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Instructor Self-Disclosure and Third-Party Generated Warrants: Student Perceptions of Professor Social Media Use

Cathlin V. Clark-Gordon & Alan K. Goodboy

Guided by warranting theory, this experiment examined students' perceptions of mediated self-disclosive messages generated by a professor and members of a professor's social network. Using a 2 (self-disclosive messages: professional or personal) x 2 (warranting cues: present or absent) factorial experiment with Twitter, students' perceptions of professor credibility and attractiveness were examined. Results showed no main effects for warranting cues on perceived instructor credibility or social attraction. However, a professor who tweeted professional self-disclosures was perceived as higher in competence and task attraction, whereas a professor who tweeted personal self-disclosures was perceived as higher in character and social attraction.

Keywords: Instructor Credibility; Self-Disclosure; Social Media; Warranting Theory

Research indicates that 70% of faculty members report using social media for personal use and 55% of faculty use social media for professional purposes (Seaman & Tinti-Kane, 2013). However, conventional wisdom and best practices for how to manage a social media presence as an instructor of higher education can be

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conflicted. Is it best to use tight privacy settings to control personal content? Should instructors create two different personas: one professional to share publicly, and one personal to stay connected to a more intimate network? Should all personal and professional content just be posted together into one online presence? With increasing metrics of social media use among college students, much research has considered how social networking site (SNS) use impacts college students' satisfaction with their lives, and how it may affect relationships with friends and loved ones (e.g., Ellison, Steinfield, & Lampe, 2007; Kalpidou, Costin, & Morris, 2011; Utz & Breuer, 2017). However, research needs to further consider the various roles social media may play in the grander scheme of higher education, including how students may find, friend, or follow their professors in this online space. With the increasing likelihood that instructors of higher education use social media, it is important to consider how instructors, professors, or other teaching professionals in higher education, engage with, and communicate to their students using social media.

To gain further understanding of students' perceptions of professor personal and professional social media use, this study replicated past research on student responses to professor Twitter profiles, examining how students perceived self-disclosive tweets generated by a professor, and extended previous work to determine if tweets made by individuals within the professors' Twitter network would also impact student perceptions. From the lens of warranting theory, the present study utilized a 2 (self-disclosive messages: professional or personal) x 2 (third-party warranting cues: present or absent) factorial experiment to examine how both the professionalism of the messages created by the professors and the presence of other-generated messages may impact students' perceptions of their credibility and attractiveness.

Warranting Theory

The information that people post online is often carefully managed and manipulated. Warranting theory refers to the perceived legitimacy and validity of information that is received from online sources (Walther, 2011). Individuals frequently use SNS and communication technologies to communicate with their social networks, and because of various affordances of SNS, such as asynchronicity and anonymity, information can easily be manipulated to help manage impressions others may form. Receivers of this online information, then, are expected to be more certain of the impressions they have formed of an individual if they are able to warrant, or connect, the online information to the offline, physical person (Walther, 2011). Warrants, then, are considered to be pieces of information that can validate or verify that information presented online connects to a person's physical, day-to-day life (DeAndrea, 2014). For example, providing a photograph on an online dating site would be a warrant that could validate textual claims made in a dating profile (Ellison, Heino, & Gibbs, 2006).

Message control is also thought to greatly affect how people evaluate information online. Warranting theory explains how receivers evaluate messages that appear online,

particularly given the potential for the manipulation of information presented in SNS. Warranting value, then, has been defined as the degree to which a target (e.g., a person, organization, or company) is perceived to have manipulated, controlled, or shaped information that is about the target (DeAndrea & Carpenter, 2018). Warranting value is a psychological construct dealing with the perception of how immune to manipulation a message is, while the warrant itself is the information that verifies a message is “true to life.” Individuals rely on information with greater warranting value when forming impressions online (Walther & Parks, 2002). One major type of warrant, or warranting cue, is third-party information visible on SNS’s, such as public connections, or comments and pictures posted by social network members connected to an individual, not made by the individual themselves. According to warranting theory, this information posted by others is seen as more legitimate than self-posted information, because individuals cannot manipulate or control the information that is being presented about them by others (DeAndrea & Carpenter, 2018). For example, imagine viewing an acquaintance’s Facebook profile to find that they only share pictures taken by themselves (“selfies”). However, in pictures that were shared by others, the individual looks different than they did in their selfies. Because the photos shared by others could not have been edited or manipulated by the acquaintance, people are more likely to trust what others post, rather than the selfies posted by the individual themselves.

Research has shown that in computer-mediated communication (CMC), other-generated messages (as opposed to self-generated messages) can increase perceptions of physical attraction and honesty of the target (Walther, Van Der Heide, Hamel, & Shulman, 2009). Antheunis and Schouten (2011) found that public comments made by friends on SNS’s can also increase social attraction, or the degree one perceives a person as pleasant and feels like they could become a friend. Similarly, DeAndrea, Van Der Heide, and Easley (2015) studied how the ability of a target to modify third-party information is received. They found that when perceptions of warranting value were high (there was low potential for modifying third-party information), the relational closeness of a target had a negative indirect effect on task attraction through perceptions of third-party objectivity (DeAndrea et al., 2015). Task attraction is a persons’ perception that an individual can accomplish tasks and would be good to work with (see McCroskey & McCain, 1974). The findings of DeAndrea et al. (2015) suggest that when there was no potential for online third party messages to be edited, and the target and receiver were relationally close, there was a negative impact on task attraction through their perceptions of the objectivity of the third party. Wotipka and High (2016) studied warranting value in the context of online dating, and discovered that lower levels of selective self-presentation are associated with higher levels of social attraction, and that both selective self-presentation and high warranting value are associated with increased trust of a profile owner (target). These studies, taken together, demonstrate that when a target is being evaluated, profiles with higher warranting value, and lower modification control, are seen as more objective and socially attractive. Twitter does not afford users the ability to comment on posts, but instead, users are able to reply to other users publicly as

a new tweet. These public replies would be considered an other- or third- party generated message on the platform, as the target cannot control whom can access the information. Therefore, in the context of this study, we pose the following research questions based on past warranting theory research:

RQ1: Will a professor whose Twitter profile contains other-generated cues (i.e., mentions from others), be perceived by students as more (a) competent, as having more (b) character, and as more (c) caring?

RQ2: Will a professor whose Twitter profile contains other-generated cues (i.e., mentions from others), be perceived by students as more socially attractive?

Instructor Self-Disclosure

The growth of SNS use provides an opportunity to study computer-mediated communication (CMC) in the context of higher education, and more specifically, within the realm of instructional communication (Kuehn, 2009). One commonly studied instructor behavior is self-disclosure. Instructor self-disclosure is a voluntary (planned or unplanned) transmission of information not readily available to students (Cayanus & Martin, 2016). Sorensen (1989) studied dimensions of self-disclosure in the context of instructional communication (i.e., intent, honesty, amount, valence, and depth) and developed profiles of effective teacher self-disclosures, outlining those disclosures that would be perceived by students as good, mixed, poor, and neutral. For example, a “good” disclosure would be, “I care about my students,” while a “bad” disclosure would be a statement such as, “I enjoy going out and getting drunk,” or “I don’t make friends easily.” Lannutti and Strauman (2006) later replicated and extended Sorensen’s study, finding instructor self-disclosures perceived to be more honest, positive, and intentional, were associated with positive evaluations of the instructor. Further research has demonstrated that when disclosures are positive, frequent, and relevant to course material, students are more motivated to learn and have lower apprehension about learning the course material (Cayanus, Martin, & Goodboy, 2009; Goodboy et al., 2014). Additionally, students’ perceptions of appropriateness, relevance, and comfort with an instructor’s disclosures are positively related to students’ perceptions of instructor credibility (Schrodt, 2013). Borzea and Goodboy (2016) compiled topics that instructors self-disclose in the classroom based on extant literature, finding that instructors self-disclosed relational information (about romantic partners, family members, and friendships) as well as personal preferences and hobbies (including political and religious preferences, sexual history, risky behaviors such as drug or alcohol use, leisure activities, educational background and experiences, and social media use). Research suggests that relevant self-disclosures (when instructors relate their disclosures to course material) can boost student perceptions of credibility (Miller, Katt, Brown, & Sivo, 2014).

Not only is self-disclosure commonly studied in the context of a classroom, it also a regularly studied variable in CMC literature. Research suggests that individuals self-disclose more via CMC than in equivalent face-to-face (FtF) conversations (Joinson, 2001), and are also more confident of attributions made by their

conversational partners in CMC than in parallel FtF conversations (Tidwell & Walther, 2002). Bridging this gap between instructional communication and CMC research, Mazer, Murphy, and Simonds (2007) found, in an experiment manipulating the level of instructor self-disclosure on Facebook, that students who viewed a teacher's profile high in self-disclosure reported more motivation, affective learning, and a more positive classroom climate.

One facet of self-disclosures on SNS that may only affect instructors is the decision to post and discuss more personal content, or to only discuss scholarly or professional topics on their social media. Mazer et al. (2007) recommended that professors attempt to maintain an online presence that is consistent with their offline behaviors, as self-disclosures have the potential to damage credibility. Several studies have explored student receptions to the decision to post professional or personal content online. McArthur and Bostedo-Conway (2012) found positive relationships between students' self-reported Twitter use and positive perceptions of teachers and teaching behaviors, such as credibility and immediacy. Johnson (2011) experimentally manipulated three mock instructor Twitter profiles, and randomly assigned participants to view an instructor's Twitter with only social, only scholarly, or a mix of social and scholarly information. Results showed that both students who read the social tweets and students who read a combination of social and scholarly tweets viewed the instructor as significantly more caring. Caring is one dimension of McCroskey and Teven's (1999) three dimensional conceptualization of source credibility. However, no significant differences were found among the experimental groups for the other two dimensions of credibility – competence and character (Johnson, 2011). Similarly, DeGroot, Young, and VanSlette (2015) studied student perceptions of professor Twitter use, using a within-subjects design where all participants viewed three different mock Twitter accounts, one with professional-related content, one with personal/social content, and one with a blend of the two. Unlike the results of Johnson (2011), DeGroot et al. (2015) found that a professor who tweeted professionally was viewed as significantly more credible than the both the blended and the personal-only conditions across all three credibility dimensions of competence, character, and caring.

Therefore, the present study replicates the previous work of Johnson (2011) and DeGroot et al. (2015), and asks if:

RQ3: Will a professor whose Twitter profile contains professional disclosures be seen as more (a) competent, as having greater (b) character, and higher in (c) caring than professor's whose Twitter profile contains social/personal disclosures?

RQ4: Will a professor whose Twitter profile contains professional disclosures be seen as more task attractive than a professor whose Twitter profile contains social/personal disclosures?

The present study also sought to investigate the role of self- versus other-generated warranting cues in tandem with perceptions of professional and personal instructor self-disclosure. Warranting theory suggests that the presence of high warranting information and low modification control on an instructor's SNS would increase their credibility, as they have little to no control over the information

their network connections present about them. However, little is known about how warrants function in the context of the instructor-student relationship, nor about how warranting information may interact with the level of professionalism in self-disclosures. To explore these connections, the following research question is posed:

RQ5: Will warranting cues and instructor self-disclosure interact to influence students' perceptions of a professor's (a) credibility and (b) interpersonal attraction?

Method

This study utilized a 2×2 factorial between-subjects experimental design, manipulating the level of professionalism in a professors' Twitter feed (with a personal condition and a professional condition) and the presence or absence of warrants, or third-party information from others (presence or absence of warranting information). All research procedures were approved by the host institution's IRB (application number available upon request).

Participants

The sample ($N = 346$) consisted of 84 first-year students (24.5%), 72 sophomores (21%), 62 juniors (18.1%), 58 seniors (16.9%), and 67 graduate students (19.5%). The average age of participants was 21.19 ($SD = 4.76$). Ninety-nine participants identified as male (28.7%), 239 (69.3%) identified as female, 3 (.9%) identified as nonbinary, 1 (.3%) identified as female to male transgender, and 3 (.9%) of participants preferred not to respond to the gender question. The majority of our participants were white ($n = 307$, 89.8%), with an additional 8 black participants (2.3%), 7 Asian participants (2.0%), 4 Middle Eastern participants (1.2%), and 16 participants indicating "other" as their ethnicity (4.7%). Participants had 381.82 Twitter followers on average ($SD = 403.07$, ranging from 0 to 1783 followers), and spent an average of 30–60 minutes per day on Twitter.

Procedures

Students at a large Mid-Atlantic university were invited to participate in the study via a university-wide email sent to all students at the host institution. The email contained a link to an online Qualtrics survey. Participants were randomly assigned into one of four conditions, personal tweets with no warrants ($n = 87$), personal tweets with warrants ($n = 85$), professional tweets with no warrants ($n = 84$), and professional tweets with warrants ($n = 90$). After engaging with the stimuli, participants responded to a questionnaire, approximately 10 minutes in length. All participants were invited to be entered into a drawing for an Amazon gift card at the close of the survey by providing their email address.

Stimuli

Participants examined one of four stimuli, each containing a mock-up of a professor's Twitter profile. Elements of these stimuli (e.g., profile and header pictures, number of tweets and followers, Twitter recommendations such as "who to follow" and "trends for you") remained constant over the four conditions, with the exception of the professor's short biography and the wording of the tweets. In conditions with warrants from third parties, profile pictures and Twitter usernames were used to denote the source of the information (the third party) as different from the tweets of the professor.

The actual content and wording of the tweets and biographies were replicated from the work of DeGroot et al.'s (2015) study on professors' personal and professional use of Twitter, and its impact on students' perceptions of the professor's credibility. The DeGroot et al. study showed three different Twitter profiles to participants, one with entirely personal content, one with entirely professional content, and a third stimulus which featured a mix of professional and personal content. The present study used the same tweets and biographies from the personal and professional conditions, and extended these to also include warranting information. We did not include a third "mixed" condition for blending both professional and personal self-disclosures as done in previous research. Personal tweets were about the professor's personal life, including references to family and interests outside of the classroom, while professional Tweets were those that related to teaching and research interests of the professor, just as appeared in the manipulations of DeGroot and colleagues.

Wording between warranting and non-warranting conditions varied slightly, only insofar as the source of information in non-warranting conditions was entirely the professor's tweets, and in warranting conditions, other sources (generic names held constant across conditions) tweeted the same information at the professor, using the @ mention feature of Twitter (see [Appendix A](#)). Taken together, we conducted an operational replication (see: Kline, 2013) of the wording and professor biographies from DeGroot and colleagues for the personal and professional self-disclosure conditions. Then, we extended their work to include warranting cues.

Measurement

Interpersonal Attraction

To assess interpersonal attraction, McCroskey and McCain's (1974)'s interpersonal attraction 6-item subscales of task attraction and social attraction were used. These subscales are set on 5-point Likert response options ranging from 1 – *Strongly Disagree* to 5 – *Strongly Agree*, and example items include, "I think he/she could be a friend of mine" for social attraction, and "You could count on her/him getting the job done" for task attraction. Both the social ($\alpha = .75$, $M = 3.43$, $SD = .42$) and task attraction ($\alpha = .83$, $M = 3.80$, $SD = .57$) scales were found to be reliable.

Credibility

Instructor credibility was measured using McCroskey and Teven's (1999) 18-item Measure of Source Credibility Scale. The measure asks participants to rank the instructor in a seven-point bipolar semantic differential format, across three 6-item dimensions: competence, character, and caring. Example adjective pairs include, "intelligent – unintelligent," "cares about others – doesn't care about others," and "honest – dishonest." All three dimensions of credibility were found to be reliable in the present study (Competence $\alpha = .89$, $M = 5.24$, $SD = 1.03$; Character $\alpha = .82$, $M = 5.28$, $SD = .95$; and Caring $\alpha = .87$, $M = 5.27$, $SD = .98$).

Warranting Value

To ensure the experimental manipulation of warranting was successful and to test the potential mediating role of perceived warrants, one of DeAndrea and Carpenter's (2018) warranting subscales was utilized – the 4-item dissemination control subscale. These scales are used to determine how perceived information control (including the likelihood a target could change information or the audiences that view it) affect the evaluation of information online. The measures are evaluated on 5-point Likert scales and are designed to be tailored to a given situation. For example, an item from the general warranting value scale is, "(The target) manipulated the (information) that appeared on (the site) about (the target)," which appeared in the present study as "The professor manipulated the information on Twitter about herself." In the present study, the dissemination control scale ($\alpha = .81$, $M = 3.79$, $SD = .94$) was found to be reliable.

Results*Manipulation Check*

To determine if our manipulations of professional and personal tweets were successful, participants viewed a Qualtrics question with a slider response from 0 (indicating extremely social/personal tweets) to 100 (indicating extremely professional tweets), and were given the prompt, "What was your perception of the professor's tweets?" To verify that the experimental manipulations of professional and personal tweets were perceived by students, as in the previous work of DeGroot et al. (2015), a Welch's *t*-test revealed significant differences between conditions $t(302) = -14.24$, $p < .001$, Cohen's $d = 1.60$, $U_3 = 94.5$. Those in the professional conditions perceived the tweets to be more professional ($M = 75.41$, $SD = 20.97$) than those in personal conditions ($M = 38.39$, $SD = 25.10$). Additionally, to determine if the warranting manipulations were successful, a second *t*-test was run with DeAndrea and Carpenter's (2018) dissemination control subscale. The *t*-test revealed significant differences between conditions with warrants present and those absent of warrants $t(335) = 3.37$, $p < .001$, Cohen's $d = .38$, $U_3 = 65.5$. Students in conditions with warrants reported significantly less control of information dissemination ($M = 3.62$, $SD = .93$) than those in conditions without warrants ($M = 3.97$, $SD = .90$).

Research Questions

RQ1 asked if students who viewed a professor's Twitter profile with other-generated cues (i.e., mentions from others on Twitter), would perceive the professor as more credible. To examine the three dimensions of credibility, a MANOVA was conducted. The MANOVA revealed no main effects for the presence of other-generated cues (Twitter mentions), on any of the three dimensions of credibility – competence, character, and caring, Wilks' $\lambda = .985$, $F(3,336) = 1.693$, $p = .168$. RQ2 asked if the presence of other-generated cues would result in higher levels of social attraction to the professor. A Welch's t -test was conducted to compare differences between the presence and absence of other-generated cues on perceptions of social attraction, finding no significant mean differences between experimental groups with warranting cues ($M = 3.41$, $SD = .42$) and those without warranting cues ($M = 3.44$, $SD = .39$), $t(336) = .792$, $p = .79$.

RQ3 asked if professors who tweet professionally would be seen as more credible than professors who tweet socially and personally, and was also tested using a MANOVA. The three related dimensions of credibility (competence, character, and caring) were entered into the MANOVA, finding overall significant differences between professional and personal professor tweets, Wilks' $\lambda = .804$, $F(3,336) = 27.379$, $p < .001$. Follow up ANOVAs revealed that professors who tweeted professionally were seen as more competent ($M = 5.49$, $SD = 1.01$) than those who shared personal tweets ($M = 5.01$, $SD = .95$), $F(1,338) = 20.811$, $p < .001$, $\eta_p^2 = .058$. However, professors who tweeted personally were perceived as greater in character ($M = 5.45$, $SD = .93$) than those who tweeted professional content ($M = 5.15$, $SD = .89$), $F(1,338) = 9.024$, $p < .003$, $\eta_p^2 = .026$. No significant differences emerged between professional ($M = 5.23$, $SD = .94$) and personal tweets ($M = 5.34$, $SD = .95$) in students' perceptions of how caring the professor was $F(1,338) = 1.19$, $p = .276$, $\eta_p^2 = .004$. Thus, RQ3 found that students' perceptions of a professor who tweeted professional content was more competent, but were not higher in the credibility dimensions of character or caring. RQ4 asked if a professor who made professional disclosures would also be perceived as more task attractive than a professor who made personal/social disclosures. A Welch's t -test showed that professors who tweeted more professionally were seen as higher in task attraction ($M = 3.88$, $SD = .53$), than those with social tweets ($M = 3.72$, $SD = .58$), $t(330.94) = -2.73$, $p = .007$, Cohen's $d = .29$, $U_3 = 61.8$.

RQ5 probed the interaction effect between warranting cues and self-disclosure on students' perceptions of credibility and attractiveness. To test for this potential interaction, two factorial MANOVAs were used. The first MANOVA, using the three dimensions of credibility (competence, character, and caring) as dependent variables, revealed a significant omnibus interaction effect, Wilks' $\lambda = .972$, $F(3,334) = 3.183$, $p = .028$. However, follow up factorial ANOVAs revealed no significant interaction effects of warrants and professionalism on competence $F(1,339) = .272$, $p = .602$, $\eta_p^2 = .001$; character $F(1,339) = 2.50$, $p = .114$, $\eta_p^2 = .007$; or caring $F(1,339) = 2.37$, $p = .125$, $\eta_p^2 = .007$. The second MANOVA used task and social attraction as dependent variables because of their significant correlation, $r(338) = .482$, $p < .001$. This MANOVA, however, did not yield

a significant interaction effect between the presence of other-generated cues (warrants) and professionalism, Wilks' $\lambda = .990$, $F(2,332) = 1.604$, $p = .203$.

Overall, these results indicate that only self-disclosure impacted students' perceptions of an instructor. The professor who made professional self-disclosures was perceived as more competent, and the same professor who made personal self-disclosures was perceived as having more character. The professor who made professional self-disclosures was also seen as more task attractive than the same professor who made personal self-disclosures. There were no effects of warranting cues on student perceptions', nor did warranting cues and self-disclosures interact to impact student perceptions of credibility or attraction.

Discussion

Social media continues to play a role in the day-to-day lives of many professors (Seaman & Tinti-Kane, 2013). However, the decision to post professional or personal content, and determine if students should have access to that content, is not one that should be taken lightly. Our results show that there is no perfect formula for professors' social media content, and there are pros and cons regardless of the decision that is made. If a professor chooses to post only social and personal content to their social media, it may damage how competent their students perceive them to be, as well as their task attraction. For faculty, diminished task attraction could directly impact how much a student wants to foster a professional advisor/advisee relationships. For professors who are largely using social media to network or find potential advisees, tweeting only professional content could be more helpful. Those who are unconcerned with task attraction may not need to make the decision to share only professional content. These findings mimic those of DeGroot et al. (2015), who also found that professional self-disclosures were seen as more competent by students. That said, the professors were seen by students as more trustworthy and socially attractive – they feel as if they could be friends with the professor. This is a departure from previous work, which has found either professional disclosures to be more trustworthy than social disclosures (DeGroot et al., 2015) or no differences between types of self-disclosures on character perceptions (Johnson, 2011). For certain professors, a student's trust may be more valuable than perceptions of competence, and therefore choose to use social media to disclose personal topics.

Because of these trade-offs, the decision to use social media professionally or personally should be made by individual professors. Because there are pros and cons associated with the decision, it should be made relative to the type of relationship a professor would ideally like to have with his/her students. This decision is often framed in terms of rhetorical/relational goals theory (Mottet, Frymier, & Beebe, 2006). Rhetorical/relational goals theory posits that instructors may have both rhetorical and relational goals in the classroom. Rhetorical goals stem from messages that instructors have carefully designed to send to students that shape their attitudes and beliefs in the classroom, while relational goals refer to those that foster a mutual

connection and concern for well-being in the learning environment (Mottet et al., 2006). Research has shown that rhetorical communication choices can lead to increased student perceptions of credibility, while relational communication choices lead to increased student perceptions of goodwill and social attraction (Myers, Baker, Barone, Kromka, & Pitts, 2018). Therefore, these rhetorical and relational goals should also be taken under consideration when professors build their online presence. That is, professors must consider if rhetorical or relational goals are more important to them.

Choosing to post only professional content has certain relational benefits (they are liked and trusted more by students) while posting personal content has other occupational benefits (they are seen as more competent and someone to work with on an academic task). Additionally, professors can choose if they want to give students access to this information in the first place. This echoes findings and recommendations of Mazer et al. (2007), who suggest that students are concerned with a professor being perceived as professional and self-disclosures being perceived as inappropriate when posted online. By restricting student access, professors can post personal disclosures with less fear of repercussions on their credibility and reputation.

In addition to the professional or personal content of the tweets, the warranting information manipulated in the present study did significantly decrease perceptions of control, showing that students (receivers) were able to recognize that the professor (target) had little control over messages displayed in their profile that were generated by third parties. Dissemination control refers to the extent to which a target is perceived to have selected what information appears on their social media (DeAndrea, 2014), and in the present study, students evaluated the dissemination control an instructor would have on their Twitter profile. Despite evidence that students recognized the diminished dissemination control professors' have on their Twitter profiles, the third party warranting cues did not significantly influence student perceptions of the professor's credibility, counter to what warranting theory suggests (DeAndrea, 2014). Past research has shown that warranting cues do increase credibility and social attraction perceptions in the contexts such as online dating (Wotipka & High, 2016) and student use of collaborative online media (DeAndrea et al., 2015). Walther, Van Der Heide, Kim, Westerman, and Tong (2008) found that while complimentary, prosocial statements made by friends on one's social media improved perceptions of the profile owners' credibility, social, and task attractiveness, there was also an interaction effect with the physical attractiveness of the profile owner and the profile owners' friend network. In this study, a generic profile picture was used (flowers, a small dog, etc.), which would have negated any potential physical attraction attributions made by participants. This decision was made due to the nature of the instructor-student relationship, but also could have had implications for the impressions formed of the instructor's social media in the present study. Past research has suggested that perceived physical attractiveness of professors does in fact increase their end-of-semester evaluations (Riniolo, Johnson, Sherman, & Misso, 2006). Future research should consider the potential intervening variable of

physical attraction, as this could serve as a partial warranting cue for a professor's credibility that could go above and beyond the other-generated warranting cues manipulated in the present study.

The Twitter profiles used in this study were designed to extend past research on professor disclosures and social media use (DeGroot et al., 2015; Johnson, 2011) by using warranting theory. The decision to use Twitter was done based on the replication of past research, but Twitter may have different warranting norms than other social media platforms. Perhaps publicly displayed messages from third parties proliferate Twitter content, as all "@" mentions and replies in the SNS are publicly displayed. Therefore, the third-party warrants did not have additional effects on credibility and attraction in the expected direction because of this platform choice. DeAndrea (2014) discussed the importance of anticipated future interaction when evaluating impression formation in online settings, arguing that when receivers believe they may interact with a target in the future, it can constrain interpretations of misleading self-presentations online. When there is no anticipation for future interaction, communication between individuals could become depersonalized or even combative, compared to those who anticipate future interaction may be more cooperative or have more intimate conversations. The professor's Twitter profile in the present study had 1,006 followers, which was consistent across experimental conditions. While previous research on SNS suggested that the number of friends or followers impacts perceptions of credibility and attraction of the profile owner (Tong, Van Der Heide, Langwell, & Walther, 2008), more recent research has found that the number of connections one has in SNS has no effect on impressions of credibility or attractiveness (Lane, 2018), the variables at the core of this study. While we do not believe the number of Twitter followers to be a limitation of the design, anticipated future interaction is an avenue for future research. To increase the psychological realism and ensure students anticipate future interactions with the target (professors) in this line of research, screenshots or screen captures could be taken from real professors' social media accounts, and be content analyzed for types of self-disclosure. Then, students could be shown these profiles of real instructors, and asked about their subsequent perceptions of credibility and attractiveness.

As with any study, findings of the present research should be interpreted within the boundaries of its limitations. This study relied on a sample that was predominantly white (nearly 90% of participants) from the mid-Atlantic region of the United States. Future research should verify that these results replicate across individuals from more diverse geographic locations and ethnic backgrounds. In that vein, future research should also consider breaking the professional/personal dichotomy of self-disclosure taken by the present study (as well as DeGroot et al., 2015; Johnson, 2011), and instead consider manipulating the differing types of disclosures to further understand the nuance of student perceptions. Research has shown that students are more motivated to learn, have lower apprehension of course material when disclosures are positive, frequent, and relevant to course material in face-to-face classroom settings (Cyanus et al., 2009; Goodboy et al., 2014; Lannutti & Strauman, 2006). In

face-to-face classroom settings, students' perceptions of appropriateness, relevance, and comfort with an instructor's disclosures have also been shown to be positively related to students' perceptions of an instructor's credibility (Schrodt, 2013). Therefore, the transfer of these instructor self-disclosure behaviors to online social media posting needs to be studied in greater detail. For example, further experimental research could examine the effects of certain instructor self-disclosure topics, such as relational information or personal preferences, and study the specific contributions of each to perceptions of credibility or attraction when viewed in a social media setting. Further, Twitter could be considered as an avenue for out-of-class communication (OCC), which is any formal or informal interaction among instructors and students that extend outside of scheduled class time (Fusani, 1994; Myers, 2004). The most common type of OCC is discussing coursework (Fusani, 1994), so future research could explore the potentials of mediated OCC to facilitate course-related discussions among professors and students.

CMC theory could further explain why self-disclosures may be perceived differently in the context of social media, particularly those made by professors. One concept that explains this is Marwick and boyd's (2011) notion of "imagined audiences," which represent who the predicted receivers of social media messages will be after they have been posted. Ironically, individuals tend to treat the potentially limitless audience they have on social media as somehow bounded, particularly when they target specific connections while broadcasting to their entire network (Vitak, 2012), or believe that only the active users of the social medium will see their message. These expectations can impact self-disclosures, as users selectively disclose with specific audiences in mind, often with goals of relational development and social validation in mind (Bazarova & Choi, 2014). For professors, their imagined audience for social media messages may not be students at all – they may assume only friends or family are reading their profiles. Therefore, making the conscious decision to post professional or personal information is all the more important for professors who leave their social media open for public viewing (and do not have privacy settings restricting student access). Finally, CMC self-disclosures are essentially permanent aspects of the social network – they do not go away unless a profile owner deletes them or makes an effort to "hide" messages posted by third parties, such as untagging oneself from an unflattering picture on Facebook. There is evidence to suggest that the persistence of messages increases liking and closeness toward a conversational partner (Walther et al., 2018), which also has implications for giving students long-term access to social media messages made by or about their professors, for which students were not the intended audience.

Conclusion

Given the proliferation of social media, and its increasing use throughout academic communities, all professors and instructors must carefully consider how they communicate online. As noted by Bateman (2017) "social media can rarely

be avoided; junior scholars are increasingly presenting and discussing their research through online channels. Building or enhancing one's academic identity on social media ... has fast become a near-necessity for career advancement" (para. 5). Using an experimental design, this study investigated the effect of professional and personal self-disclosures in combination with warranting information on a professor's Twitter feed had on students' subsequent perceptions of the professor's credibility, task attraction, and social attraction. Findings suggested that the presence of warranting cues had no effect on perceptions of a professor's credibility or social attractiveness, and that professional tweets (as compared to personal tweets) were viewed as more competent and task attractive, but not significantly higher in character or caring. Professors who frequently seek advisees or working student relationships may choose to keep their disclosures online professional, while those looking to foster friendships may choose to post more personal and social content. Knowing these benefits and consequences, as well as the potential importance of a social media presence for young academics, professors must carefully choose what content they post on social media, keeping in mind both their rhetorical and relational goals for student relationships, as well as the intended and unintended student audiences of their social media platforms.

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Appendix A. Experimental manipulations

Note. The first mock-up (top) was used for the professional tweet content, with warranting information (@ mentions) condition, while the second mock-up (bottom) was the personal tweet condition with no warranting information. Size has been reduced for the purposes of this manuscript; full stimuli are available upon request.

The image shows a screenshot of a Twitter profile for Kim Edwardsville. At the top, there are navigation icons for Home, Moments, Notifications, and Messages, along with the Twitter logo and a search bar. The profile header features a large background image of a white daisy flower and a circular profile picture of a small, fluffy dog. Below the profile picture, the name "Kim Edwardsville" and handle "@kimedwardsville" are displayed, along with the bio "Social media researcher and professor." Statistics show 1,989 tweets, 516 following, 1,006 followers, and 167 likes. A "Follow" button is visible.

The main content area is divided into three sections: "Tweets", "Tweets & replies", and "Media". The "Tweets" section is active, showing a list of tweets. The "Who to follow" section on the right lists three users: blythe steelman (@bksteelman), Jay Baer (@jaybaer), and Amanda Moore (@aemoore). The "Trends for you" section on the right lists several hashtags with their respective tweet counts.

Profile Information:
Name: Kim Edwardsville
Handle: @kimedwardsville
Bio: Social media researcher and professor.
Tweets: 1,989 | Following: 516 | Followers: 1,006 | Likes: 167

Tweets:

- My students are required to create their twitter accounts for class by the end of this week. Avatar pictures and bios must be added.
- @kimedwardsville reminds students considering careers in SM that "your storytelling/writing skills are as important as knowledge of the SM platforms."
- Really enjoyed this article about 7 ways teachers use social media in the classroom: [http://mashable.com/2013/08/18/social-media-teachers/ ...](http://mashable.com/2013/08/18/social-media-teachers/)
- @kimedwardsville says, "popularity of social media means every company needs to invest in talented social media managers to enhance their online reputations."
- Looking forward to my conference next week on social media in the classroom with @kimedwardsville. I always learn something new from the research presented there.
- Working on a study with @kimedwardsville about how social networking sites can be used in educational settings.
- @kimedwardsville showed me a study from the Leichtman Research Group today, saying that DVRs are in 36% of households, but more than 90% of all TV viewing is done live.
- Today @kimedwardsville is researching the effects of Facebook on the self esteem of young adults.

Who to follow:

- blythe steelman @bksteelman
- Jay Baer @jaybaer
- Amanda Moore @aemoore

Trends for you:

- #Emmys: 81.7K Tweets
- #WelcomeToTheShow: 67.7K Tweets
- #KateMcKinnon: 2.7K Tweets
- #UpdateAn80sMovie: 174.7K Tweets
- #90DayFiance: 71.7K Tweets

Home Moments Notifications Messages  Search Twitter  Tweet



Tweets 1,989 Following 516 Followers 1,006 Likes 167 [Follow](#)

Kim Edwardsville
@kimedwardsville
Mom and wife. I enjoy cooking and watching good movies.


July 2014

[Tweet to](#) [Message](#)


283 Photos and videos




Tweets Tweets & replies Media

 Jennifer Lawrence, Liam Hemsworth Hosting Benefit Screenings of Hunger Games: Catching Fire <http://eonline.net/1diredy> via @sonline


 Just reserved my spot in a kickboxing class tonight. I've heard it's challenging but fun.

 These are beautiful designer pumpkin templates from the Martha Stewart website. I can't wait to start carving: [http://www.marthastewart.com/356836/designer-pumpkin-templates ...](http://www.marthastewart.com/356836/designer-pumpkin-templates...)

 Considering making a Halloween costume for our dog, too, if I have time. Then we can go trick-or-treating as a family.

 A great recipe for my spaghetti squash. Can't wait to try it. "Fall Out of Your Food Rut!" <http://mcdanielnutrition.com/blog/fall-out-of-your-food-rut.html>

 Enjoyed watching the movie "Lincoln" last night. A great performance by Daniel Day Lewis in the lead role.


 Making my son's Halloween costume today. Hopefully he likes it!

 I'm making apple pie for my brother-in-law's birthday. Yummy.

Who to follow

 [blythe steelman @bsteelman](#) [Follow](#)

 [Jay Baer @jaybaer](#) [Follow](#)

 [Amanda Moore @aemoore](#) [Follow](#)

Trends for you

#Emmys 81.7K Tweets

#WelcomeToTheShow 87.7K Tweets

#KateMcKimmon 2.7K Tweets

#UpdateAn80sMovie 174.7K Tweets

#80DayFiance 71.7K Tweets