchical multiple regression analyses to test Hypotheses 2, 3, 4, and 5. Continuous variables were z-scored in order to center them as recommended by Aiken and West (1991). For Hypothesis 2, that greater ADHD symptoms would predict greater Facebook Involvement and Negative Facebook Interactions, I entered
gender at Step 1 as a covariate. This is because previous work has pointed to gender differences in SNS usage (Mehdizadeh, 2010; Muscanell & Guadagno, 2011). At Step 2, I entered ADHD symptoms and anxious-depressive symptoms. Factors identified by the PCA were entered as outcome variables. The same regression model was used for Hypothesis 3, that anxious-depressive symptoms would predict lower Facebook Involvement and greater Positive Facebook Interactions.

**Hypotheses 4 and 5.** For Hypothesis 4, that greater social acceptance would predict greater Facebook Involvement, I entered gender at Step 1 as a covariate. At Step 2, I entered my measure of social acceptance from university peers. The proportion score of participants’ reciprocated friendships was also entered at Step 2. The same regression model was used to test Hypothesis 5 that more reciprocated friendships would predict higher levels of Positive Facebook Interactions and lower levels of Negative Facebook Interactions. Factors identified by the PCA were entered as outcome variables.

**Exploratory analysis.** To explore the potential moderating role of both ADHD symptoms and anxious-depressive symptoms on the association between online social functioning and face-to-face peer relationships, gender was entered at Step 1. At Step 2, I entered my measures of ADHD symptoms and anxious-depressive symptoms. At Step 3, I entered my measure of social acceptance with university peers based on the sociometric ratings they received and the proportion score of participants’ reciprocated friendships. At Step 4, I entered the two-way interaction terms between social acceptance and ADHD symptoms, social acceptance and anxious-depressive symptoms, reciprocated friendships and ADHD symptoms, and reciprocated friendships and anxious-depressive symptoms. The same model was repeated
for all factors identified by PCA. Post-hoc probing was conducted on significant interactions according to recommendations outlined by Holmbeck (2002).
Results

Descriptive Statistics

Descriptive statistics of study variables are presented in Table 1. Most study variables were normally distributed with skewness less than +/- 2. As expected with a community sample of new university students, levels of self-reported psychopathology were low. In addition, participants tended to be socially well-accepted by peers but had relatively few reciprocated friendships.

Dimensions of Online Social Functioning

PCA was conducted on the 17 Facebook variables with oblique rotation (direct oblimin). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO = .74 (‘good’ according to Hutcheson & Sofroniou, 1999). Bartlett’s test of sphericity $\chi^2 (136) = 1328.83, p < .001$, also indicated that correlations between items were sufficiently large for PCA. An initial analysis to obtain eigenvalues for each component in the data revealed that six factors that had eigenvalues over Kaiser’s criterion of 1 and in combination, accounted for 67.0% of total variance in the model. However, the scree plot indicated inflexions that justified only retaining the four largest factors. Given the large sample size and the convergence of the scree plot, I only retained the four factors in the final analysis.

Table 2 presents the factor loadings after rotation. The items that load on the same factors suggest that factor 1 represents Facebook Involvement, factor 2 represents Positive Facebook Interactions, factor 3 represents Narcissistic Self-Presentation and factor 4 represents Negative Facebook Interactions. The Facebook factor of Narcissistic Self-Presentation was skewed, such that for most participants this construct was displayed to a lower degree.
Zero-order correlations between study variables are reported in Table 3. ADHD symptoms were positively correlated with Negative Facebook Interactions. Social acceptance was positively correlated with Facebook Involvement and Positive Facebook Interactions. Reciprocated friendship was positively correlated with Positive Facebook Interactions and Narcissistic Self-Presentation.

**Psychopathology as Predictors of Online Social Functioning**

As displayed in Table 4, greater ADHD symptoms significantly predicted greater Facebook Involvement and Negative Facebook interactions above and beyond gender and anxious-depressive symptoms. Anxious-depressive symptoms, however, did not predict any indices of online social functioning after accounting for ADHD symptoms and gender.

**Face-to-face Peer Relationships as Predictors of Online Social Functioning**

As displayed in Table 5, greater social acceptance predicted lower levels of Narcissistic Self-Presentation. However, social acceptance was not a significant predictor of Negative Facebook Interactions, Positive Facebook Interactions or Facebook Involvement after accounting for gender, psychopathology and reciprocated friendships.

More reciprocated friendships, by contrast, was associated with greater Facebook Involvement and Narcissistic Self-Presentation. However, reciprocated friendship was not a significant predictor of Positive Facebook Interactions or Negative Facebook Interactions after accounting for gender, psychopathology, and social acceptance. Notably, the associations between face-to-face peer relationships and indices of online social functioning remained significant after accounting for ADHD and anxious-depressive symptomatology (see Table 6).
Moderator Analyses

As shown in Table 6, the interaction terms between psychopathology and face-to-face peer relationships did not significantly predict any aspect of online social functioning.
Discussion

The current study identified distinct aspects of emerging adults’ Facebook interactions, and explored the associations between online interactions and psychopathology. Further, I sought to understand the associations between online social functioning and face-to-face (offline) peer relationships, as well as the potential role that psychopathology may play in moderating the associations between online and offline social functioning. Results revealed four aspects that constitute emerging adults’ Facebook activity: Facebook Involvement, Positive Facebook Interactions, Negative Facebook Interactions, and Narcissistic Self-Presentation. Emerging adults who reported more ADHD symptomatology had greater Facebook Involvement and more Negative Facebook Interactions. Emerging adults who were more accepted by peers displayed less Narcissistic Self-Presentation. In contrast, a greater number of reciprocated friendships was associated with greater Facebook Involvement and Narcissistic Self-Presentation. Associations between online and offline social functioning did not differ based on psychopathology.

Facets of Online Social Functioning

As hypothesized, emerging adults’ Facebook interactions appear to be multi-faceted and comprised of distinct dimensions. This finding provides support for the idea that the online social interactions of emerging adults are not merely superficial. Rather, these interactions can be complex and nuanced, and differ across individuals, thus providing an ideal lens in which to understand social functioning in emerging adult populations.

We found that activity on Facebook can be characterized by not only the individuals’ frequency and intensity of Facebook use (Facebook Involvement) but also the quality of those interactions (Negative and Positive Facebook Interactions). More specifically, my analyses revealed that Facebook content evidencing negative emotion, verbal aggression, and deviant
content, which align more readily with negatively valenced face-to-face social interactions, appear to be distinct from positive content indicating emotional support and connection. These findings mirror the distinction between negative and positive social interactions present in face-to-face peer relationships (Parker & Asher, 1993).

Taken together, these findings may suggest greater complexity in online social functioning than previously thought. Contrary to early work suggesting that online communication may only be relevant to superficial relationships with strangers and are almost always poor quality as a result (see Valkenburg & Peter, 2007), the current findings provide support for the idea that emerging adults instead show variability in the positive and negative quality of their online interactions – paralleling their face-to-face interactions.

Interestingly, a fourth factor also emerged (Narcissistic Self-Presentation), suggesting that an emerging adult’s Facebook interactions can also be understood in terms of the degree of Narcissistic Self-Disclosure observed on their Facebook profile. Although unexpected, this is not surprising considering that narcissism has been identified as a common construct displayed on SNS such as Facebook (Buffardi & Campbell, 2008; Carpenter, 2012). Presentations of narcissism based on an individual’s Facebook activity and profile photos can also be reliably detected by strangers (Buffardi & Campbell, 2008). The emergence of Narcissistic Self-Presentation on Facebook may be due to the fact that SNS are in part designed to fulfill the user’s need for self-presentation and impression management (Krämer & Winter, 2008; Mehdizadeh, 2010). This may be accomplished through Facebook’s sharing-centered features such as status updates, comments and posting photos. Apart from being an appealing platform for narcissists (Ryan & Xenos, 2011), use of Facebook has also been suggested to engender greater narcissistic behaviour among users in general (Twenge & Campbell, 2009).
Interestingly, my analyses revealed that the Facebook construct Narcissistic Self-Presentation was comprised of not only observed narcissism and excessive self-disclosure but also emotional support provided by Facebook friends. This result is inconsistent with existing literature on the association between narcissistic self-disclosure and emotional support. In face-to-face contexts, narcissists are initially perceived as being more socially attractive than non-narcissists, but these positive responses tend to dissipate over time (Young & Pinsky, 2006; Paulhus, 1998). On Facebook, emerging adults who were high in self-reported narcissism also received fewer comments and likes in response to their status updates on Facebook compared to their peers with low narcissism (Choi, Panek, Nardis, & Toma, 2015). Several studies have also documented links between intimate or inappropriate self-disclosure on SNS, and lower levels of interpersonal attraction from strangers (Baruh & Cemalcilar, 2015; Lin & Utz, 2017). Collectively, these findings suggest that narcissism and excessive self-disclosure should instead be met with lower emotional support from friends, not more.

It is important to note, however, that existing literature has focused on the relationship between offline narcissism and Facebook responsivity. Although this literature informs our understanding of the relationships between face-to-face and online social functioning, these findings do not necessarily speak to the association between narcissistic SNS content (which may be distinct from narcissism displayed or perceived in face-to-face relationships) and Facebook responsivity. Further, the current study stands in contrast to existing literature in that I am observing the responses of friends and acquaintances to self-disclosure and perceived narcissism, as opposed to the judgements of strangers.

We argue instead that Narcissistic Self-Presentation observed on Facebook may reflect a distinct social construct or norm that uniquely emerges in online social interactions. That is,
Facebook activity that may appear to convey narcissism and inappropriate self-disclosure may instead reflect an individual’s openness to sharing information with their online social network in an attempt to deepen relationships. Indeed, SNS such as Facebook exist in order to facilitate greater self-presentation, thereby allowing friends and acquaintances to feel more connected with the discloser on these digital networks (Nadkarni & Hofmann, 2012). Content that may be perceived as narcissistic or inappropriate when expressed in face-to-face contexts with acquaintances may instead be attempts at building familiarity and intimacy with friends on SNS. Thus, when narcissism is viewed instead as a normative effort to develop intimacy online, Facebook friends may reciprocate by providing responses that evidence positivity and support.

**Psychopathology as Predicting Online Social Functioning**

Emerging adults who reported greater ADHD symptoms were also more socially active and involved on Facebook. This finding aligns partially with previous literature reporting that emerging adult women with ADHD show greater preference for online over face-to-face social communication (Mikami et al., 2015). Yet, the same study also found that despite a greater preference for online forms of communication, women with ADHD had fewer Facebook friends relative to comparison women, suggesting less involvement on Facebook. This inconsistency with the findings of the current study may be explained by differences in the study populations. The sample in Mikami et al. (2015) consisted of emerging adult women participating in a longitudinal study (some of whom were university students but many of whom were not), whereas the current study exclusively observed emerging adult university students at a competitive institution. As use of Facebook may be more ubiquitous in university students, there may be a greater translation of preferences for online communication to actual Facebook Involvement in a student population. This may be because university students, especially those
of whom are leaving home for the first time, are highly motivated to develop new social networks and sources of support. Facebook presents an inexpensive and effective solution in which to develop and manage these social relationships. Further, the current study examined not only the number of Facebook friends the participant may have, but other indices of Facebook use as well (i.e., quantity of posts, likes received and given by participants), which may provide a more nuanced view of emerging adults’ involvement on Facebook.

Greater involvement on Facebook in university students with ADHD may in part be due to the SNS’ potential as a mechanism for procrastination. Students in general typically engage in procrastination as a stress-relieving response in the face of intended, but subjectively aversive tasks (Blunt & Pychyl, 2000). Recent work has also suggested that features inherent in the SNS such as real-time notification alerts and ever-changing news feeds may make Facebook a perfect outlet for procrastination among emerging adult university students (Przepiorka, Błachnio, & Díaz-Morales, 2016; Smock, Ellison, Lampe, & Wohn, 2011). Due to the academic rigors of university, students are expected to invest a large amount of time and energy on their academic responsibilities. However, students with ADHD who already struggle in academic settings may also lack sufficient cognitive resources to permit successful self-regulation processes necessary for maintaining focus on their work and avoiding procrastination. Indeed, low self-control and impulsivity have been linked to greater use of Facebook for procrastination (Meier, Reinecke, & Meltzer, 2016). Therefore, students with ADHD symptoms may show greater Facebook Involvement relative to their peers who may be less prone to procrastination and distractibility and may suffer academically because of it (Junco, 2012).

In line with my hypothesis, the present study found that emerging adults who reported greater ADHD symptomatology also engaged in more Negative Facebook Interactions (indexed
by verbal aggression, negative emotion and deviant content). Thus, symptoms of impulsivity and inattention may not only impair the face-to-face social functioning of emerging adults with ADHD, but also their online social functioning as well. During childhood, individuals are thought to develop mastery over important social skills (such as perspective-taking and identifying social cues) through their peer experiences (Pedersen, Vitaro, Barker, & Borge, 2007). These peer relationships provide children with opportunities in which to learn and practice what behaviours are appropriate, when to engage in emotion regulation, and how to appropriately convey what one is thinking. However, as peer relationship impairments are common in children with ADHD, these children may ultimately be deprived of otherwise normative opportunities in which to develop key social skills. Just as these social skill deficits may extend into the face-to-face interactions they may have as adults, the online social interactions of emerging adults with ADHD may be similarly affected (Mikami et al., 2015).

Contrary to my hypotheses, anxious-depressive symptomatology was neither related to the degree of Facebook Involvement, nor the positivity in Facebook interactions. This runs counter to extant literature in both online and face-to-face contexts which have suggested that anxious-depressive symptomatology may negatively influence social functioning (Davila et al., 2012; Tse & Bond, 2004). There may be several reasons for the discrepancy in findings. Because participants in the current study do not represent a clinical sample, the anxious-depressive symptoms reported by participants may not be severe enough to impact the quantity and quality of their online social interactions. This is especially relevant as the study’s data was collected during a period of time in which participants may have been functioning the best, as participants had yet to have any academic responsibilities and were participating in enjoyable social activities with new peers. Indeed, levels of reported symptomatology were relatively low (see Table 1),
meaning most participants in the sample reported being “not at all” or “only a little bit” distressed by anxious-depressive symptoms. Future studies may investigate the impact of symptoms on SNS interactions for emerging adults scoring above a clinically relevant cut-off of anxious-depressive symptomatology.

Further, just as social interactions in the online domain are not mere mirrors of face-to-face interactions, perhaps the social impact of anxious-depressive symptomatology may vary across mediums. That is, anxious-depressive symptoms such as social withdrawal, negative affect and reassurance-seeking behaviour may have a greater influence on face-to-face interactions. Indeed, supplementary analyses revealed a significant relationship between the number of participants’ face-to-face reciprocated friendships and self-reported anxious-depressive symptoms (see Table 3). It may be that the absence of certain social cues as well as the ability and time to exert greater control over one’s self-presentation may serve to protect emerging adults from the social impact of their internalizing behaviour on SNS by allowing these individuals to “choose” what others in their online social network learn about them.

It is important to note that existing studies examining the relationship between psychopathology and online social functioning have largely relied on self-report measures (Davila et al., 2012; Feinstein et al., 2012). The measurement of variables using the same method and informant may lead to the inflation of the strength of observed associations (DeVellis, 2003). Thus, observed associations between anxious-depressive symptoms and online social functioning in extant literature may be partially affected by shared method variance. It is possible that individuals who display depressive and anxious symptomatology may also be more likely to interpret social interactions more negatively (see Tse & Bond, 2004). Deficits in social self-evaluation and subsequent anxiety over social encounters may contribute to the decreased report
of positive social interactions in both face-to-face and online social environments. In advance of other work on the topic, the use of observational measures of online social interactions in the current study may serve to reduce the impact of shared method variance on my findings.

Face-to-Face Peer Relationships and Online Social Functioning

Emerging adults who established a greater number of face-to-face reciprocated friendships also evidenced greater Facebook Involvement. As my study captured a sample of students who had moved away from home and likely had no pre-existing social connections in the university, these students may have employed SNS such as Facebook to connect with new peers. This is in line with existing literature suggesting that students may begin communicating with new peers through online mediums during the transition to university in order to establish a university affiliated social network (Madge, Meek, Wellens, & Hooley, 2009; McEwan, 2011). Indeed, the ease with which Facebook allows individuals to identify others and learn about them may encourage new university students to use Facebook as a means of “social information-seeking” in order to establish common ground for future social interactions (Ellison, Steinfield, & Lampe, 2011).

Contrary to my hypothesis, greater Facebook Involvement did not predict greater social acceptance in my sample. It is important to note however that my measure of Facebook involvement indexed the intensity of Facebook activity with all Facebook friends (not specific to students’ program peers). Therefore, an individual’s degree of involvement on Facebook overall may not reflect how much they are accepted or liked in the circumscribed social context of their program group. Emerging adults who have moved from afar to attend university may still be utilizing Facebook primarily as a means to maintain communication with friends and family from home. Use of Facebook in this manner could explain the lack of an association between
Facebook Involvement and face-to-face social acceptance. Further, as my sample was composed of students who had just begun university (when they are most motivated to form peer relationships), the majority of participants were generally well-liked by peers. Thus, participants’ Facebook Involvement may not have as large of an association with their face-to-face social acceptance at this time so early in the school year.

Contrary to predictions, neither the number of participants’ face-to-face reciprocated friendships nor their social acceptance was significantly related to the quality of their Facebook interactions. It was hypothesized that the degree of negativity or positivity in emerging adults’ Facebook interactions may hinder or facilitate the formation of face-to-face dyadic friendships. However, it may be that because participants in my sample had only known each other for approximately 1 month, their interactions on Facebook may not have had sufficient time to impact their relationships with new university peers. As participants were in the process of getting to know each other, interactions on Facebook with new peers may still have been casual and superficial (e.g. information seeking, passive browsing), evidencing neither negativity nor positivity.

Instead, the positive and negative quality of Facebook interactions in the current study may better reflect interactions that participants are having with old friends from home. This may particularly be the case given that participants have only just begun university and have yet to fully transition to a reliance on their new social support network. Although I potentially thought that positive and negative interaction tendencies with old friends might carry over to ways the participant approaches interactions with new university peers, there may be specific ways that emerging adults use Facebook features (commenting, liking, posting) to facilitate the development of new friendships. Unfortunately, the coding system does not allow me to separate
out interactions with old friends from interactions with new university peers. This may obscure the direct associations between the Facebook indices of relationship quality and emerging adults’ newly established peer relationships.

Interestingly, greater Narcissistic Self-Presentation observed from participants’ Facebook activity was related to a greater number of reciprocated friendships but lower peer acceptance. This finding further exemplifies the multi-faceted nature of peer relationships and how each aspect may be uniquely related to online social functioning. As mentioned previously, narcissistic SNS content may serve as a means to facilitate self-presentation and connection with friends in the online domain. However, it appears that this newly emerged social norm may be nuanced. Perhaps the tolerance, acceptance, and in some cases, encouragement of Narcissistic Self-Presentation may only emerge in relationships that are more intimate. Unlike friends, acquaintances may instead object to narcissistic self-presentation, leading to decreased liking of the poster of the content. This interpretation aligns with previous work linking narcissism and excessive self-disclosure with more negative judgements from strangers (Baruh & Cemalcılar, 2015; Kauten, Lui, Stary, & Barry, 2015; Lin & Utz, 2017). Within friendships, however, the act of self-disclosure may instead serve to connect individuals and deepen relationships in online social environments. By increasing self-disclosure, friends are allowed access to a greater amount of information and context, thus enabling them to learn more about the poster and to establish common ground. Therefore, I speculate that the associations between Narcissistic Self-Presentation and face-to-face peer relationships may differ based on the degree of closeness and intimacy within those relationships.

My findings also suggest that the associations between online and offline social functioning may be equally present regardless of emerging adults’ levels of psychopathology.
symptoms. That is, the interplay of online social interactions and face-to-face peer relationships may be universally applicable; relevant not only for well-functioning individuals but also for emerging adults who experience ADHD and anxious-depressive symptomatology. Again, as I have captured a high-functioning sample, reported psychopathological symptomatology may not have been severe enough to impact the influence emerging adults’ online social interactions may have on their face-to-face peer relationships, or vice-versa.

**Study Strengths and Limitations**

To my knowledge, the present study represents one of the first efforts to explore the multi-faceted nature of online social functioning using observational measures. Observing both the quantity and quality of participants’ Facebook interactions as opposed to only relying on self-reports of their online activity ensured the validity of the constructs in my findings. In addition to observational measures of online social functioning, participants’ face-to-face peer relationships were sociometrically assessed and psychopathology was self-reported. Utilization of independent reporting sources reduced concerns regarding shared method variance between predictor and outcome variables. In addition, prior to the orientation program, participants in my study were unacquainted with their program peers, providing a unique lens in which to observe the associations between emerging adults’ online social functioning and their ability to establish new face-to-face peer relationships.

Despite the strengths of this study, several limitations also warrant consideration. First, findings derived from my sample may not generalize to other emerging adult Facebook users. The associations between online social functioning on Facebook and the formation of new peer relationships may be most prominent for emerging adults who have moved away from home to attend university. To compensate for the loss in social support networks due to this transition,
these emerging adults may be particularly motivated to establish new peer connections and to utilize SNS such as Facebook to facilitate this endeavour. However, I do suspect that the pattern of findings regarding the relations between online and face-to-face social functioning may be similar in other emerging adult Facebook users.

Another limitation of my study concerns the assessment of face-to-face peer relationships. The present study assessed the quantity of reciprocated friendships, which only captures one facet of emerging adults’ friendships (Hartup, 1995). Although I suspect that the assessment of friendship quality and stability (other important facets of friendship) may be inappropriate due to the nascent nature of participants’ peer relationships, I am also limited in the conclusions I can draw about the associations between online and face-to-face social functioning.

**Implications**

Findings from the current study assist our understanding of the nuances of online social interactions. The factors extracted from my analyses provide further evidence that social interactions online are multi-faceted (Courtois, All, & Vanwynsberghe, 2012). Further, my findings suggest that online and face-to-face social functioning may be somewhat intertwined. Due to the rapid proliferation of new communication mediums and a high adoption rate of such tools among emerging adults, it is imperative that researchers, clinicians, and administrators alike understand how this segment of the population is utilizing SNS in order to establish and maintain social relationships. Observing both the online and offline interactions of emerging adults may provide a much richer view of their overall social well-being.

Lastly, results suggest the importance of understanding the association between psychopathology and online social functioning. If there are bi-directional influences between online and offline social functioning, greater insight into the way in which individuals with
ADHD may communicate online may pave the way for the development of novel interactions. McKenna & Bargh (2000) speculated that positive interactions in online settings may lead to improvements in self-efficacy which would in turn improve self-confidence and competence in social abilities displayed in face-to-face settings. As online interactions are asynchronous in nature, responses of individuals with ADHD can be carefully guided and evaluated. Because SNS have become entrenched in the way emerging adults communicate with each other, social skills imparted by these online interventions could potentially aid in improving the face-to-face social functioning and peer relationships of individuals with ADHD.

**Future Directions**

Although my findings provide support for the postulated relations between online and offline social functioning, research in this area is incipient and I am currently unable to speak to the directionality of these relationships. Existing research has suggested that our online activity in SNS like Facebook may be reflections of our personality and face-to-face social functioning (Marshall, Lefringhausen, & Ferenczi, 2015; Weidman & Levinson, 2015; Wu, Chang, & Yuan, 2015). Much like a telephone, SNS have been viewed merely as tools that provide an outlet for individuals, to extend and augment their ability to communicate with others. However, it is unclear whether online interactions may also have downstream effects on face-to-face social functioning as well. That is, could changes in the way one communicates socially online facilitate similar changes in offline interactions? Future studies should employ longitudinal designs when examining the association between online and face-to-face social functioning in order to establish temporal precedence and to better elucidate directionality.

As mentioned, the assessment of the quality and stability of face-to-face friendships in my sample may be inappropriate, given the newness of the friendships. However, future research
incorporating the assessment of these facets of friendship may aid in evaluating the current study’s pattern of findings in more established peer relationships. Furthermore, the variety of different SNS and social media platforms made available to users has drastically increased in recent years. Approximately 56% of adults currently use more than one of these social media platforms (Pew Research Center, 2016). It is important to note that each SNS is unique in the features and services offered, not mere clones of one another. Preliminary research has suggested that differences inherent in these SNS may influence the motives for using these different SNS (Utz, Muscanell, & Khalid, 2015). Differences in the motivations of use may influence how individuals may use these platforms. That is, while emerging adults may be using Snapchat primarily as a tool for communicating with close friends, they may use the features of Facebook to maintain connections with their social network at large. Thus, in order to gain a much richer understanding of an individual’s online social functioning and its impact on face-to-face peer relationships, future studies should assess social interactions across a range of SNS.

**Conclusion**

The current study elucidated the nuances of online social functioning and their associations with face-to-face social functioning and psychopathology among emerging adults. As expected, online social interactions on Facebook were comprised of independent facets which were differentially associated with face-to-face peer relationships. Interestingly, my findings suggest that some of these facets may be emergent social phenomena unique to this digital medium. Further, psychopathology in emerging adulthood may be associated with a greater degree of negative online social interactions.
Table 1

Descriptive Statistics of Study Variables

<table>
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<tr>
<th>Variable</th>
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<th>SD</th>
<th>Min</th>
<th>Max</th>
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<td>0.75</td>
<td>16.77</td>
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<td>Posts (Pt)</td>
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</table>

Note. ADHD = attention-deficit/hyperactivity disorder; Fr = Facebook Friend; Pt = Participant.
Table 2

*PCA of Online Social Functioning Variables*

<table>
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<tr>
<th>Variable</th>
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<th>Factor 3</th>
<th>Factor 4</th>
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*Note.* Bold-faced values represent factor loadings that belong to each extracted factor. Fr = friend; Pt = participant
### Table 3

**Correlations between Study Variables**

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</table>

*Note.* ADHD = attention-deficit/hyperactivity disorder; FB = Facebook.

*p < .05; **p < .01.
Table 4

*Psychopathology as Predictors of Online Social Functioning*

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<tr>
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<th>Δ(R^2)</th>
<th>β</th>
<th>Step 1</th>
<th>Δ(R^2)</th>
<th>β</th>
<th>Step 1</th>
<th>Δ(R^2)</th>
<th>β</th>
<th>Step 1</th>
<th>Δ(R^2)</th>
<th>β</th>
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<td>Gender</td>
<td>.09</td>
<td>Gender</td>
<td>.02*</td>
<td>Gender</td>
<td>-.14*</td>
<td>Gender</td>
<td>.01</td>
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<td>.02*</td>
<td>Step 1</td>
<td>.00</td>
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</tr>
</tbody>
</table>

Note. *p < .05; **p < .01.
Table 5

Peer Relationships as Predictors of Online Social Functioning

<table>
<thead>
<tr>
<th>Facebook Involvement</th>
<th>Positive Facebook Interactions</th>
<th>Negative Facebook Interactions</th>
<th>Narcissistic Self-Presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\Delta R^2$</td>
<td>$\beta$</td>
<td>$\Delta R^2$</td>
</tr>
<tr>
<td>Step 1</td>
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<td></td>
<td>Step 1</td>
</tr>
<tr>
<td>Gender</td>
<td>.13</td>
<td>Gender</td>
<td>.09</td>
</tr>
<tr>
<td>Step 2</td>
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Note. *$p < .05$; **$p < .01$. 
Table 6

**Peer Relationships and Psychopathology as Predictors of Online Social Functioning**

<table>
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<th>Positive Facebook Interactions</th>
<th>Negative Facebook Interactions</th>
<th>Narcissistic Self-Presentation</th>
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<td>( \Delta R^2 )</td>
<td>( \beta )</td>
<td>( \Delta R^2 )</td>
<td>( \beta )</td>
</tr>
<tr>
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<td>Step 1</td>
<td>.01</td>
</tr>
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<td>Gender</td>
<td>.13</td>
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<td>.09</td>
</tr>
<tr>
<td>Step 2</td>
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<tr>
<td>Step 3</td>
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<td>Social Acceptance</td>
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*Note.* *p < .05; **p < .01.
References


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https://doi.org/10.1207/s15374424jccp1603_8


https://doi.org/10.1097/01.nmd.0000120884.60002.2b


Appendices

Appendix A – Brief Symptom Inventory (BSI)

In the past few weeks since I arrived at UBC, I have been bothered by:

1. Nervousness or shakiness inside
   
   Not At All  A Little Bit  Moderately  Quite A Bit  Extremely

2. Thoughts of death and dying
   
   Not At All  A Little Bit  Moderately  Quite A Bit  Extremely

3. Suddenly scared for no reason
   
   Not At All  A Little Bit  Moderately  Quite A Bit  Extremely

4. Feeling lonely
   
   Not At All  A Little Bit  Moderately  Quite A Bit  Extremely

5. Feeling blue
   
   Not At All  A Little Bit  Moderately  Quite A Bit  Extremely

6. Feeling no interest in things
   
   Not At All  A Little Bit  Moderately  Quite A Bit  Extremely

7. Feeling fearful
   
   Not At All  A Little Bit  Moderately  Quite A Bit  Extremely

8. Feeling hopeless about the future
   
   Not At All  A Little Bit  Moderately  Quite A Bit  Extremely

9. Feeling tense or keyed up
   
   Not At All  A Little Bit  Moderately  Quite A Bit  Extremely

10. Spells of terror or panic
    
    Not At All  A Little Bit  Moderately  Quite A Bit  Extremely
11. Feeling so restless I can’t sit still

| Not At All | A Little Bit | Moderately | Quite A Bit | Extremely |

12. Feelings of worthlessness

| Not At All | A Little Bit | Moderately | Quite A Bit | Extremely |
Appendix B – Current Symptoms Scale (CSS)

1. I don’t pay close attention to details, so I will make careless mistakes in my work
   - Never or rarely
   - Sometimes
   - Often
   - Very Often

2. I tend to fidget with my hands, tap my foot, or squirm in my seat when I am sitting down
   - Never or rarely
   - Sometimes
   - Often
   - Very Often

3. I have difficulty keeping my attention on things, for instance, when I am doing schoolwork or in a lecture my mind wanders
   - Never or rarely
   - Sometimes
   - Often
   - Very Often

4. I like to get up and leave my seat in situations when I am expected to stay in my seat
   - Never or rarely
   - Sometimes
   - Often
   - Very Often

5. I tend to not listen when people are talking to me because I am daydreaming or thinking about something else
   - Never or rarely
   - Sometimes
   - Often
   - Very Often

6. I feel restless and want to get up and move about when I am supposed to sit still or wait for things
   - Never or rarely
   - Sometimes
   - Often
   - Very Often

7. If I get a multi-step instruction for a class assignment, it is hard for me to remember to follow through on all the steps, and I might leave the work incomplete
   - Never or rarely
   - Sometimes
   - Often
   - Very Often

8. I have trouble not being loud when I am having fun, even in situations when I am supposed to be quieter
   - Never or rarely
   - Sometimes
   - Often
   - Very Often

9. I have difficulty organizing things and staying organized about things such as my room, class
notes, or work schedule

Never or rarely  Sometimes  Often  Very Often

10. I am always on the go and rushing about from one thing to another, as if I am driven by a motor

Never or rarely  Sometimes  Often  Very Often

11. I avoid, dislike, or put off (procrastinate doing) anything where I would have to concentrate for a long time or put in sustained mental effort

Never or rarely  Sometimes  Often  Very Often

12. I talk too much or talk in situations when I am not supposed to be talking

Never or rarely  Sometimes  Often  Very Often

13. I lose things that I need for tasks, activities, or schoolwork

Never or rarely  Sometimes  Often  Very Often

14. I have trouble waiting for people to finish asking a question before I jump in with the answer

Never or rarely  Sometimes  Often  Very Often

15. I get distracted easily by sounds, sights, or things around me

Never or rarely  Sometimes  Often  Very Often

16. I have trouble waiting and get impatient, for instance while in line at the store or at the bus stop, or in traffic

Never or rarely  Sometimes  Often  Very Often

17. I forget what I am supposed to be doing, appointments I have made, or when assignments are due

Never or rarely  Sometimes  Often  Very Often
18. Its hard for me to not interrupt other people when they are talking

<table>
<thead>
<tr>
<th>Never or rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very Often</th>
</tr>
</thead>
</table>

Appendix C – Facebook Coding Manual

UBC Facebook Coding Manual (Abbreviated)

Last Revised: September 7, 2013 by Amori Mikami and David Szwedo
B. Number of Friends

CODE CURRENT FRIENDS

You can find this information on the Timeline directly under the cover photo; there should be a box that says the word “Friends” in the row under the cover photo. Sometimes if the box is not there, you can find it by scrolling down the page and looking at the left hand column, where you will see a box that says “Friends” at the top and then has pictures of the participant’s friends.

B1. Jump Start Learning Community (LC) Friends

Record the Facebook friends the participant has from among consented study participants in their Jump Start learning community (LC) of approximately 20-30 fellow students.

The coding sheet contains the list with all the possible names of the LC members who consented to the study (although not necessarily to the Facebook part of our study). Indicate beside each name on the coding sheet either “Yes” or “No” for whether this LC member is Facebook friends with the participant, then sum the total of “Yeses” and put it on the first page in the “# Jump Start LC Friends” box. We advise that you use a highlighter to mark each LC member who is friends with the participant so that it is easy to determine later whether or not they are posting or liking things on the participant’s Timeline.

Finding whether someone in the LC is friends with the participant can be done by: (a) looking at the box on the top of the Timeline that says “Mutual Friends” and then scanning those people for the LC members on the list on the coding sheet; and (b) after that, clicking on the “Friends” box on the participants’ Timeline page and typing in the names of remaining members of the LC who are not mutual friends to determine if they are also friends with the participant. The reason why this two-part procedure is necessary is because the list on the coding sheet contains everyone from the participant’s LC who consented to the study, but some of them may be Facebook friends with the participant yet not show up in the “Mutual Friends” box because they are not friends with the study page. However, they are still friends with the participant.

If the participant has blocked his or her friends list from the study page, you should still try to determine whether a LC member is friends with the participant by: (a) looking in the “Mutual Friends” box and scanning the mutual friends section for the names of each person on the LC member list; and (b) searching for LC member on Facebook to see if that person has a page with an open friends list and the participant is on that list; and (c) looking at who has commented or liked things on the participant’s page (in the coding period only) and seeing that some of those people are LC members. In this case, you would record the number of LC friends you found after all three endeavors, but would circle “Not Confident” in addition to the number you put down to indicate that you are not confident in this answer.

B2. Jump Start Program Friends

Several LCs come together as part of a larger Jump Start Program group within the same field (e.g., Arts, Sciences, Commerce, Applied Sciences, and Land and Food Systems/Forestry). There
are five Facebook pages for the study and we have kept Jump Start participants in the same field together on the same Facebook page. Finding this total can be done by: (a) taking the total number of LC friends who were not mutual friends (who you had to search to find); (b) after that, counting the total in the “Mutual Friends” box. Note that you can count the number of rows times the number of columns for a quicker way to get the total as opposed to counting individual friends. You would sum (a) and (b) together to get the total number of JS Program friends. There is no need to record the names of these friends. (Note that this number will include all the LC friends).

If the participant has blocked his or her friends list from the study page, you will follow the procedure above, but also circle “Not Confident”. We recognize that there will be some Jump Start Program group members who are friends with the participant, but not part of the participant’s LC and not mutual friends with the study page- and this procedure will not catch them; but, it would be too much work to try to find them if they are not mutual friends.

B3. UBC Affiliated Friends
Click the “Friends” box. For many participants, after you do this it will say “College” across the top bar. If you click on the word “College” then a page with all the college friends will show up and a number will show up directly to the right of the word “College”. If this is present, record the number on the coding sheet. I believe that the full number of friends will be listed next to “College” at this point on Facebook. However, if for some reason the number of friends is listed as 99+, just record “99+” and there is no need to count the actual number. Do not add the number of JS Program friends to this total.

For some participants, “from College” will not be present on their top bar, in which case there is no way to determine the number of UBC friends the participant has. Similarly, if the participant has blocked his or her friends list from the study page, you will also not know the number of UBC friends the participant has. In both cases, record the number of UBC affiliated friends you are able to see (which would just be the same number as the “Jump Start Program friends”) but also circle “Not Confident” on the coding sheet.

Duplicated friends, missing friends, and organizations
We recognize there will be some friends who are part of the LC but not part of the College network (even though they should be), whereas others are part of both. Unfortunately there is no easy way to tell this without checking each friend one by one, and this is not realistic. As well, it may look like a friend is an organization page (e.g., UBC Ballroom Dance) but you notice that they show up as a “friend” in the College network. Count them as a friend anyway, because it is not realistic for you to go through each friend to determine if they are a real person.

B4. Total Friends
Click the “Friends” box. For many participants, after you do this it will say “All Friends” across the top bar on the far left. There should be a number printed directly to the right of the words “All Friends”. Record the number on the coding sheet. (Note that this number will include the
friends at UBC and in the Jump Start Program and in the LC). If the participant has blocked his or her friends list from the study page, you would not write anything and then circle “Unknown”.

**B5. Friends Added Recently**

Click the “Friends” box. For many participants, after you do this it will say “Recently Added” across the top bar. If you click on the word “Recently Added” then a page with all the recently added friends will show up and a number will show up directly to the right of the word “Recently Added”. If this is present, record the number on the coding sheet. If the friends list is open to the study page but “Recently Added” does not appear across the top bar then this means that the participant has not recently added any friends, in which case you would write “0”. If the participant has blocked his or her friends list from the study page and this is why you can’t see the “Recently Added” tab (you would know this because you could only see your mutual friends but no other tabs), you would not write anything and then circle “Unknown”.

**D. Posts on Timeline**

**CODE THE PAST MONTH OF FACEBOOK ACTIVITY**

Check the *last month of activity* for (a) participants’ posts on his/her own page (status updates, pictures, links, likes); (b) Jump Start learning community (LC) friends’ posts on the participant’s page (whether initiated by the friend as a post or a picture, or posted in response to the participant’s status update, link, or picture); and (c) all other friends’ posts on the participant’s page (whether initiated by the friend as a post or a picture, or posted in response to the participant’s status update, link, or picture).

**Determining the coding period**

The coding period begins one month before the current day you are on. Count from the same day you are on the current month in the previous month, regardless of how many days are in the month. If you are on a day that is not in the previous month (due to the previous month being shorter than the current month), count from the last day of the previous month. For instance: If you are coding on November 11th (5p.m.) you would look at all posts from October 11th (anytime, so 12:00 a.m. on) through the current day. You would not consider posts occurring on October 10th (11:59p.m.) or before. (It does not matter that October has 31 days, not 30). If you are coding on December 15th, you would look at all posts from November 15th on. (It does not matter than November has 30 days not 31). If you are coding on December 31st, you would look at all posts from the last day of November (the 30th) on through the current day (and not consider anything occurring on November 29th or before). If you are coding on March 31st, you would look at all posts occurring on the last day of February (the 28th) on.

It does not matter if no posts have been made on the current day, you’re still going to consider the coding period to be 1 month back from the current day. So for instance, imagine you are coding on January 5th, 10p.m. The most recent post the participant has made is on January 1st. Your coding period is still from December 5th (12a.m.) through January 5th, 10p.m. NOT from Dec 1st to January 1st.

Record the current date and time of coding and the coding period at the top of the coding sheet.
For all the participants, two research assistants will be coding the same page independently so that we can calculate inter-rater reliability. It is super important that both research assistants are coding the same thing. Therefore, whoever is Coder 1 should put down the date (and time) they coded the page, and then the date that they looked at posts from (e.g., the coding period). The second person will probably code the page at a later date, but will need to make sure that s/he only codes the posts that the first person saw (e.g., the identical coding period as Coder 1). Here is a situation where this might get tricky. Suppose you are Coder 2 and it is September 16th, and you know the first coder had coded a participant’s page on September 12th, 9p.m. The participant posts something on September 12th, 8p.m. You would code this post. However, a number of friends have now responded to the participant’s post over the last 4 days. In this case, you should be sure to only code the friends’ responses that occurred before September 12th, 9p.m., even though they are in response to a participant’s post that occurred before the deadline.

Think of it this way: the second coder needs to be trying to “see” the page in the exact same way as the first coder did. We realize it is possible that this won’t happen exactly, because for instance, a participant could delete a post in between the time that the first and second coder viewed the page. We try to have the first and second coder work as close to the same time as possible to avoid this.

**Making sure you find all posts made during the coding period**

If the month you are coding for spans more than one ‘calendar month’ (i.e., from August 15th to September 15th), the posts from the previous month may not naturally appear on the participant’s Timeline. Therefore, you will need to check for past month’s posts by looking at the right side of the participant’s Timeline. There is a vertical bar chronicling the years that the participant has been using Facebook. On this vertical bar you should see “Recent” and then the most recent years in succession (e.g., “2013,” “2012,” “2011,” etc.). If you click on the year then each month during the year should come up. Make sure to specifically click the months that you are interested in so that all posts made during that month should come up. This is especially an issue if you are Coder #2 and it is the beginning of a month. So, for instance, say Coder #1 coded the period of September 30- August 30 2012. Now you are Coder #2 and you need to go back to look at this same period of time, but it is October 2nd 2013. This means that when you look at the participant’s Timeline on the right side-bar, “now” will indicate October, “September” will indicate the previous month, and “2013” will appear. However, you will need to click on “2013” to bring up “August” and then click on “August” to bring up the posts that happened on August 30th (the last day of the coding period) or it will look to you like those posts do not exist.

Note: Typically Facebook does not archive posts that occur within the last month. Then at a certain point Facebook will lump all the posts that happened during the same year into one box that says, for instance, “Friends 2012”. Importantly, once this happens, you can’t tell by looking at the box when each post occurred, or any responses to the post. However, if you follow the method described above to click on the month in the right side-bar, this should separate the posts again so that you can see all posts individually.

**Finding the date and time that a post occurred**

The date that a post occurred is generally right below the name of the person who posted (if the original post in a stream), or at the end of a post (if it’s a comment in a stream to an original
post). If the post happened too recently though it may say things like “3 hours ago” or “2 days ago”. As well, sometimes Facebook hides the time that a post occurred if it’s on an original post or if it happened too recently. You can fix both these problems by taking the mouse and hovering over the date, and the full date and time will come up.

**D1. Birthday in Past Month**

We are screening participants so that they have not had a birthday in the past month when they are assigned to coders. However, sometimes we may miss things. Specifically, it is possible that the participant won’t have his/her birthday posted on the Timeline (or visible to the study), but then as you are looking at his/her page you’ll see a mass of friends posting “Happy Birthday” messages (which Facebook often lumps into one box). If it seems to you that the participant has had a birthday during the coding period, please let us know as soon as you realize this. This is so that we can assign you another participant.

**D2. Number of Posts and “Likes” from Participant**

The number of posts and the number of “likes” from the participant will be counted separately on the coding sheet. Count the total number of posts from the participant on the participant’s Timeline that have occurred during the last month. Include status updates, links, pictures posted to the Timeline, the participant’s comments on his/her own status updates, as well as responses on the participants’ page to friend-initiated posts. Count the total number of times the participant has “liked” something, whether it is his/her own post or someone else’s. Generally speaking, count every time the participant has posted something as a post.

*Friend 1: (posting on participant’s Timeline) What’s up?*
  *Participant: (in response to Friend 1’s post) Not much, you?*
  *Friend 1: See you tonight at dinner. P.s. You rocked it out at practice today!*
  *Participant: Cool =)*

This would count as two posts from the participant (not one), even though both posts are in response to the same original post by Friend 1.

*Participant: (posts as status update) soooooo hungry*
  *Participant: (comments on own status) ah, got fries*
  *Friend1: nom nom (Participant likes the Friend 1’s “nom nom” comment)*

This also counts as two posts from the participant (not one), even though the second post was in response to the original post. This counts as one “like” from the participant.

*Participant: (posts a picture on the Timeline with a comment) Loving it*

This counts as one post from the participant, not two, because the comment refers to the picture. As well, if the participant had posted a link and a comment, this would still be one post because the comment refers to the link. Note that if the participant had just posted a photo or link with NO comment, this would still count as one post.
Participant: (posts a picture on the Timeline with a comment) Awesome times
   Participant: that’s easy living
   Friend 2: LOL (and “likes” the participant’s picture)
   Participant: can’t wait to go back
   (Participant also “likes” the original picture that s/he posted)

This is three posts from the participant, one for the original photo and comment, and two more for the responses. This also counts as one “like” from the participant (as participants can “like” their own posts). This counts as one post and one “like” from the friend. This would also be the same if the photo the participant posted was a profile picture or cover photo (and the change got posted to the participant’s Timeline); you would count this as one post by the participant, and code any responses/likes to that picture. However, do not count profile pictures (and the posts/likes on profile pictures) if they were not posted to the Timeline.

**Photo albums**
Sometimes a participant may upload a photo album with many pictures in it. The participant may publish the whole album to Timeline. On the Timeline it will show the cover page of the album and three album pictures that are small on the bottom, or it will just show three small pictures if the participant did not designate what the album cover should be, and potentially the participant’s comment introducing the album, such as it would for an individual picture posted to the Timeline. Count the post of the album plus the comment as a single post. Do not count individual photos posted in the album as individual posts. If the participant (or friends) comment on or “like” the main post of the album beyond the participant’s original post introducing the album, you would count each comment as an additional post and each “like.” Do not count comments or “likes” (either from the participant or from friends) on pictures within the album. Sometimes a participant may add a new photo within the past month on an old album that was started several months ago. If this happens, the album will rise in the Timeline to the new date in which the update was made, and you should code the new additions as one post from the participant. However, you should be sure when you are checking the other posts from the participant and friends on the post indicating the album that you only count the ones that occurred within the last month (e.g., within the coding period).

**Tagged in pictures**
You may see one post that says “participant was tagged in 9 pictures” and it shows the first three on the participant’s Timeline. You should count the whole thing as one post. In order to determine who posted the album, you may have to click on one of the pictures because it may not say on the Timeline who did the posting of the album. Recall that it is important to determine who posted the album because this album would count as one post by the original poster, who may not be the participant.

**Other**
You may see check-ins at locations, trip advisor, answers to polls, scores in online games, results on quizzes, and confirmations of attending events. The rule of thumb you want to use is that if it is clear when this activity occurred (and it occurred in the past month), if it is posted on
Timeline, and if it is possible for friends to like or post comments in response to this, consider each one as a post from the participant. If the participant makes a comment to introduce the check-in, score, etc., count the comment and the result as one single post from the participant (as you would if the participant commented when posting a photo or a link to Timeline). If it is not possible for friends to like or post comments in response to this, then don’t count it as a post.

**Recent Activity box and Places box**
Sometimes you will see a Recent Activity box is in the left hand vertical column in Timeline, and it includes friends added, pages liked, and sometimes confirmations of events attended. Additionally, sometimes there is a Places box that says the name of the month and then “visited X places” with a map and markers. Don’t count these as posts. You are already recording the friends added and pages liked in other places on the coding sheet, and you are already recording the confirmations of events and places the participant went to as posts where they appear on the Timeline.

**D3. Number of Posts and “Likes” from Jump Start LC Friends**
For each consented member of the LC (approximately 20-30; see list of names on coding sheet), count the total number of posts that each member made on the participant’s page in the coding period (e.g., the last month). This can be done by looking on the coding sheet for the LC members who are checked off as Facebook friends. (Again, it is recommended that you use a highlighter on the list of names of these friends on the coding sheet so they are easier to find). Then, for each friend’s name, you will need to look at the participant’s Timeline and count the total number of posts and “likes” on the participant’s page that this friend made in the coding period.

That is, LC member #1 will have the number of posts and “likes” recorded, then LC member #2, through LC member #20. It is expected that some (many) LC members will have zero posts and “likes” on the participant’s page in the past month. For LC members who are friends with the participant but have no posts on the participant’s page, these members would receive zeros by their names in the coding sheet. For LC members who are NOT friends with the participant (and therefore would, by default, have no posts on the participant’s page), leave the section for the tallies by their names blank.

Consider each time a friend posts (even if in response to the same original post or status update) to be a separate post.

*Friend 1: (posts on participant’s Timeline) What’s up?*
  *Participant: Not much, you?*
  *Friend 1: See you tonight at dinner. P.s. You rocked it out at practice today!*
  *Participant: Cool.*

This is considered to be two posts for Friend 1 (not one).

*Friend 2: (posts a link to an article on the participant’s Timeline, with no comment; likes the post)*
Participant: LOL

This is considered to be one post and one “like” for Friend 2. If the friend had posted a link to an article or a picture on the participant’s Timeline with a comment, that would still be considered to be one post (not two) because the comment goes with the link/photo.

D4. Number of Posts and “Likes” from All Other Friends
Record the total number of all other friends’ posts and “likes” that have occurred during the coding period (e.g., over the past month). Do NOT include the posts from the members of the LC, and do NOT count posts from the participant on his/her own page in this total. You do not need to separate these posts by the friend’s name, just count the total number all together.

E. Quality Indicators of Posts
CODE THE PAST MONTH OF FACEBOOK ACTIVITY

Each post (not “likes”) made from the participant, members of the LC, and all others in the past month will be coded on quality indicators. This will be coded for the participants’ posts all together, then separately for each member of the LC’s posts, and then for all other friends together. This means that LC member #1 will receive codes to indicate the number of posts that are characterized by the following quality indicators, as will LC member #2, all the way through LC member #20. For LC members who are friends with the participant but have not made any posts in the past month, they will receive zeros for their scores on these quality indicators. For LC members who are NOT friends with the participant and have no posts by default, leave the section on the coding sheet blank for their scores on these quality indicators.

Order in which to code posts
Code beginning from the oldest post in the coding period (e.g., September 15th) and progress to the most recent (e.g., October 15th) as opposed to the other way around. Within a stream (multiple comments on one post), start with the original post and code the quality indicators on that post. Then move down one by one and code each comment individually. Don’t read the whole thing first. This is so that you do not use later information to change your interpretation of earlier posts.

When you can use earlier information to influence your codes
You can use earlier information within a stream to help you understand what the words in a later post in that stream literally mean. For instance, “I am” means nothing unless you know what the person is responding to. Do not use earlier information in a post stream to help you determine whether the poster likely meant something as Supportive or Relationally Aggressive, whether the poster and recipient have Connection, whether the poster was joking or not. Do not use earlier information from streams other than the current one. Do not use later information, even if within the same stream, to influence your codes of earlier posts; in other words, don’t go back and change your codes because of something you learned that happened in a later post.
Consider every post separately
Consider every post separately. In other words, in the following exchange:

Participant: Can’t wait for tonight!
Friend: Yeah, see you soon!
Participant: See you at 8 =)

The participant’s first post is not coded as anything (although you could think about it as contributing to the Positive Emotion global code, as the participant seems like a happy person) because you do not know that the participant is happy because s/he will be seeing a Facebook friend. The Friend’s post is Connection (because it is clear that the Friend will be seeing the Participant). The participant’s second post is Connection because it is another confirmation referring to seeing the friend. However, the participant’s first post does not then become Connection too.

Participant: Can’t wait to see you tonight at 8!
Friend: Yeah, see you soon!
Participant: Oh shoot, I totally forgot- I can’t make it after all

In this situation the participant’s first post is Connection and so is the friend’s response. However, even though you realize by the participant’s second post that they are not getting together after all, this does not make you change your code of the first post.

How many quality indicators can a post have?
It is possible for a post to have more than one quality indicator.

Friend 1: (posts on participant’s Timeline) What’s up?
Participant: Not much, you?
Friend 1: See you tonight at dinner. P.s. You rocked it out at practice today!

Participant: (posts as status update) sooooo hungry
Participant: ah, got fries
Friend 1: nom nom

Post 1 from the Friend 1 would be nothing. Post 2 from Friend 1 would have both Connection and High Emotional Support Given. Post 3 from Friend 1 (in fries example) would be nothing.

However, each post can only get a maximum of one for each quality indicator. In other words, if someone posts and says they are having dinner with three Facebook friends, this post gets one score for Connection, not three scores for Connection. As well, for Emotional Support Given, if this code is present it is either High or Low, not both High and Low. In other words, if the post says, “your dress is pretty, I love you” this is High Emotional Support Given (for the “I love you”, and because the High trumps the Low), not one score for Low (for the pretty dress) and one score for High (for the I love you).
**Totaling quality indicators**

Imagine that Friend 1 (in the example above) is a LC member and that these three posts are the only times that Friend 1 has posted on the participant’s Timeline in the past month. In that case, on the coding sheet, next to the name of Friend 1, you would put one instance of Connection and one instance of High Emotional Support Given, and zeros for the other quality indicators. In other words, the totals of quality indicators for each friend in the LC are summed across all the posts for that friend. As well, the quality indicators across all the posts that the participant has made are summed together and one total is reported for the participant for each indicator. The quality indicators across all the posts that all other friends not in the LC have made are summed together and one total is reported for the “all other friends” line at the bottom of the coding sheet for each indicator.

**Towards whom is the post directed?**

Participants receive scores on quality indicators for any post on their Timeline regardless of which friend the post is directed to (or how many friends). (Exception: Connection. The participant’s post must be directed towards a specific Facebook friend to count as Connection.)

*Participant: awesome dinner yesterday with my best friends Ron and Jeff (not tagged); you always have my back and I’ll always have yours*

This is one score for High Emotional Support Given. It is still High Emotional Support Given, even though the friends are not tagged. It is not Connection, however, because the friends are not tagged. If the participant had tagged specific Facebook friends, it would count as Connection.

However, friends will only receive scores on Quality Indicators when their posts are directed toward the participant. For example:

*Friend 1: (posts on participant’s Timeline) life sucks*

*Friend 2: [Friend 1], I love you and am always here for you*

Friend 1’s post is a Call for Emotional Support. We can assume it is directed at the participant because it is posted to the participant’s Timeline. Friend 2’s post is counted under the tally of posts from this friend, but would not be scored for High Emotional Support Given because it is not directed towards the participant.

*Friend 1: (posts on participant’s Timeline) how much is the I-phone 5?*

*Participant: 16gb $200 32gb $300 64gb $400*

*Friend 2: ^ that’s the price with plans*

Friend 1’s post is Call for Instrumental Support. We can assume it is directed at the participant because it is posted on the participant’s Timeline. The participant’s response is Instrumental Support Given. Friend 2’s response is counted under the tally of posts from this friend, but would NOT be scored for Instrumental Support Given because it is not information directed towards helping the participant, it is directed towards Friend 1.
Similarly, Relational Aggression posts from friends must be directed towards the participant (insulting/criticizing/belittling the participant or making the participant look bad) and not directed towards other people for them to count.

Sometimes it may be difficult to tell whether a friend’s message is directed towards the participant or not. For example:

*Friend 1:* (posts on participant’s Timeline) Friday was so fun

*Friend 2:* looking forward to seeing you next week!

Friend 1’s post is considered Connection because we can assume it is directed at the participant, as it is posted on the participant’s page. Friend 2’s post is more confusing because it is not clear whether Friend 2 is referring to getting together with Friend 1, with the participant, or both. However, it is probably safe to assume this is refers to the participant because Friend 2 had to go on the participant’s page to write it. So in the absence of information indicating the contrary, count Friend 2’s post as Connection.

*Friend 1:* (posts picture that tags multiple people, including the participant, so the picture appears on the participant’s Timeline, but actually it is posted originally on Friend 1’s page)

*Friend 2:* (comments on picture) looking forward to seeing you next week!

Friend 1’s post is again considered Connection because it contains a picture of the participant and implies that Friend 1 and the participant saw each other in person. In this case, however, it is probably more likely to that Friend 2’s post refers to Friend 1 instead of the participant because the post originated on Friend 1’s Timeline. Unless Friend 2 had said “Friend 1 and participant name, looking forward to seeing you next week”, you should assume that the comment is directed only toward Friend 1.

Basically, if a post from a friend was posted directly onto the participant’s Timeline, you should be inclined to count that (and any subsequent posts) as directed toward the participant, unless there is specific, explicit information to indicate that this is not true. However, if the post from a friend was initially posted on his/her own Timeline or someone else’s Timeline but it also appeared on the participant’s Timeline because the participant was tagged in that post, then you should be inclined to consider that post and any subsequent posts as directed towards the original place it was posted and not toward the participant, unless there is specific, explicit information indicating the contrary.

**E1. Connection**

This code assesses degree to which the participant and his/her Facebook friends also communicate outside of Facebook in the present time. Friends’ Connection must be with the participant to be counted. “Present time” means that the relationship should be within the past year, as opposed to being with someone who you used to be in touch with a long time ago but this is no longer true. Facebook friends who communicate with each other outside of Facebook even if they do not see each other in person (e.g., keeping up via emails, calls, texts, Skype)
and/or friends who hang out in person, would have Connection. For the participants in our study (who are UBC first years), if the post is from someone who they were in touch with back home but have not seen since they moved to Vancouver, this is still Connection (because of the 1 year rule). There are several ways Connection might be evidenced:

**Past meetings**
Any comment that references a time in the past that individuals last talked outside of Facebook (including email, phone, Skype, text) or saw each other in person should be counted as Connection. In the absence of information that explicitly explains that the interaction occurred outside of the past year, assume that it happened in the past year.

*Friend: HEY! it was good seeing you last night. it had been FOREVER!!!!*

*Participant: (status update) So happy to have had the lovely [Friend tagged] in town.*

*Friend: I messaged you, check your inbox*

*Friend: I do with him like we used to do; hang out every day after school and do homework and listen to K-Pop* (assuming these meetings happened in past year)

Any comment that references a place or event AND tags a Facebook friend, even if it does not directly say in the comment that the Facebook friend attended with the poster, we infer that the poster and tagged friend went together so it is Connection.

*Friend: Thanks for the amazing weekend, Seattle – with (friends tagged)*

*Participant: at Joe’s Crab Shack – with (tagged friend)*

*Participant: shopping is exhausting! – with (tagged friend)*

*Participant: Solid 12 hours and counting — with [name of friend] at Boulder, Colorado.*

Any picture posted by the participant that includes a friend who is tagged, we assume to represent a past meeting (even if the participant is not in the picture). In the absence of information that the picture or meeting occurred over 1 year ago, code as Connection. Not everyone has to be tagged in the picture for it to count as Connection; just having one Facebook friend tagged in the picture is enough. Any picture of the participant posted by a friend on the participant’s Timeline, even if the participant is not tagged, is also Connection so long as it is obvious it is the participant.

*Participant: The old team back in action. — with [name of friend tagged]*
Any picture of a place or event posted by the participant with a friend tagged (even if the picture does not contain the friend), or vice versa, any picture of a place or event posted by the friend with the participant tagged (even if the picture does not contain the participant) counts as Connection. What we are assuming here (which we realize is an assumption) is that this implies that the participant was at this event with the friend.

Not Connection. “This picture was from Christmas 2009” (explicitly over 1 year ago); picture of participant and friend as children (if they look 14 and under, do not count it as Connection, otherwise consider it to be Connection in the absence of information that the picture was taken over 1 year ago); friend posts a picture of plants, the weather, cheesecake, sunset etc. on the participant’s Timeline but the participant is not in the photo and there is no comment to indicate that the participant and friend were at this event together; friend posts “I found my missing ring!” and tags the participant (not a place/event)

Future meetings
A confirmation of a time when the individuals actually plan to talk, communicate, see each other, or otherwise get together to do something. Invitations to get together do not count as Connection, no matter how serious they sound. For confirmations of future meetings, we want to feel fairly confident (>50%) that the individuals will actually follow through on their plans. This will sometimes require your own judgment, but you are looking to see if the individuals have designated a specific time to do something or sound committed (at the time on Facebook at least). The future meeting could be social/fun or could be work related (e.g., getting together to work on a group project for a class or lab).

Friend: Can you come over Friday?
Participant: hell to the yeah!
Participant: oh wait, sorry, I can’t after all =/ next week?
The friend’s invitation is not Connection but the participant’s first response is. The participant’s second response is not Connection, however this does not make you go back and change your code for the first response. Remember that later information in a post stream cannot change your codes for earlier information.

*Friend: I’ll call you in the evening sometime this week*

*Participant: You should come to the PNE with us Saturday at 5
    *Friend: Ok ok, I think I’ll go*

Although in these previous two examples the friend could be more definitive about calling/going, this is a strong enough confirmation to be considered Connection.

**Not Connection.** “*Call me sometime*”; “*we should have lunch*”; “*maybe I’ll see you there*” (not definite enough confirmations). Also, “*anyone want to have dinner – [multiple tagged friends]*” is not Connection; don’t let the tagging throw you off, it’s the same as an invitation. If a friend says they’ll be at an event too but the event is big such that it would be unlikely they would see each other (such as a sporting event or a concert), unless they have made specific plans to actually find each other/sit together/meet up during the event, it is not Connection. However if they would probably see each other (such as a house party) this is Connection.

**Shared information/inside jokes**
Connection can also be indicated by posts that reveal information that is probably only known by the person posting and the individual they are posting to. You would presume, based on reading the post, that the recipient probably told the poster the information at another point in time (presumably not on Facebook), and the poster remembers it and is referring to it on Facebook. The information the poster is referring to cannot come from the same post stream. In the absence of information that this exchange occurred prior to 1 year ago, assume Connection.

*Friend: Hey bro, how did the exam go?* (If not in response to post in the same stream that the recipient had an exam)

*Friend: How do you like your new haircut* (If not in response to post/picture in the same stream about the participant getting a haircut)

*Friend: remember chicken legs? Hahaha* (Without explicit information to the contrary, assume that information exchange has continued in the past year.)

*Participant: I almost got in a car crash today and it reminded me of (tagged friend)*
(Without explicit information to the contrary, assume that information exchange has continued in the past year.)

*Friend: Breaking Bad is starting again, do you still have a crush on XX?*
Participant: Posts link to article – “I have a feeling that (tagged friend) is NOT going to like this

Last two examples imply that the recipient and poster had an interaction outside of Facebook to create this inside joke

Not Connection. “remember chicken legs in 3rd grade? Hahaha” (explicit that information came from outside the past year); “Breaking Bad is starting again – [tagged friend]”; posts link to article “what would [tagged friend] think?”; friend posts link to YouTube video on participant’s Timeline with no comment (in last 3 examples, not clear enough implication that poster and recipient had an interaction outside of Facebook to create this inside joke). Friends’ posts on participant’s page asking “how is UBC/Canada/university?” (this information is too apparent on the participant’s page, but when the participant posts similar questions back to friends on the participant’s own page, this counts as Connection, unless the friend had just provided this information in the same post stream.)

Sushi and Connection examples
Here are some examples that are NOT Connection:

Friend: (posts on participant’s Timeline) sushi rocks (could be inside joke or a reference to a past meeting, but could also just be the friend saying he likes sushi. This is similar to the “Breaking Bad is starting again” example of Not Connection)

Friend: remember sushiiiiiiiiiiii-a-boom-boom when we were growing up (inside joke, but the shared information occurred outside of the past year)

Friend: Are we getting sushi Sunday? (invitation to a future meeting, not a confirmation)

Participant: (posts link to article about how to make sushi - tags friend) (possible that the friend and the participant have discussed this in the past or made sushi together, but it is not clear enough unless it said something like “I know (tagged friend) would like this”)

Participant status update: at sushi with Friend Name (not tagged) (we do not know if it is a Facebook friend)

Participant: (posts picture of self and friend at sushi, no tags) (again, we do not know if it is a Facebook friend)

Friend: (posts picture of sushi on participant’s Timeline, does not tag anyone) (no tags on picture, participant is not in picture)

Here are some examples that would be Connection:

Friend: sushiiiiiiiiiiiiiiii-a-boom-boom (probably inside joke, similar to the “Breaking Bad is starting again, do you still have a crush on XXX” example of Connection. We assume the joke occurred in the past year)
Friend: Sunday (if in response to the question of “when are we getting sushi” in the same post stream) (confirmation of a future meeting)

Participant: (posts link to sushi restaurant- tags friend) (post about a place/event and a friend is tagged, so we assume they went together)

Friend status update: sushi rocks – (with tagged participant) (post about a place/event and the participant is tagged. This is admittedly more ambiguous than if the friend had said ‘getting sushi/at sushi restaurant- with tagged participant’ but it is more likely they went together to eat sushi because it is a status update tagging the participant as opposed to a post from the friend that says ‘sushi rocks’ on the participant’s Timeline; the current example is more like the “shopping is exhausting- with tagged friend” example of Connection)

Participant: (posts picture of sushi, tags friend) (it’s a picture of a place/event – sushi restaurant- so we are assuming that the participant and friend were there together.)

Friend: (posts picture of participant eating sushi on participant’s Timeline but does not tag participant) (because it is posted to the participant’s Timeline and obvious it is the participant, it is Connection because the friend posted it)

**Participant’s versus friends’ posts**

If a friend posts on the participant’s page “how is UBC going?” or “hope you are having a good time at university/Canada” this is not Connection because it is probably obvious when looking at our participants’ pages that are going to UBC (it typically says so on their profile) and it does not mean that the participant and the friend actually know each other/keep in contact. However, if a friend posts something on the participant’s page and the participant responds “how is university going for you?” this counts as Connection, unless the friend had just provided this information in the same post stream. Although it is possible that the friend could just as easily have their university prominently displayed on his/her page, because there is no way to check up on that (and because the participant is posting on his/her own page where s/he cannot immediately see where the friend is at school), give the participant the benefit of the doubt and consider this Connection.

**E3. Emotional Support Given (Low and High)**

Emotional Support Given aims to capture the extent to which posts are characterized by encouragement, compliments, understanding, caring, validation, sympathy, or empathy to a recipient. Emotional Support Given does not have to follow a Call for Emotional Support to be coded. Friends’ Emotional Support Given must be directed to the participant to be counted, although the participants’ Emotional Support Given could be directed toward any friend.

Record the number of supportive posts that appear according to their level of support (i.e. Low vs. High). A single post can either be Low or High Emotional Support Given (or neither), but not both. If there are parts of the post that are Low and parts of the post that are High Emotional
Support Given, the whole post counts for one single score of High ES Given because High trumps Low. To determine whether a comment is Low, High, or No Support, consider these indicators:

**Low Emotional Support Given**
These messages offer a low level of encouragement, compliments or good wishes, but in a way that is more superficial, more generic, and less intense than the High Support messages do.

**Appearance or character.** Low Support comments are often compliments about a recipient’s appearance or compliments about a recipient’s page or things/items that the recipient owns as opposed to comments about a recipient’s character/talents/personality or comments validating the friendship/relationship between the poster and recipient.

*Friend: i'm in love with your eyelashes.*

*Friend: that picture is most glorious*

*Friend: hey sweetheart i know it has been forever, you still look fantastic!*

*Friend: yea girl, I’m lovin’ the page, especially the background.*

*Friend: You always have the coolest boots! So jealous!*

*Friend: your phone case is so cute!*

**General or specific to recipient.** Low Support comments are often general well-wishes that could be said to most anyone, as opposed to being specific messages that the poster had to think of and devise that would only fit the recipient based on something particular the poster knows about the recipient (personally tailored to the recipient). If the comment is directed toward multiple recipients instead of to one recipient, it is more likely to be general (because it is more difficult to think of a specific, tailored, personalized message that still fits multiple recipients), although there could be exceptions to this.

*Friend: Happy New Year! I hope you had an excellent holiday.*

*Friend: I hope you guys have a great and fun spring break.*

*Friend: I hope you have a great start of the semester*

Although it is true that not everyone could receive this message because not everyone is starting a semester, it seems like the poster could have said this to a lot of people. Also, the poster did not put in any special information that would only fit the participant, such as “I’m thinking you’re really going to love your art class” or “I know you are working all those hours at your job too, but you can do it!” which would make it High Support instead of Low.
Participant: my sorority sisters are awesome

Here is an example of a phrase that could potentially be more about personality/character/talents/friendship than appearance/things owned, thus tipping it to High Support if it was directed toward one recipient. However, because it is directed to multiple participants, it seems general and not personalized, and therefore would be probably be Low Support (also because it’s not intense enough – see next paragraph).

**Casual or intense.** Low Support comments are more casual expressions of validation or caring, as opposed to having the intensity of emotional expression that often characterizes High Support. For instance, “luv ya” “xoxo” (Low Support) versus “I love you” (High Support), or “miss you” “miss ya’””miss your face” (Low Support) versus “I miss you” and “miss you SO much!” (High Support). Low Support statements are those that would seem more expected (and not out of place) in either a casual friendship or a close/intimate relationship, but importantly, two people would not have to be close friends in order to say such a statement.

*Friend: Soooo excited we’re facebook friends now! Can't wait to keep in better touch this way!*

*Participant: [in response to Friend’s post] I’m thinking about you too! Call me soon.*

*Participant: miss ya/miss you/miss your face*

*Participant: love ya/love you/hugs*

*Friend: heart symbol/xoxo*

A heart symbol or a xoxo must be clearly directed at the participant by a friend, or at a friend by the participant, to be counted as Low Emotional Support Given. In other words, a friend should post a heart by itself on the participant’s Timeline, or under a picture of the participant. If the friend posts the heart under a picture of something else such as sushi, or in response to a post by the participant in the same stream referencing sushi, this does not count as Low Emotional Support because it is not clear enough that the heart is directed toward the participant as opposed to the sushi.

*Participant: great to see you/good to see you/it was so fun to see you*

*Friend: Looking forward to seeing you/can’t wait to see you*

*Friend: Nobody could ever replace you hahaha but I found a new half-asian friend who is just like you*

The “hahaha” and the second half of the phrase about the new half-asian friend makes the “nobody could ever replace you” more casual and less intense, and therefore a good example of Low Support. If it had only said “nobody could ever replace you” this would be intense enough to be High.
**High Support Given**
These messages offer strong encouragement, understanding, caring, validation, sympathy, and empathy in a way that is deeper, more intense, or more personalized/tailored to the recipient than the Low Support messages do.

**Appearance or character.** High Support messages are often compliments about the recipient’s character or personality or talents, as opposed to appearance or page or items that the recipient owns. Validation of the friendship or relationship with the recipient also counts as High Support.

> Participant: It’s good to know I have sweet, sincere people out there who I can count on, especially my suitemate Kim

> Participant: (to friend) U are so awesome, I am so impressed by your talents

> Friend: I miss you sooooooo much, I can’t imagine ever knowing all this stuff in all these books that i'm supposed to learn... day three of my labor day weekend and I am looking forward to class b/c it'll be a break from studying. You are/were my inspiration.

> Friend: You are the physics guru

> Participant: I feel blessed and lucky that you are my friend

> Participant: I owe (names of two friends) for getting me through stats this semester- they’re seriously geniuses.

**General or specific to recipient.** High Support messages are often specific, personalized expressions of well-wishes that the poster had to think of and devise that would only fit the recipient, based on something particular and personal that the poster knows about the recipient. This is in contrast to Low Support messages that are more generic well-wishes that could be said to many people or most anyone. When messages are directed towards multiple recipients as opposed to one recipient, it lowers the probability that it could contain a specific, personalized message to those recipients, although there are exceptions.

> Friend: Praying for a strong back and good health for you to do your best during this time

> Friend: I know how much you have been practicing- you’ll do awesome today!

> Friend: I wish a had a miniature (participant name) to carry around in my pocket and pull out to cheer me up and make me laugh

> Participant: I must give a shout out to my dear cousins (names tagged) whose documentary (NAME, link) is premiering today. I am so proud of them and wishing them all the success they deserve
This last example is directed toward more than one recipient, but it is clearly personalized to them and therefore should be considered High Support not Low.

**Casual or intense.** Whereas in a Low Support message it could sound like a person is casually expressing that s/he likes or misses the recipient, in High Support messages the person is expressing a high intensity of emotion, the fact that s/he likes or misses the recipient a very great deal or a large amount. High Support messages are those that would seem appropriate in the context of a close, intimate friendship. We are not saying that High Support statements have to come from a close friend (because we cannot objectively determine that), but when discriminating between High and Low Support, it is helpful to ask yourself whether a the post is something you would feel comfortable saying to either a more casual friend or a close/best friend (Low), or whether it is a higher level of support that you would not intend for a casual friend, but would be said only to someone particularly close to you. So, for example, it might seem appropriate for two people who are either casual or very close friends, to say “miss ya” or “I’m giving you and your page some looove” (Low Support). However, only two people who were in a close and intimate relationship, and not casual friends, would probably say “I love you” or “I miss you so, so much.” (High Support).

*Friend:* hey matt...just wanted to stop by before i logged of to tell you THANKS so much for talkin to me tonight and keeping me somewhat sane. your awesome matt. im really glad we've become such good friends. you rock!!!

*Friend:* I miss you so much...come back soon, okay?/ I miss you/ I miss you so friggen much

*Participant:* I love you/ I (heart symbol) you/ I ruv wu

These examples must have the “I” in there

*Participant:* SO GOOD to see you!!!/ getting to see you brightened my day/ I had an amazing time hanging out with you/ SUCH A GREAT TIME catching up with you, my friend.

Each of these examples is more intense than those given in the Low Support “good to see you” wishes

*Friend:* I can’t friggen wait to see you!/I really couldn’t be more excited about you coming home!!/ I am so happy that I’ll be seeing you all soon!/I am glad glad glad that I get to see you you you

Again, each of these expressions is more intense than the Low Support posts of “looking forward to seeing you”

**Not Support (either Low or High)**

Things that are not support are generally superficial expressions of good wishes that are even more superficial than those in Low Support. “Happy Birthday” is a good example if it was
someone’s birthday (although you aren’t coding participants with birthdays in the coding period so this shouldn’t really come up), or “Thanks!” The poster would not need to know (or care about) the recipient at all to say this. If the comment seems like something you would say to a sales clerk at the store (or the clerk would say to you) in the context of being polite but not actually mean it at all or care even a little bit about the recipient or what happens to the recipient, this might not be Support.

Friend: Happy birthday

Friend: Have a great day (if it is the participant’s birthday; however, if it was NOT the participant’s birthday and the friend said this independently, that would be Low Support)

Participant: I finished my novel
   Friend 1: congratulations
   Friend 2: woo-hoo
   Participant: Thanks everyone!

Neither Friend comment is support here. However, if a friend had independently posted “congratulations” not in response to the participant’s post, it would be Low Support. The participant’s “thanks” is also not support.

Participant: So good to see you all at dinner Friday!
   Friend: really fun

The participant’s comment is Low Support Given and Connection. The friend’s comment is NOT Support. It isn’t clear enough that the friend thought what was good was seeing the participant; s/he could have just liked the food. Similarly, a friend saying “should be fun/looking forward to it” about an upcoming event, if it doesn’t mention that the poster is looking forward to seeing the recipient or anticipates that seeing the recipient is what will be fun, is Not Support.

If the comment fits both Low and High Support

Remember that a single post can be coded as either High or Low Emotional Support Given (or neither), but not both.

If the post contains a clear example of a High Support phrase above (a compliment about character/clear validation about friendship, an expression of good wishes that is explicitly and specifically tailored to the recipient, or I miss you/I love you/I heart symbol you), then the whole post is coded as one score for High Emotional Support Given, regardless of what else is in the post.

Friend: I love you

Participant: I love these girls (multiple friends tagged)

Friend: I love you and I miss you a lot! By the way, guess what, I cut my hair!
Each of these examples is one score for High Emotional Support Given, because the “I love you” portion is a clear example of High Support. In the third example, it doesn’t matter that “I love you” and “I miss you a lot” would each be High Emotional Support. Because they are in the same post, the whole post is given one score of High Emotional Support (not two).

If the post contains a clear example of a Low Support phrase above (compliment about appearance/things someone owns, a generic good wish that does not seem specifically personalized and tailored to the recipient, or miss ya/miss your face/love ya/xoxo/heart symbol directed at the recipient), you will score the whole post as Low Support, unless there is also a High Support phrase in the same post that trumps it, as explained below. As well, it does not matter how many Low phrases the post has, it still gets one score.

Friend: miss your face and I also miss Macaroni!

Friend: looking forward to seeing you soon…. I can’t wait to show you my new shirt

Friend: congratulations (not in response to the participant’s sharing accomplishment in the same post stream)

Friend: You are too cute and your shoes look fabulous (heart symbol).

This last example is three separate Low phrases in one post (too cute; shoes fabulous; heart symbol). The whole post gets one score of Low Emotional Support Given (not three).

If the post contains one (or more) separate phrases that fit Low and one (or more) separate phrases that fit High, the presence of any High phrase trumps the Low phrases and the whole post gets one score of High Emotional Support.

Friend: Hey honey I miss you a lot! Cute pic.

This is a single post with two phrases in it. The “I miss you a lot” is High and the “Cute pic” is Low. However, because this is all in a single post, the High part trumps Low and this post is given a single score of High Emotional Support Given.

Friend: Have a great trip! Miss you and I love you.

This is a single post with three phrases in it. The first two (“have a great trip” and “miss you”) are Low but the “I love you” is High. Because this is all in a single post, the High part trumps Low and this post is given a single score of High Emotional Support Given.

Participant: (heart symbol) to the amazing and multi-talented Jolie
The phrase is more about character or friendship than appearance or an object owned ("amazing and multi-talented" implies talents/personality, and it is directed to one person- making it seem more personalized- even though the poster does not say exactly what the talents are). Although the phrase has a heart symbol directed toward the recipient (classic example of Low), because of the presence of a High phrase, the whole post becomes High.

**Notes to help distinguish between Connection, Low and High Support**

A post can be considered Connection, Support, neither, or both at the same time. Connection is about whether the poster and participant actually know each other/interact together outside of Facebook in the recent time, as opposed to having gone to elementary school together but have not been in communication since then, or having accepted each other’s friend requests despite not really knowing each other. Support is about the quality of that relationship (no indication of emotional positivity and support to one another is no support, some indication of support as you would see in two people who were friends but not necessarily close/best friends is Low Support, or the type of encouragement/caring/complements/expressions of liking for the other person that tends to be reserved for people in a very close relationship is High Support).

**Not Connection or Support (either High or Low).** Participant posts, “At Disneyland” as a status update and friend posts in response to this update “have a good time”. Neither the participant’s post, or the friend’s post, would be considered Connection or Support, because the information about the participant going to Disneyland occurs in the same post stream and the “have a good time” could easily be a platitude you could say to the clerk at a store in response to someone telling you they were going to Disneyland. However, if the friend initiated a post on the participant’s Timeline that said, “Hey, I hope you have a good time at Disneyland this weekend” that would count as Connection because it is assumed that the friend would not know this if he or she had not been in contact with the participant and Low Support. If the friend’s post said, “It was so good to talk to you the other day, it’s been way too long and I’ve missed you incredibly, my friend. Have a good time at Disneyland.” this would be High Support and Connection, because of the expression of validation and caring in the “missed you incredibly, my friend” and the indication that the two people had a recent past meeting.

**Connection, but not Support. See you Sunday =)**  
The smiley face is not enough to make it Low Support, as opposed to if the person said “can’t wait to see you Sunday”. It would be High Support if the person made it more intense, such as “just CANNOT WAIT to see you Sunday!!”

**Low Support, but not Connection.** awesome new picture, I love it!

**Both Connection and High Support.** i can't frickin wait to see you friday. Second Floor Totem just isn't the same without you. High intensity statement (High Support); confirmation of future meeting (Connection).

**E7. Relational Aggression**
The comment puts down, criticizes, or belittles the recipient for the recipient’s actions, who s/he hangs out with, appearance, etc., or sullies the reputation of the recipient. The post should be directed towards a specific person (or group of people) that the poster knows.

Sometimes it is difficult to determine when something is Relational Aggression if it is said as a joke. The best thing to do is to ask yourself if the content of the post ultimately puts down, criticizes, or belittles the recipient. If it does, even if the tone is joking, this is Relational Aggression.

Remember that a participant’s post can be considered Relational Aggression as long as it is directed to any Facebook friend or specific person who Facebook friends are likely to know, but friends’ posts are only considered Relational Aggression if they are directed towards to participant.

Friend: (posts on participant’s page) So.... this is one of the gayest cover photos ive ever seen! i just wanted to let you know im proud and you put a smile on my face.

Friend: man you cant even write me in the morning!! you wrote christy yeah cool WHATEVER

Friend: Hey Miss Skank, still hoing?

Friend: Hey Lameo i was bored and just dropped by to tell ya i can't stand ya, but other than that have a nice day! lol

Friend: hey you hussie, you better call me soon

Friend: BITCH DID U RESPOND TO THA MESS IN UR INBOX?GET ON IT

Friend: I emailed you the other day at ianismybiatch@hotmail.com and it got sent back

Participant: What class should I take next semester?
   Friend 1: How to suck
   Participant: Your mamma teaches that class

In this class example, the participant’s first post is a Call for Instrumental Support. The friend’s response in Relational Aggression. The participant’s response to the friend’s response is also Relational Aggression.

Participant: (status update) Since Julie [tagged] flaked out on me again I decided to make my own dinner.

Even if Julie wasn’t tagged, this is still Relational Aggression, because it’s directed towards a specific person that the participant clearly knows. Presumably also there’s a pretty good chance that other people reading the status update will know who Julie is.
Friend: (posts on participant’s Timeline) and tell jamila ta stop dippin in our convo! dis kool aid too sweet 4 her SKINTY behind!!!

Friend: JG’s skills are WEAK. Can’t believe you let him come along.

Participant: Come on Stanford!!!
    Friend: Stanfurd sucks, go whoever is playing them

Recall that friends’ Relational Aggression must be directed towards the participant to be counted (although participant’s Relational Aggression can be directed towards anyone the participant personally knows). The Jamila and JG examples are counted as Relational Aggression because they are criticizing the participant, even if it doesn’t look like it at first glance. Specifically, these posts are criticizing someone who the participant hangs out with, not just as criticizing Jamila/JG. They are criticizing the participant for his or her choice in friends. In the Stanford example, the friend’s comment is Relational Aggression because it is criticizing the participant’s choice in teams (even though this is a joke).

Friend: don’t worry, if there’s a bad smell I’ll just tell mom and dad you were baking cookies again, LOL
    Participant: Those cookies were fine, you don’t know what you’re talking about.

Both the friend’s post and the participant’s post are Relational Aggression. Even though this is probably a friendly joke, objectively both comments are put downs or criticisms of the other person (despite the tone and the LOL).

As a coder, sometimes it is hard to assign something a Relational Aggression code if you think “that really is funny and sounds like these people are actually friends and didn’t take it personally.” Try not to think that way; instead just read the text in a neutral frame of mind and decide whether objectively it would be a criticism or put down of the recipient.

Note that we are not saying that people should have no sense of humor on Facebook or that all Relational Aggression is necessarily bad. In fact, we are doing this study to find out if Relational Aggression (and the other codes) seem to be helpful or hurtful for participants; it may be that there is an optimal level of Relational Aggression that is neither none or a lot, or it may be that Relational Aggression is positive in the presence of other indicators that the participant has good friends, but Relational Aggression is negative if there are no other indicators that the participant has good friends.

Not Relational Aggression. Do not confuse Relational Aggression with general anger/negativity/complaining about life, or participant comments that are not meant to put down/criticize a specific person (or group of people) who the participant is friends with.

    Participant: The people who work at the Save On Foods on campus are the biggest morons ever...
This would not count as Relational Aggression (but would be considered in the Negative Emotion global code for the overall feel of the participant’s page). This is because, even though the participant is complaining about a group of people (Save On Foods employees), it is not about or directed towards a specific friend that the participant has a relationship with. It is probably not meant to insult, put down, or belittle a specific friend (or group of friends) that the participant knows. Rather, it sounds more like a general rant. However, if the participant had directed this same comment to a friend who worked at that SaveOnFoods (or was dating someone who worked there), then this would be Relational Aggression.

Racist, sexist, homophobic (etc.) comments do not come up very often, but could come up on occasion. They are considered to be Relational Aggression if they are directed towards a specific recipient that the participant knows and has identified (such as another Facebook friend), even if they sound like they are being made as a joke. Remember, you have to think about whether objectively it is a put-down. However, racist, sexist, homophobic (etc.) comments are probably NOT coded as Relational Aggression (for the purposes of this coding system) if they are more like a rant against nonspecific people who are part of that racial (etc.) group.

**Friend:** you look so hot in that picture. Woo-whee. Sexy stuff!

**Participant:** OMG I am so going to hit you when I get back

The participant’s comment is NOT Relational Aggression because it is not a put-down, insult, or criticism of the friend. However, if the participant had said, “you’re such a moron” in response to the friend’s comment, that would be Relational Aggression even though we would think it was probably a joke and the participant was not really mad.

**Participant:** if someone pulls the fire alarm again at 3a.m. I am going to kill them... get voted off the island.

This is not Relational Aggression because probably the participant does not know who pulled the fire alarm and is not trying to put down, criticize, or belittle a specific recipient who the participant is friends with or knows personally. This is tricky because it is true that chances are high the participant would recognize the name of the person who pulled the fire alarm were the participant to eventually find out that person’s name (given that they all live in the same dorm). However, because we are assuming that (at this point at least) the participant does not actually know who pulled the fire alarm, then it is not Relational Aggression because it is not directed toward a specific person who the participant is identifying. By contrast, if the participant had named a specific person in the post (whether tagged or not), we would count it as Relational Aggression.

**E8. Inappropriate Content**
These are posts and pictures on Timeline that might be embarrassing or judged inappropriate if viewed by a parent, teacher/professor, or employer. You are thinking about whether it is reasonable to assume that a parent, teacher, employer, or other authority figure would look at this
content and disapprove. Obviously, everyone’s parent is different in what they disapprove of, and you will never know what the participant’s parent specifically thinks; you are making a judgment about whether you think it is likely that some authority figures would judge this behavior negatively if they were to see it.

Note: It is not that we think that playing drinking games (or saying the F-word, etc.) is necessarily inappropriate behavior for a university student to be doing; the distinction is that the participant is posting this behavior on Facebook. Also, we are not saying that all Inappropriate Content is bad for participants. As with Relational Aggression, the whole point of this study is to find out what the optimal level of Inappropriate Content (and the other codes) is.

**Albums**

As with the other quality indicators, you will apply this code to single posts, single photos posted to Timeline, and albums. Again, if the participant posts an album with several photos in it to the Timeline, you would count that as one post and judge for the presence of Inappropriate Content in what gets displayed on the Timeline (typically this is either the album cover photo only and three small pictures below it, or just three pictures if the participant did not designate an album cover) and the comments that the participant and friends make about the album as a whole, not about individual pictures within the album. Count the post for the whole album as Inappropriate if there is Inappropriate Content in ANY of the album photos that are displayed on the Timeline. Do not code any pictures within the album that do not show up on the Timeline (e.g., where you would have to go through and click on the album to see them).

Sometimes if there are three or four photos that indicate the album on Timeline, these photos will be fairly small and it will be hard to see what is going on in them, depending on the size of your computer screen. It is acceptable and recommended that you click on the picture to blow it up in order to see what is going on. However, do not consider Inappropriate Content in pictures in the album that do not show up on the Timeline without clicking on the album (e.g., that are not in the album cover photo plus the three smaller pictures below it.)

**Participant versus friend in photos**

Inappropriate content in photos is coded regardless of whether the participant or friends in the picture are doing the content, so long as the content is visible. Therefore, if the friend is giving the middle finger, dressed like a stripper, licking the participant’s nipple, flashing, imitating a sex act, doing a kegstand (alcohol misuse/overuse), or smoking pot, even if the participant is not, but the participant has the photo on his/her Timeline, code this post as Inappropriate. One exception: If the friend has a beer in his or her hand, but the participant does not, and while the participant is under 19 you do not know how old the friend is but there is nothing in the picture to suggest alcohol misuse/overuse, then this would NOT be Inappropriate. Or relatedly, if the friend is at a nightclub on the list but it is not clear that the participant is there, and we don’t know the friend’s age, this would NOT be Inappropriate (we are giving the benefit of the doubt that the friend is 19+ in both cases).

**Profanity**

Comments containing profanity are counted as Inappropriate Content. To think about whether a word is Inappropriate or not, we are using the guidelines about whether it could be played on
network TV or radio for the age group of the study population. Words that could be played are okay and not Inappropriate. Words that would be bleeped out are Inappropriate. Below is a list of words that are currently bleeped out and thus considered Inappropriate Content.

<table>
<thead>
<tr>
<th>Word</th>
<th>Word</th>
<th>Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ashhole (bleep &quot;hole&quot;)</td>
<td>Eat / Eat out (as a sexual act)</td>
<td>Motherfucker (bleep &quot;fucker&quot;)</td>
</tr>
<tr>
<td>Balls (as a sexual act)</td>
<td>Fag / Faggot</td>
<td>Nigger / Nigga</td>
</tr>
<tr>
<td>Beat off</td>
<td>Fingered (as a sexual act)</td>
<td>Pink (as in vagina)</td>
</tr>
<tr>
<td>Blow (as a sexual act)</td>
<td>Fisting (as a sexual act)</td>
<td>Piss (as a sexual act)</td>
</tr>
<tr>
<td>Blowjob / BJ</td>
<td>Fuck / Fucker</td>
<td>Poonani / Poontang</td>
</tr>
<tr>
<td>Bullshit (bleep &quot;shit&quot;)</td>
<td>Gang-bang (as a sexual act)</td>
<td>Prick</td>
</tr>
<tr>
<td>Carpet munching</td>
<td>Go down on</td>
<td>Pusy (as in vagina)</td>
</tr>
<tr>
<td>Chink</td>
<td>Goddamn (bleep &quot;God&quot;)</td>
<td>Reach Around</td>
</tr>
<tr>
<td>Christ (as an epithet)</td>
<td>Golden Shower</td>
<td>Rim / Rim job (as in sexual act)</td>
</tr>
<tr>
<td>Circle Jerk</td>
<td>Guinea</td>
<td>Shit</td>
</tr>
<tr>
<td>Cist</td>
<td>Hand job</td>
<td>Sixty-nine (as a sexual act)</td>
</tr>
<tr>
<td>Cock</td>
<td>Hard / Hard-on (as in arousal)</td>
<td>Skeet (as in ejaculate)</td>
</tr>
<tr>
<td>Cook sucker</td>
<td>Head (as a sexual act)</td>
<td>Snatch (as in vagina)</td>
</tr>
<tr>
<td>Coon</td>
<td>Homo</td>
<td>Spic</td>
</tr>
<tr>
<td>Coochie (as in vagina)</td>
<td>Jack off (as in masturbation)</td>
<td>Suck (as a sexual act)</td>
</tr>
<tr>
<td>Cum</td>
<td>Jerk off (as in masturbation)</td>
<td>Swallow (as a sexual act)</td>
</tr>
<tr>
<td>Curt</td>
<td>Jesus Christ (as an epithet)</td>
<td>Tits / Titties</td>
</tr>
<tr>
<td>Dick (as in penis)</td>
<td>Jizz / Jism</td>
<td>Wet (as in sexual arousal)</td>
</tr>
<tr>
<td>Dirty Sanchez</td>
<td>Kike</td>
<td>Weback</td>
</tr>
<tr>
<td>Doggy-style</td>
<td>Lesbo / Lezzy</td>
<td>Wigger</td>
</tr>
<tr>
<td>Dyke</td>
<td>Mofo</td>
<td>Wop</td>
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</tbody>
</table>

Pictures on the Timeline that include text with profanity as the comment introducing the picture would be counted as Inappropriate.

_Friend: Hey Sweetie, just came by to say hi. Hope ur having a fan-fuckin-tastic day!_

This Sweetie example would also be considered Low Support (good wishes, but something that could generally be said to anyone and not tailored to the recipient)

_Friend: Y DA FUCK DID YOU DELETED MII COMMENT..._

This deleted comment example would also be Relational Aggression.

_Participant: Fuck I hate that this is the third person to tell me that I don t know how to talk to people_

This would not be Relational Aggression because it is not clear enough that this comment is directed towards a friend of the participant (if this is all that is in the post). However, this would be considered under the global code for Negative Emotion. Also, probably this
would be a Call for Emotional Support because it calls for friends to respond by saying “feel better, that’s not true”, etc.

Pictures that contain profane gestures are Inappropriate Content.

Participant: (posts photo, no comment)

**Abbreviations.** Count as Inappropriate Content common abbreviations or bleeping out of swear words that would be on the chart, so long as it is obvious what the word is. For instance: “F**K me!!!” “WTF” “MILF” “LMFAO” “don’t know where in the F I am” (all abbreviations or versions of fuck) or “sh!t” “BS” (all versions of shit), all are Inappropriate Content even though they are abbreviations. However if the abbreviation is for a word that is not on the chart, for instance: “a$$” “LMAO” (for ass, which is not inappropriate) then do not count it.

**Not Inappropriate.** “damn” or “this blows” (see chart). By contrast, “Goddamn” or “blow me” would be considered inappropriate, based on the censored list of words. “Blow me” would also be considered Relational Aggression if this comment was directed specifically at someone.

**Drugs or alcohol misuse**
Count (a) references to alcohol or tobacco that suggest potential overuse (for anyone of any age); (b) any alcohol and tobacco use by participant (if the participant is under age 19); and (c) references to any drugs that are illegal in Canada currently (such as marijuana).

First write the participant’s age on the coding sheet. In BC, the legal drinking age is 19, so some of the participants will not be of legal drinking age, although some will be. If it is NOT listed what the participant’s age is, then we will assume they are of legal age. Assume that friends are of legal age (because we will not know their age).

It is important that you keep in mind the age of your participant when you are judging pictures or references to alcohol. If the participant is legal drinking age, what you are looking for is indicators of alcohol overuse. This means that casual references to grabbing a beer with a friend or saying that one needs a glass of wine to unwind would NOT be Inappropriate provided that the participant is of legal drinking age, but comments about getting wasted, playing drinking games, taking shots, throwing up, passing out, or doing things that the person regrets when drunk, would count as Inappropriate Content regardless of age.
Lots of wine, lots of weed, and a what not to wear makeover

Feeling peach fuzzy, hash pipe in hand too....no work 2morrow #noworries #trueFriends

These posts/pictures are considered Inappropriate Content no matter what the participant’s age because they reference an illegal drug (marijuana).

Friend: Dude, I can’t believe you threw up on Erin. Do you even remember doing that? How do you feel today? LOL.

Participant: (Posts picture of self or friends doing a kegstand, or drinking two 40s of beer with one bottle taped to each hand, playing beer pong or flip cup or other drinking games)

These posts/pictures are considered Inappropriate Content no matter what the participant’s age because they suggest alcohol overuse, or drinking to get totally wasted.

Not Inappropriate Content (depending on age)

Participant: 1.5 hours until Bud Lights by the pool and a night out in Old Town with Erin!! Twice in 1 month you are in town!! How did I ever get so lucky?!??! ♥
NOT Inappropriate Content (if the participant is age 19 or older), because no misuse/overuse is communicated and the substance (alcohol) is legal. Also this would be Connection (if Erin is tagged) and High Emotional Support Given (sounds like a personalized message directed towards a single recipient that is high intensity enough so that this isn’t Low Emotional Support).

*Picture posted on participant’s Timeline:*

If the participant has a beer in hand but is 19 or over, this would not be Inappropriate Content because it does not imply misuse/overuse. If the participant is under 19, it is Inappropriate if the participant is one of the people in the picture with the beer in hand (person in middle or on right), but would not be Inappropriate if the participant did not have a beer (person on left) but the friends did, because we will assume the friends are 19 or over.

**References to sexual behavior**

Any reference to sexual behavior in a post should be counted, including sexual innuendos. Pictures on the Timeline might include photos of individuals wearing particularly revealing clothing, licking someone, straddling someone, posing in a provocative way, or simulating a sex act.

*Friend: hey baby how u been i miss u soooo much i cant wait to see u cause when i see u we are going to have a hot and wild time!!! and i bet ur ass its gonna be all night and all day so get ready for me sexy cause im ready for ur thang lol alright sexy ill talk to u later aight muah love ya bye*

*Friend: slurp..suck..nibble..stroke..suck..caress..lick..nibble...slurp*

*Participant: GOOD NIGHT FB FOR ALL MY LADIES THAT THINK OF ME AT NIGHT IN BED!! IF YOU HAD THIS DICK BEFOR THEN YOU KNOW WHAT IM TALKING ABOUT!!*

*Pictures posted on Timeline:*
Also Inappropriate: pictures of a person humping a pole or statue, pretending to feel someone’s sexual parts, or pretending to be having sex (including oral sex).

**NOT Inappropriate Content.** Pictures of people dressed in clothing that is revealing, but would be within the reasonable limits of what you would expect somebody this age to be wearing in the situation that s/he is in. For instance, a picture of someone in a bikini at the beach is probably not Inappropriate. A picture on Facebook of someone in a thong at the beach or topless at the beach, even if it is a topless beach, is Inappropriate. A picture of someone in a tight dress at a party is probably fine unless it looks like this is above and beyond what most people this age would wear to a party. A picture of someone in a tight dress bending over to specifically show (or hint at) parts of her body at a party is probably Inappropriate, or simulating a sex act in a picture at a party is Inappropriate.

**References to illegal behavior (vandalism, theft, and entering nightclubs if underage)**
Any mention of defacing property or stealing things, cheating, tagging/graffiti, or other illegal behaviors like this, would be counted as Inappropriate Content. Pictures on the Timeline indicative of these things would count as well.
If the participant is underage (under age 19), count as Inappropriate if they have gone to a nightclub on the list below. The way you would know if they were at these nightclubs is that it may say the name of the club in the corner of the picture or the poster may refer to the name of the club in the post. If it is NOT EXPLICIT that they are at a specific club name that is on the list below, even if the picture generally looks like they are clubbing or it says they are at a club but the name is not listed below, do not count it as Inappropriate.

**List of common clubs.** These are common clubs that would be frequented by undergraduates but require someone to be 19 or over to enter.

- Caprice
- Ceili’s Irish Pub
- Celebrities
- Commodore Ballroom
- Ginger 62
- Gossip
- Joe’s Apartment
- Roxy
- The Bourbon
- The Pit
- Venue

**G. Overall Global Impression of Participant’s Profile**

**CONSIDER THE PAST MONTH OF FACEBOOK ACTIVITY**

Think about your overall global impression of the participant’s profile, which includes the past month’s activity of participant posts, friends’ posts, profile pictures and cover photos—basically, everything you have coded up to now on this participant. The purpose of these codes are to capture the overall “feel of the page” or “sense of what this participant is like.” The participant will be rated on a 1-5 Likert scale, with higher scores indicating greater presence of the construct.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>A Little</td>
<td>Fair Amount</td>
<td>Pretty Much</td>
<td>Extremely</td>
</tr>
</tbody>
</table>

Consider the overall number of posts in making your determination of these scores. For instance, imagine the participant posts 50 times in the coding period and 10 of these show participant positive emotion and 5 show participant negative emotion. Friends post 75 times during the coding period and 1 post indicates the participant having positive emotion, 50 posts are supportive and there are no indications of relational aggression. When the participant makes calls for emotional or instrumental support, the friends respond. The participant never issues an invitation to do something so you can’t tell if the friends would take the participant up on the offer or not. In the coding period, there are two occasions where participant seems to be going
out with friends to do something fun. This participant might be a 3 in positive emotion in own posts, a 5 for the friends’ contribution, but maybe a 2 for the getting out contribution because, relative to the number of posts that are on the page, the person does not seem to be getting out very much. (By contrast, if it seemed that there were only 10 posts in the whole coding period, such that the person did not use Facebook very much, but s/he was tagged in two separate friends’ posts for going out on two separate events, you should consider this a higher score for “getting out”). Because the largest weight is on the person’s own positive emotion, you would probably score this a global code of 3 for Positive Emotion. Regarding Negative Emotion, this is also a 3 for the participant’s contribution, but probably a 1 for the friends’ contribution because it seems that the friends are engaged and giving a lot of support. Therefore, the global code for Negative Emotion might be a 2.

Sometimes posts can vary in intensity. For instance, “loving life at UBC, feel so BLESSED” is a high intensity positive emotion post, whereas “spending a happy lazy Sunday relaxing” is a low intensity positive emotion post. As well, a picture that would get a 3 on the Narcissism code is high intensity, whereas one that would get a 2 is low intensity. If someone has a high intensity post, consider that to count as two posts (e.g., double count it towards the total of posts for that construct).

For global codes, if the final score ends up exactly between two numbers, err toward the higher number. For instance, if the participant has a 4 for Narcissism in photos but a 1 for posts, the overall score would be a 2.5 (as each is weighted 50%), but you would mark a 3. However, we recommend that when you code, you think more about, for instance, photos being a 4- and the posts being a solid 1 (not a 1+), in which case the overall score would be more like 2.25 which gets marked as a 2.

1. **Not at all.** This doesn’t describe the participant at all; there is no evidence for this.
2. **A little.** This would characterize a very small portion of this participant’s profile. For instance, perhaps a minority of content (e.g., more than 0% but less than 10% of posts/pictures) would fit the description
3. **Fair amount.** The participant’s profile is marked by a sizable amount of this construct. The construct might characterize between 10-25% of the content
4. **Pretty much.** This construct clearly characterizes this participant. It is one of the first things that you notice/take away from the participant’s profile. This construct characterizes over 25% of the content but probably less than 50%
5. **Extremely.** This construct dominates the page and would be likely one of the strongest, first things you would notice/take away from this participant’s profile. This construct characterizes at least 50% or more of the content on the participant’s profile.

**G1. Narcissism**
The extent to which the participant seems to be interested in presenting him/herself favorably and drawing positive attention to him/herself.

50% of your determination of the final score should come from the extent to which Narcissism is present in the pictures on the page in the coding period. Importantly, here you are not only
considering the profile pictures/cover photos (which you already coded individually), but also
any other pictures of the participant that were posted during the coding period on the Timeline.
The other 50% of your determination should come from the participant’s own posts (for instance,
the extent to which Sharing Accomplishment is present or the participant brags or self-selects
positive things about him/herself to share) OR potentially by friend’s posts about the
participant’s Narcissism (e.g., participant posts a picture of herself that she took in the bathroom
mirror; friend posts “so THAT’S why you were in the bathroom for so long”)

Participant: (post and picture) So that's what's goin on, 2 much lol

Participant: (status update) I’m so glamorous I bleed glitter

Participant: A girl should always be two things: classy and fabulous—Coco Chanel

Participant: (takes “My Celebrity Look-alikes” quiz and posts results to Timeline)

These participant posts would not count as Sharing Accomplishment (in fact, they probably
wouldn’t be coded as anything in the Quality Indicators), but they would count towards the
Narcissism global score.

Friends’ Narcissism does not count towards the participant’s Narcissism score. However,
sometimes the content of friends’ posts can be used to get a sense of the extent to which the
participant has Narcissism For example:

Friend: can’t believe you got on stage and danced last night like the hot thing you are
(probably gives a clue about participant being narcissistic)

But if a friend posted a picture of just the friend and not the participant that showed the friend in
a narcissistic pose, this would not count towards the participant’s Narcissism.

G2. Excessive Self-Disclosure
This assesses the degree to which personal information is overly shared about one’s own personal life, generally involving negative emotional states or things like sex. Most people would find this information embarrassing to be shared in a public forum such as Facebook because it seems like the sort of thing that should instead be said in private to a best/close friend. The overly personal information should capture the participant’s own behavior/life/emotions as opposed to the participant posting about someone else’s behavior/life/emotions.

This code captures sharing overly-personal information that most people would think should be kept private. This code does not capture general over-sharing of boring information. For instance, if the participant repeatedly posted things like “I just woke up” “now I am eating breakfast” “now I am looking for my shoes” “now I am brushing my teeth”, that is boring, but that is not Excessive Self-Disclosure because the information is not overly personal or something that would be embarrassing or in poor judgment to have on a public forum like Facebook but would be more appropriate to be shared in private with close friends/a best friend.

50% of your determination of the final score should come from the participant’s own posts OR friends’ posts that indicate that the participant engages in behavior that shows boundary problems (sharing overly personal information that might be embarrassing or most people would want to keep more private). The other 50% of your determination should come from any photos during the coding period (profile photos, cover photos, and others posted to the Timeline) that indicates boundary problems and poor judgment about what to share on Facebook, such as pictures of the participant imitating sex acts.

Participant: I have a loving boyfriend, a whole heap of family and friends that have been making sure I'm ok but I still feel like someone stuck their hand through my chest and ripped out my heart. I feel empty....I've been in denial, I've been angry, I've even tried to make deals with God....I just want my heart back....

Participant: It fucking sucks when ur heart belongs to a person who's heart belongs to someone else, oh well on to the next.......

These two posts would also count under Calls for Emotional Support in the section where individual posts are coded. The one with the F-word would also be Inappropriate Content. Both would also count under Negative Emotion in the global codes as well as Excessive Self Disclosure.

Participant: (In response to a friend’s post) Hang in there, honey. When I was 16 I thought my life was gonna to end but it didnt I moved on and became a better person cuz of it

This post would also count as Low Emotional Support Given in the individual post and Negative Emotion in the global codes, in addition to Excessive Self Disclosure.

Participant: My girlfriend is addicted to sex. But I’m the best she’s ever had.
Excessive Self-Disclosure because of sharing information about one’s sex life, and it would also go under Sharing Accomplishment, Inappropriate Content, and the Narcissism global code.

Pictures of the person in revealing clothing or simulating sex acts would also count toward the Excessive Self-Disclosure code as well as towards the Inappropriate Content code because they indicate that the person probably does not have good judgment about keeping his/her own sex life/sexual interests private. However just using profanity, which counts towards Inappropriate Content, would not count toward Excessive Self-Disclosure. As well, telling a joke that involves sex but is not about one’s own sex life/sexual interests would be Inappropriate but not Excessive Self-Disclosure. Accusing someone else of being a whore would be Relational Aggression but not Excessive Self-Disclosure.

As in the Inappropriate Content section, friends’ self-disclosure does not count towards the participant’s Excessive Self-Disclosure code. However, sometimes the content of friends’ posts can be used to get a sense of the extent to which the participant has boundary problems, for instance if a friend mentions behavior of the participant.

**G3. Positive Emotion**
Global code for the extent to which this person seems to be upbeat, happy, and experiencing positive emotions in his/her life. You get the sense that “this person is happy and lives a rich, satisfying life.” In addition, you are looking at the general character/upbeat nature of the participant’s posts and in pictures, and his/her interactions with friends.

50% of your determination of the final score should come from the extent to which the participant seems to be experiencing positive emotion (happiness, joy, pride) as indicated in the participant’s own posts (e.g., *having the time of my life; love living here; so thrilled to see my friend; that movie rocked =) =; soooo proud to have finished first*) and pictures (large smile) OR potentially by friends’ posts about the participant’s mood (e.g., *wow, it sounds like you are having an awesome time out there in BC*). 25% of your score should come from the extent to which friends’ posts are giving love, compliments, good wishes, saying helpful things to the participant. The final 25% of your score should come from the extent to which the participant seems to be getting out and doing fun things with friends, going to events, engaging in fun activities with other people, has an active social life. Friends’ own positive emotion does not count towards this code.

Participant: *You know it is a great day at work when your boss brings you a box of Godiva truffles as a get well soon present :)*

Participant: *Words can’t express how happy and proud I am of my little brother.*

Note that these posts are NOT Sharing Accomplishment, because the first one is not something that took participant effort/talent to do, and the second one is not about the participant. But they would display the participant expressing Positive Emotion.
Friends’ positive emotion does not count towards the participant’s Positive Emotion. For instance, if the friend posts “I am so happy” on the participant’s Timeline, this doesn’t count. However, sometimes the content of friends’ posts can be used to get a sense of the extent to which the participant is a happy person, for instance if a friend mentions behavior or emotions of the participant, or if friends seem to be mentioning lots of fun things that they and the participant did together (Friend: “That was soooooo fun Saturday, so happy to see you!!! I can’t believe we were still dancing when they closed the club down. Can’t wait for next Saturday with you). As well, if the participant seems to have a lot of rich, happy, positive interactions with friends on Facebook, this counts toward Positive Emotion.

Pictures on the Timeline (or in the profile pictures) of the participant looking like s/he is getting out and doing activities with other people (for instance, hiking, or on a sports team, or out to dinner, or at a book club), where the participant looks like s/he has good friends and is out doing fun things with them, would count towards this 25% for “getting out/doing things with friends. Here is where group pictures in which other Facebook friends are NOT tagged would also count (as they generally do NOT count under Connection), so long as the participant genuinely looks like s/he is getting out and leading a rich and happy life.

G4. Negative Emotion
This is a global code for the extent to which this person seems to be experiencing negative emotion. You get the sense that “this person probably isn’t doing well”. The person seems to be lonely, upset, sad/depressed, worried/anxious, or angry. You can find this information in the participant’s posts, but sometimes also it is in the absence of joy or connection with friends.

50% of your determination of the final score should come from the extent to which the participant seems to be experiencing negative emotion (anger, sadness, loneliness, anxiety, and/or irritability) as indicated in the participant’s own posts (e.g., “life sucks”. “Midterm results are depressing.” “Hating everyone right now” “So worried about my midterm”) and pictures (picture of participant giving middle finger) OR potentially by friends’ posts about the participant’s mood (e.g., “good to talk to you. Cheer up, things will get better”). If the participant posts a rant about how everyone who works at Save On Foods is a moron, or a rant with racist (sexist, homophobic, etc.) content, recall that this probably isn’t counted as Relational Aggression unless it is directed toward a specific friend, but this would count towards the Negative Emotion Global Code. Participants’ Relational Aggression posts may also count towards the Negative Emotion code if you get the sense that the participant is experiencing negative emotion (e.g., irritability, annoyance) when the participant made the post. However, many posts will be counted as Relational Aggression that truly seem like the participant is happy and making a joke; these wouldn’t count toward the Negative Emotion code despite being considered to be Relational Aggression.

The other 50% of your score should come from the extent to which friends’ posts are giving Relational Aggression towards the participant (regardless of whether or not it seems like a joke) OR not engaging despite the participant making Calls for Emotional or Instrumental Support or invitations to go out and do things OR that friends’ posts and going out with friends are noticeably absent in a situation where the participant tends to post a lot. It must be that the
participant is using Facebook and making invitations/requests to friends that are going unnoticed or unresponded to in order for this to count as friends’ contribution towards Negative Emotion. Friends’ own negative emotion does not count towards this code.

*Participant: FUCK EVERYONE WHO WORKS FOR THE UNIVERSITY*

*Participant: Hey random street corner lurker: are you my parents? Are you my boyfriend? Am I under the age of two? No, so do not call me baby, and while we're on the subject, fuck off.*

This is a good example of a rant that would not be considered Relational Aggression, but is a very strong example of Negative Emotion.

*Participant: (posts picture flicking off camera)*

The posts with the f-word and the picture of flicking off the camera would also fit under “Inappropriate Content”

*Participant: I want to kill myself*

This post would also be considered a Call for Emotional Support and would be a major example of Excessive Self-Disclosure in the global code section; code this post as these things plus Negative Emotion even if you think the person is not serious. Here is an example of something that you would need to bring to the attention of a staff member immediately (Carol, Jacqueline, Julie, Dr. Mikami).

Here is an example of how the friends’ contribution to the Negative Emotion code can come from omissions as opposed to active Relational Aggression against the participant.

*Participant: (status update on Friday) This Saturday I am finally off work.*  
*Participant: (status update on Saturday morning) Woke up late, feel nauseous.*  
*Participant: (status update later that Saturday) Anyone want to go get food with me? (no responses from friends on participant’s Timeline to this)*  
*Participant: (status update Saturday afternoon) Watching Two and a Half Men reruns*  
*Participant: (status update Saturday evening) Pigged out at McDonalds by self. LOL.*

Overall you should see few or no responses from friends to these posts. This would count toward the friends’ contribution to the global Negative Emotion score.

Another example could be someone who has few posts from friends on Timeline overall, and every day takes multiple quizzes (“Your Horoscope”; “How Romantic Could You Be Today?”; “Guess this Song”) or plays games (Bejeweled, Mafia Wars, Farmville) and posts the answers to the quizzes or the new game score achieved on Timeline every day, such that most days what is shown on the Timeline is multiple quiz scores and no interactions with friends as well as no (or very few) friends commenting on the quiz scores. In this case, each post of the quiz
answers/game score would be counted as a participant post but no quality indicators, but the global feel of this participant being a lonely person who does not live a rich life would be captured in the Negative Emotion code here. This would count toward the friends’ contribution to the global Negative Emotion score.

Friends’ Negative Emotion does not count towards the participant’s Negative Emotion score. However, sometimes the content of friends’ posts can be used to get a sense of the extent to which the participant is an unhappy person, for instance if a friend mentions behavior or emotions of the participant, or, as in the examples above, there is a notable lack of interaction with friends on Facebook despite the participant making invitations/calls to friends on Facebook, this could count toward the friends’ contribution to the global Negative Emotion score.

H. Ethical Issues in Coding

Knowing the participant
It is possible that you may know the participant who we assign you to code. If this happens, you need to tell the study staff (Julie, Jacqueline, Carol) immediately and they can reassign you. It is possible that you won’t realize that you know the participant until you get onto his/her page, but as soon as you realize this, you need to get reassigned. This is also the case if you realize that you don’t know the participant, but you know his/her friends that s/he interacts with on Facebook, or the two of you are part of the same club at UBC, or really any scenario where you think it’s likely that the two of you will come into contact even if you haven’t already. You cannot code this person because (a) it will be hard for you to be objective about them; and (b) to be fair to the participant, s/he may not want someone that s/he knows coding his/her page.

Talking about things you see on participant’s pages with other people
Simple rule- don’t do it unless the people you are talking to are part of our RA team. Say you see something on a participant’s Facebook page that you think is hilarious. You can (a) show and tell Jacqueline/Julie/Carol, who will probably appreciate the laugh; (b) show and tell anyone else on the RA team for this study. Do not show or even tell other friends of yours, even if you think the friends of yours do not know the participant, and even if you never name the participant by name. This is out of respect for the participant. As well, you never know who knows whom. You could be talking about this “totally sad thing” you saw on someone’s page, and then your friend might actually know who you are talking about even if you don’t name the participant by name, or your friend could tell someone else who does know the participant.

Danger to self or others
It is unlikely that this will happen, but if you do run across anything where a participant seems to be threatening harm to self or others, even if you think the person is joking, you need to tell a staff member (Julie, Carol, Jacqueline, Dr. Mikami) immediately. This is so that we can determine whether we think we need to follow up to get the participant help. What counts here are threats to kill oneself/make a suicide attempt OR to kill/attack/physically harm someone else who is specifically named. You do NOT need to report Inappropriate Content involving drug and alcohol use, vandalism, theft, or clubbing while underage. However, if you are ever not sure whether you should report something, do so and let us determine whether we need to follow up.