

# Should Faculty Use Social Networks to Engage with Students?

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**Purpose of the Study.** The purpose of this research is to inform faculty if/how to use social networks for educational purposes by examining the effect of a student's "separateness-connectedness" self-schema (Wang & Mowen, 1997) on a student's acceptance of online social networking in general, and also on faculty presence in the student's social network.

**Method/Design and Sample.** A survey was administered to 458 students at a medium-sized northwestern university.

**Results.** Results indicate that many students are tentative about using social networking for work and education. Less independent students, however, are more favorable towards its use for work and education, perhaps to seek assistance. They are also more negative towards professors' *social* presence.

**Value to Marketing Educators.** These findings suggest professors must understand different preferences of students and tread lightly before implementing coursework and business projects on students' social networking sites. Alternatives might include asking students their preferences, implementing only minor goals, holding office hours online, or using only dedicated sites for education.

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In 2005, the Sloan Consortium found that the business discipline had the highest reported levels of online coursework (Grandzol & Grandzol, 2006). As such programs grow, concerns center on providing meaningful coursework and networking experiences that are consistent with the needs of professional development in business. Social networking media, such as Facebook, Twitter, Text Messaging, Instant Messaging, and MySpace, may be considered as a means of providing such developmental activity. However, research on their efficacy for education is limited. Not everyone agrees that social media should be used for such utilitarian purposes, including some students (Charnigo & Barnett-Ellis, 2007; Chu & Meulemans, 2008; Connell, 2009; Hewitt & Forte, 2006; Lipka, 2007). Jordan (2009) warns of a "blurring of boundaries" (Jordan, 2009, p. 174), where the unintentional sharing of too much information can result in dire consequences, some of which imply legal and professional difficulties (Brandenburg, 2008; Gibson, 2010). Connell (2009) concludes that a "one-size-fits-all model does not work when it comes to social networking sites ..." (Connell, 2009, p. 33).

The degree of "separateness-connectedness" (Wang and Mowen, 1997) inherent in student psyches or self-schemata may be important to the efficacy of social networking in general, and its use for educational purposes in particular. "Separateness-connectedness" has been found to be significant in studies of human development, empathic tendencies, gender differences, and cultural differences (Corcoran,

1982; Douvan & Adelson, 1966; Josselson, 1988; Markus & Oyserman, 1989), where the sense of self is partially defined by each individual's different need for affiliation and intimacy (Miller, 1986). This construct describes both the level of independence/ individuality and the desire for privacy (or self-other boundary) in an individual's personality. This construct may create a divide between those students who tend to confine their social life to a close, comfortable "inner circle" and those whose need for interpersonal trust among their contacts is lower (Mason, 1994; Thompson & Pennycook, 2008). The purpose of this research is to examine the effect of a student's "separateness-connectedness" self-schema on the acceptance of online social networking in general, and on faculty's presence in the student's social network in particular, so that educators might be better informed regarding the "if" and "how" of integrating social networking in the classroom.

## LITERATURE REVIEW

Several studies find that students use social networking sites mostly for social and personal purposes (Grosbeck, Bran, & Tiru, 2011; Luo, 2010; Smith and Caruso, 2010). Research based on content analysis of students' postings indicates that online communications are often deeply intimate, with topics such as candid discussion of family issues, risk-behavior admissions, and the use of sexual and profane language (Williams & Merten, 2008).

Communications for formal educational purposes are more limited; less than 10% of students report using the sites for such purposes (Smith and Caruso, 2010). Some studies indicate students use Facebook for educational purposes in an informal way (Grosbeck, Bran, & Tiru, 2011), while others show small innovations used by faculty in formal ways (Gibson, 2010). In a study of which faculty behaviors students judge to be most appropriate, Teclehaimanot and Hickman (2011) find that passive behaviors are more appropriate than active behaviors, and that men are more accepting of faculty presence.

A few studies examine social issues and their effect on online education. Researchers in 1994 posited that HCC and LCC (High and Low-Context Culture) students differ in the need for positive social interaction to be present before any effective learning occurs (Mason, 1994). HCC students obtain communication information by processing non-verbal and social cues that they find important to build relationships. The lack of such clues in online interactions creates challenges as HCC learners attempt to build their inner circles of trust (Vratulis and Dobson, 2008). Another study that examines individual differences in satisfaction with real-world interpersonal relationships finds a positive causal relationship between real and virtual interpersonal relationships (Lin, Sun, Lee, & Wu, 2007). Additionally, research on online education in general finds that students have similar perceptions of social connectedness and satisfaction with their learning, irrespective of whether an in-person or an online format is used (Daves & Roberts, 2010).

The distinction between HCC and LCC learners roughly matches the concept of separateness-connectedness found in the marketing literature. This concept is an outgrowth of individual differences research, where the dichotomy of separateness and connectedness is manifested in how a person describes his or her self-identity (Markus & Oyserman, 1989). Generally, a separated person distinguishes him- or herself from others and establishes a clear boundary between the self and others. In contrast, a connected person may see others as an extension of the self and frequently thinks and talks about significant others to whom he or she is attached (Josselson, 1988). In the self-schema, both the level of independence/ individuality and the desire for privacy (or self-other boundary) are of importance. For the connected, the self-identity is embedded in the relationship networks to which the person belongs, with a consequent increase in one's empathic tendency (Corcoran, 1982; Wang & Mowen, 1997) and a desire for a higher level of intimacy in relationships.

Given the importance of relationships to those individuals who score high on connectedness, it would seem that such individuals would respond favorably toward the use of online social networking. It is not clear, however, if online connectedness is analogous to interpersonal connectedness and if the translation from "real" to "virtual" worlds can be made. Early literature on computer communications described

computer interactions as task-oriented, lacking in humanity, detached, and absent of affection (Rice & Love, 1987; Sproull & Kiesler, 1986). The development of user-friendly social networking interfaces, however, may alleviate some of the more deleterious effects of computer-mediated communications.

## RESEARCH HYPOTHESES

This research is underpinned by Wang and Mowen's (1997) separateness-connectedness self-schema, which is examined as one determinant of students' opinions of online social networking.

### **Dependent Variables**

The dependent variables represent student opinion, expressed as "favorability rating of social networking," and "willingness to experience professors' involvement in social networking."

### **Independent Variables: Separateness-Connectedness Self Schema**

Wang and Mowen's (1997) separateness-connectedness construct designates independent variables as "independence/individuality" and "self-other boundary."

We assume that technological improvements have resulted in social adaptations that relieve computers of purely mechanistic aspects of interaction, and we thus hypothesize that students who desire more connectedness with others are more favorably disposed towards social networking than those who prefer to be more separated from others. Using Wang and Mowen's (1997) definition of connectedness to describe those individuals who are "less individual/independent" and those who have a "weaker self-other boundary" (less need for privacy), we make the following hypotheses:

**H<sub>1</sub>:** The less individual/independent a college student, the more favorable are the student's attitudes towards online social networking.

**H<sub>2</sub>:** The weaker the self-boundary of a college student, the more favorable are the student's attitudes towards online social networking.

On the face of it, "connected" persons seem to be equally welcoming of the presence of professors in their social networks, but the issues are far more complex. The level of independence in each student may in part determine how welcome a professor's presence is in students' social networks. Students with a low sense of independence and individuality may welcome continued guidance from authoritarian figures (Fougler, Ewbank, Kay, Oborn Popp, & Carter, 2009). A second consideration of great importance, however, is the concept of "blurring" or uncertainty about privacy, authority, and professionalism (Hewitt and Forte, 2006; Jordan, 2009; Lipka, 2007; Selwyn, 2009). This concept of "blurring" is of consequence when the personal lives of students are integrated with

online educational pursuits. “Connected” individuals may engage in far more intense interpersonal interactions online, and may, as a result, be more reluctant to accept the presence of a person normally kept at a professional distance. It is also possible, however, that the “connected” individual has difficulty maintaining boundaries, even with formal relationships. As a result, because the “separated” individual is, in general, “naturally” more able to keep distance between himself or herself and others, we make the following hypotheses:

**H<sub>3</sub>:** The less individual/independent a college student, the more willing the student is to experience professors’ involvement in the student’s social network.

**H<sub>4</sub>:** The weaker the self-boundary of a college student, the more willing the student is to experience professors’ involvement in the student’s social network.

## METHOD

### Sample

After discussions with several students about which social media they considered to be familiar to students, a survey instrument was developed and pilot-tested to determine the usability of the instrument and any problems present in the survey design. The pilot-study questionnaire included questions about text messaging, Twitter, and a group of web-based social

networking sites listing Facebook, MySpace, and Instant Messaging as examples. A sample of 55 undergraduate students completed the paper-and-pencil pilot-study questionnaire. Results of the pilot study were used to refine the survey instrument and to clarify any difficult-to-understand items. Results showed that no respondents used Twitter on a regular basis, so that portion of the questionnaire was discarded. Further discussion led to several corrections for clarity and the addition of several more items about faculty involvement in students’ online networking circles. The final questionnaire included enough differences from that used in the pilot study that the pilot study results were set aside from further analysis.

The final voluntary paper-and-pencil questionnaire was then administered to numerous classes at a medium-sized university in the Northwest. A pencil-and-paper questionnaire was used because the university was undergoing a transition to a new e-mail system that uses standardized student e-mail addresses, and not all students were migrated to the new system.

Of the 458 students sampled, 54 % were female. Age ranged from 16 (the state has a “Running Start” program allowing high school juniors to begin college) to 52 (a few students fitted the nontraditional category). The average age was 21. Average GPA was 3.26. Table 1 summarizes other characteristics of the sample.

**Table 1: Summary Statistics for Demographic Variables and Social Networking Usage**

	<b>N</b>	<b>Mean</b>	<b>Std. Dev.</b>
Age	456	21.2	4.84
Reported GPA	438	3.26	0.38
No. of contacts in network	398	257	252
No. of contacts frequently contacted	390	45	57
Hours spent/week	391	6.7	7.7

### Measures

The questionnaire had four main parts. First, respondents read a short introduction that guaranteed anonymity and conveyed the voluntary nature of the survey. Second, subjects answered some demographic questions and completed the nine-item separateness-connectedness self-schema scale (Wang and Mowen, 1997), using seven-point Likert-type ratings. Third, the questionnaire inquired about respondents’ usage patterns of text messaging and social networking media, which listed Facebook, Myspace, and Instant Messaging as examples of major social networking sites. It also asked subjects to rate their opinions towards social media, utilizing a seven-point Likert-type scale. Last, the questionnaire asked various attitudinal and opinion-related questions delving into their positive and negative feelings regarding the use of social networking by professors.

Wang and Mowen’s (1997) separateness-connectedness two-factor (independence /individuality and self-other boundary) scale was developed using exploratory and confirmatory factor analysis, and it found significant predictive validity when used to relate the construct to demographic variables. Items used for a summative scale of the factor, “independence,” include such things as “enjoying the way I am rather than the way other people want me to be.” Items used for a summative scale of the factor, “self-other boundary,” include such things as “I have my own privacy, which I would never share with even my closest family members or partner” (Wang and Mowen, 1997).

To measure the favorability rating of online social media, items were developed from language that assessed utilitarian aspects of the media, as well as more socially engaging aspects of the media. In this case, twelve items were chosen, ranging from relative

importance of the media to one's job, one's education, and one's social life to items that assessed opinions about its personal relevance, fun, excitement, etc. Students rated these items on a seven-point Likert-type scale. An exploratory factor analysis using principal components with varimax rotation was performed on the results. Internal consistency was also assessed using Cronbach's alpha. These methods are consistent with recommendations for the use of summated Likert-scales (Clason and Dormody, 1994).

Analysis was performed separately for the text-messaging questionnaire and for the web-based social-networking questionnaire. Results for all analyses were so similar for both types of social media

that only the web-based social-networking analyses are reported, in order to eliminate reporting complexity and to allow for parsimony. (Contact authors for text-messaging results.)

### Factor Analysis

Results of the factor analysis for favorability of online social networking are shown in Table 2. A factor loading of at least 0.5 was the criteria set for including an item in a factor. Two factors, which we named "social engagement" and "general utility," emerged. The measure of internal consistency, which is Cronbach's alpha, is 0.860. This result exceeds an acceptable level of reliability (Nunnally, 1978).

**Table 2: Varimax Rotated Factor Loadings for Favorability of Web-Based Social Networking<sup>a,d</sup>**

Item	Factor 1: Social Engagement	Factor 2: General Utility	Communalities
FB/MS/IM <sup>c</sup> is:			
Important to my social life	0.766	0.292	0.672
Important to my job	-0.027	0.860	0.740
"Cool"	0.776	0.210	0.646
Fun	0.859	0.009	0.737
Exciting	0.831	0.186	0.726
Intellectually stimulating	0.545	0.565	0.616
Personally relevant	0.634	0.338	0.516
Let's me be "who I am"	0.682	0.344	0.583
Let's me be "who I want to be"	0.619	0.403	0.545
A complete waste of time <sup>b</sup>	-0.505	-0.085	0.263
Important to the world	0.383	0.567	0.468
Important to my education	0.251	0.823	0.741
Initial Eigenvalue	5.862	1.391	
Cumulative % of Variance	48.850%	60.440%	
Cumulative % of Variance after Rotation	38.565%	60.440%	

<sup>a</sup>Cronbach for the overall scale is 0.860

<sup>b</sup>Indicates reverse-scoring

<sup>c</sup>Indicates Facebook/MySpace/InstantMessaging

To measure "willingness to experience professors' involvement in social networking," issues such as liking, academic success, and accessibility were included with questions of anger, resentment, embarrassment, and perceived intrusion of privacy. The questions were again measured by seven-point Likert-type ratings. An exploratory factor analysis using principal components with varimax rotation was performed on the results. Internal consistency was also assessed using Cronbach's alpha. Results are shown in Table 3. Once again, two factors emerged, and they are identified as "educational utility" and

"social incursion." Cronbach's alpha is 0.680, a bit low, but it still constitutes an acceptable level of reliability.

Each of the measures for the dependent-variable constructs includes two factors. The emergence of two factors was not hypothesized a priori, but items were originally chosen to tap into both utilitarian and social aspects. The factor loadings are aligned with our original reasoning and are mathematically consistent. The use of two factors for further analysis allows for more nuanced hypothesis testing, so the factors were used without reservation for statistical analysis.

**Table 3: Varimax Rotated Factor Loadings for Willingness to Experience Professor's Involvement in Web-Based Social Networking<sup>a</sup>**

Item	Factor 1: Educational Utility	Factor 2: Faculty Social Incursion	Communalities
It would be fun if my professors used FB/MS/IM <sup>c</sup> .	0.763	-0.230	0.635
My grades would be better if I could contact my professor through FB/MS/IM <sup>c</sup> .	0.861	-0.099	0.750
Professors should be more accessible through FB/MS/IM <sup>c</sup> .	0.874	-0.144	0.784
I would like it if my professors used FB/MS/IM <sup>c</sup> to hold virtual office hours.	0.846	-0.070	0.721
I would like it if my professors used FB/MS/IM <sup>c</sup> as a part of their classes	0.814	0.013	0.662
I would enjoy being friends with many of my professors through FB/MS/IM.	0.724	-0.280	0.602
I would resent it if my professors accessed my FB/MS/IM <sup>c</sup> conversations.	-0.109	0.717	0.526
I would be embarrassed to have my professors on my FB/MS/IM <sup>c</sup> accounts.	-0.099	0.850	0.732
If my professors saw my profile on FB/MS/IM <sup>c</sup> , I would be angry.	-0.164	0.770	0.620
Professors holding office hours on FB/MS/IM <sup>c</sup> would be a waste of time. <sup>b</sup>	-0.613	0.286	0.458
Professors using FB/MS/IM <sup>c</sup> to contact me would be a real intrusion of my privacy.	-0.354	0.685	0.595
Professors using FB/MS/IM <sup>c</sup> for class purposes would be unnecessary. <sup>b</sup>	-0.633	0.359	0.530
If professors had access to students through FB/MS/IM <sup>c</sup> , the access should be made separate or invisible from my social contacts	-0.081	0.643	0.420
Initial Eigenvalues	5.886	2.147	
Cumulative % of Variance	45.279%	61.794%	
Cumulative % of Variance After Rotation	38.030%	61.794%	

<sup>a</sup>Cronbach for the overall scale is 0.680

<sup>b</sup>Indicates reverse-scoring

<sup>c</sup>Indicates Facebook/MySpace/InstantMessaging

Summary statistics for usage items, as well as for independent and dependent variable items, are reported in Table 4. The average number of contacts reported in students' social network is 257, with 45 the reported number contacted on a regular basis. The average time spent on social networking sites is

reported to be 6.7 hours per week, which is consistent with other research findings that students spend an average of 51 minutes per day on such sites (Stutzman, 2008). About 398 out of the 458 (87%) respondents are actively involved with social media of some kind.

**Table 4: Summary Statistics for Independent Variable Items and Dependent Variable Items**

	N	Mean	St. Dev
Independence	458	5.05	0.78
Self-Other Boundary Items	458	3.87	1.13
SN Social Engagement Items*	424	4.08	1.18
SN General Utility Items*	426	2.82	1.27
Educational Utility Items**	451	3.57	1.40
Faculty Social Incursion Items***	449	3.81	1.26

\*1=strongly disagree about its favorability, 7=strongly agree about its favorability

\*\* 1=strongly disagree items are positive, 7=strongly agree items are positive

\*\*\*1=strongly disagree items are negative, 7=strongly agree items are negative

## RESULTS

### **Summary Statistics**

Summary data on the items composing each of the factors in the independent and dependent variables indicate several important findings. First, the relatively high mean for the independence factor items ( $m=5.05$ ,  $sd=0.78$ ) is consistent with Wang and Mowen's (1997) finding that western cultures generally have more independent and individualistic cultures, although respondents answered across the full range of the independence scale. Mean scores for the self-other boundary factor are lower ( $m=3.87$ ;  $sd=1.13$ ) and tend toward slightly less desire for privacy than more desire for privacy, another foreseen finding for college-age students.

Among the dependent-variable factor-items, the mean favorability scores for "social engagement" in online social networking (SN) ( $M=4.08$ ;  $SD=1.18$ ) are higher than for the "general utility" scores ( $M=2.82$ ;  $SD=1.27$ ). These summary statistics indicate that, in general, students enjoy the social aspects of social networking but find it less relevant to their jobs, education, and the world. Last, in their willingness to experience a professor's presence in their social networks, the low mean score ( $M=3.81$ ,  $SD=1.26$ ) suggests that students are not overwhelmingly negative about faculty presence on their social networks, but are not particularly enthusiastic about their presence for educational purposes either.

An in-depth study of how demographic variables affect students' opinions is beyond the scope of this research, but the demographic variables were tested, nonetheless, for significant relationships with the dependent variables. T-tests of gender differences show that only "Educational Utility" is modestly significant ( $t=1.829$ ,  $df=448$ ,  $p<0.10$ ), with women slightly less favorable ( $M=3.46$ ) about faculty using Facebook for educational purposes than are men ( $M=3.70$ ). Correlations show three significant relationships. Age is negatively correlated with "Social Engagement" ( $r=-0.196$ ,  $p<0.01$ ) and "Educational Utility" ( $r=-0.087$ ,  $p<0.10$ ), suggesting older students are less favorable than younger students about the social aspects of social networking and about faculty using Facebook for educational purposes. GPA correlates negatively with "General Utility" ( $r=-0.103$ ,  $p<0.05$ ), suggesting students with higher GPAs regard the educational utility of social networking less favorably.

### **Hypothesis Testing**

For hypothesis testing, multiple regression was used as the means of analysis. Because the dependent variables loaded onto two factors for favorability, four multiple regression equations were analyzed, two for general favorability and two for favorability of professors' presence. The independent variables, "independence" and "self-other boundary," were entered into the regression together because factor

analysis with varimax rotation results in uncorrelated factors; thus, multicollinearity is not a problem. First, the regressions tested the effect of "independence" (H1) and "self-other boundary" (H2) on favorability of "social engagement" and "general utility." The results, shown in Table 5, indicate that neither factor is significant for "social engagement." For "general utility," however, overall results are significant ( $R^2=0.025$ ,  $F(2,418)=5.386$ ,  $p<0.005$ ), with significance for the effect of "independence," ( $b=-0.160$ ,  $t=-3.279$ ,  $p<0.001$ ), but not for "self-other boundary." The negative b-coefficient indicates that the less independent a student, the more important is social networking to his or her job, his or her education, and the world. So, in summary, H2 is not supported, but H1 is partially supported, in that less independent students view the importance of social networking as having more general utility. This finding adds clarification to other studies (Hewitt and Forte, 2006) by finding social networking for educational purposes is favorable mostly for those students who are less independent. Neither H1 nor H2 is supported when it comes to social-engagement attitudes; students are generally favorable toward social engagement regardless of their connectedness schema.

Multiple regression was then used to test the hypotheses (H3 and H4) about students' willingness to experience a professor's involvement in their social networks. The multiple regression tested students' willingness to experience a professor's involvement when that involvement is primarily for purposes of educational utility. The overall model (see Table 5) is significant ( $R^2=0.019$ ,  $F(2,437)=4.219$ ;  $p<0.05$ ). "Independence" (H3) is significant at the  $p<0.01$  level ( $b=-0.126$ ,  $t=-2.638$ ), and the negative b-coefficient indicates that less independent students are more willing to experience the presence of faculty on their social networks for educational purposes. "Self-other boundary" (H4) is nearly significant at the  $p<0.10$  level, but it does not pass that hurdle. The second multiple regression tested students' willingness to experience a professor's involvement when it involves incursion into their social relationships. The overall model is significant ( $R^2=0.011$ ,  $F(2,433)=2.515$ ;  $p<0.10$ ), and "independence" (H3) is significant ( $t=-2.082$ ;  $p<0.05$ ), while "self-other boundary" (H4) is not. The negative b-coefficient for "independence" indicates that less-independent students are more upset by social incursions of faculty. This significant finding lends some credibility to the idea that more intensely connected individuals engage in more intimate subject matter, and so they may be somewhat less inclined toward the presence of professional, formal, or authority figures in social matters. Overall, however, the insignificant finding of the "self-other boundary" factor, combined with a relatively low mean for distress related to "faculty social incursion" indicates that students find such incursions only mildly distasteful, regardless of their personal boundary setting.

**Table 5: Results of Multiple Regression for Favorability Factors and the Independent Variables – Independence/Individuality and Self-Other Boundary**

Hyp No.	Dependent Favorability Factor	Independent Variable	Overall Model- F	Sig	Std B-Coeff	Adj R-Sq	t	Sig
1	Social Engagement	Independence	0.793	NS	-0.057	-	-1.148	NS
		Self-Other Boundary						
2	General Utility	Independence	5.386	0.005	-0.160	0.025	-3.279	0.001
		Self-Other Boundary						
3	Educational Utility	Independence	4.219	0.015	-0.126	0.014	-2.638	0.009
		Self-Other Boundary						
4	Faculty Soc'l Incursion	Independence	2.515	0.082	-0.101	0.007	-2.082	0.038
		Self-Other Boundary						

Students, in general, view the social aspects of social networking more favorably than they view the utilitarian aspects. Less independent (more connected) students, however, view social networking as more important for purposes of utility – more important to their jobs, to their education, and to the world. When social networking is used for educational purposes, less independent students are significantly more willing to experience professors' presence. When professors stray past social boundaries and invade students' social space, however, more connected (less independent) students are more upset than independent students.

## DISCUSSION

Contemporary literature on digital technologies and education suggests that a change in students' lives is underway, courtesy of their engagement with various social media (Fabos, 2008; Jordan, 2009; Prensky, 2001; Towell, 2009). It is this environment that prompted our investigation and led us to ask whether students view social networking favorably when used for education, and if individual differences about social connectedness affect those favorability ratings. Our results regarding extent of use coincide with other studies; students use social networking frequently and

extensively. Because there is no reason to believe that the level of technological sophistication of the students sampled is other than average, we believe that the demographics regarding usage reflect the generalizability of the study.

Student personality attributes, specifically Wang and Mowen's (1997) "independence/ individuality" and "self-other boundary" metrics, were examined to gauge their effect on favorability of social networking. Factor analysis found that two emergent factors, "Social Engagement" and "General Utility," loaded on favorability of social media. Two emergent factors, "Educational Utility" and "Faculty Social Incursion," also loaded on professors' involvement. These factors indicate that students view the use of social media for social purposes differently from the ways they view its use for utilitarian purposes, such as education and work. The test of our first two hypotheses found only partial support. When we were talking about the use of social networking for purposes of social engagement, all students liked the interactions, regardless of their independence or self-other boundary. What was more interesting was the "general utility" factor. Our research shows that students were less amenable to using social media for educational or job purposes, but for those students who are less independent and perhaps feel a stronger need for assistance, their

views were more favorable toward using social media for educational or job assistance. Perhaps students who are less independent are more nuanced in practice when combining professional and social channels.

Discerning the meanings of student responses regarding professorial involvement in their networks and developing prescriptions for professors' interaction are more challenging tasks. On the one hand, students seemed to be telling us they mildly dislike professor involvement for educational purposes; the extent varying as a function of their independence, with less-independent students being more welcoming. On the other hand, the strength of self-other boundary had little effect on how students felt about professors' presence for educational purposes. To muddy the waters further, less independent students felt more negative about professorial social incursion into their social media, perhaps because less independent students may have more intimate social connections and may wish to keep those interactions separate from academic and professional-style interactions. Certainly, anecdotal evidence of high profile college-campus incidents that result in disciplinary action or unintended consequences may hinder students from granting access to their online profiles beyond their intimate social circles. Past campus incidents include athletic suspensions or dismissals for inappropriate verbal and photographic postings (Armour, 2006), academic suspensions for postings of inappropriate photographs of selves, other students, or dignitaries (Gruss, 2007; Iyengar, 2006), and loss of prospective jobs for posting risqué online persona (Finder, 2006). Such incidents feed student concerns about blending their professional and social lives.

Uncertainty in our digital worlds prevails, and as the use of social networking extends to an increasing number of educational applications, concern for professionalism and proper boundaries must remain paramount until a more complete social transformation renders a clearer picture for us as professors. Since a manageable number of social networking channels are relevant at present, inquiry into how to best set privacy and group settings and other pertinent customizations would be useful for professors trying to negotiate between engagement and abuse. At present, professors should tread lightly, perhaps implementing only minor goals, holding office hours, or using dedicated educational sites for "social" networking. LinkedIn may be one platform useful for professional networking purposes, though it is somewhat limited in educational functionality.

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As is typical when doing early work on emergent phenomenon, every answer seems to beg a question. Our research is limited by the fact that it is one snapshot in time and a test of one individual difference. As online social media continues to evolve very rapidly and develop to support many more functions, student attitudes may evolve as well. Longitudinal research would assist in tracking the continued "blurring," or eventual clearing, of attitudes in a digital world. Future investigation also needs to be conducted to better understand, with more depth, how other demographic and personality variables affect students' use of social media and their perceptions of incursions by professors. For example, a number of researchers argue that students who use social networking learn in an informal or self-motivated manner (Fabos, 2008; Grosseck, et al., 2011), thus highly motivated students may be more likely to use social networking extensively and may view it more favorably. Other researchers argue that the multi-tasking nature of social networking results in poor formal learning (Jordan, 2009; Towell, 2009), thus poor students may be using social networking more extensively and may view it more favorably. Some uncertainty exists, despite claims of unique characteristics among "Generation Y digital natives," that demographics may be less influential than personality factors and "digital mindsets" in the extent of use and attitudes towards social networking (Prensky, 2001).

Research can also be directed towards understanding more precisely what constitutes clear educational intent and professorial concern in social networking venues, as contrasted with inappropriate and unwelcome incursion. Comparisons of attitudes among students, faculty, and administrators would highlight potential areas of misunderstanding among the populations groups, adding insight into how best to adapt social networking into education. Studies that include more specific behaviors or scenarios may provide valuable insights into what constitutes optimal use of social networking for educational purposes. In addition, the effect of negative personal experiences, such as disciplinary action or unexpected sanctions for online behaviors, should be studied for the effect on students so disciplined, as well as on fellow students. Meanwhile, we can rest assured that ongoing change is inevitable, and the information-age education professional needs to step up to its challenge to stay in touch with students.

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