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Is a Profile Worth a Thousand Words? How Online Support-Seeker's Profile Features May Influence the Quality of Received Support Messages

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Abstract

Although there is an increasing amount of research on support-seeking in cyberspace, very little is known about what features of online support-seeking can enhance the quality of received support. The present experiment examined how support-seekers' use of cues to personal identity in their user profile can influence the level of person-centeredness and politeness in others' responses to their support-seeking postings. Results showed that support-seekers whose user profile contained a portrait picture and a first name ID tended to receive higher person-centered and more polite support messages than support-seekers whose user profile did not contain those cues to personal identity.

Keywords

online forums, personal identity cues, profile, support-seeking, social presence, trust, person-centeredness, politeness

The salutary effects of social support on individuals' physical and psychological well-being, especially during times of stress, have been well documented in the social support literature (MacGeorge, Feng, & Burleson, 2011). As many scholars have pointed out, technological advances have provided new pathways to supportive communication (Sarason & Sarason, 2009). The Internet, in particular, holds great potentialities for enhancing individuals' coping with difficult conditions (Schulz, Rubinelli,

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Zufferey, & Hartung, 2010). Today, the use of online support has grown into a mass social phenomenon (Barak, Boniel-Nissim, & Suler, 2008), with numerous online support groups existing on almost every possible topic. Not surprisingly, the past decade has witnessed a boom of research on computer-mediated social support (e.g., Bane, Haymaker, & Zinchuk, 2005; Coulson, 2005; Cummings, Sproull, & Kiesler, 2002; Griffiths, Calear, & Banfield, 2009; Tanis, 2007; van Uden-Kraan et al., 2008; Xie, 2008). This body of work has generated substantial amount of evidence indicating that online support, much like its face-to-face counterpart, can have a positive impact on individuals' coping with stressful situations, and on their physical and psychological well-being (Rains & Young, 2009).

Despite the growing body of research on computer-mediated social support across disciplines, online supportive communication remains a relatively underdeveloped area. In particular, extant research on online support has focused largely on precedents (e.g., sociodemographic characteristics and personality traits; for example, Im & Chee, 2008; Shaw et al., 2006) and outcomes of online supportive communication rather than the online supportive communication process (e.g., Bane et al., 2005; Cummings et al., 2002; Fogel, Albert, Schabel, Ditkoff, & Neugut, 2002; Griffiths et al., 2009). As a result, very little is known about what features of online supportive communication contribute to (or inhibit) various outcomes, and how key elements of the supportive communication process, such as the seeking and provision of support, are related to each other. The present study is an attempt to fill this gap in the literature.

Among the wide range of applications and services that are available online (e.g., information sites, social network sites, mail lists, and online forums), online forums are a particularly appealing venue for seeking support, because time and geographic barriers to participation are diminished, and participants have greater control over their identity, privacy, and engagement with others (Sparks, 1992). To date, some studies of support-seeking on online forums have examined how support-seekers talk about their problems. Most of these studies are descriptive in nature, focusing on the content features of support-seeking messages and the lexical and structural aspects of verbal language used in those messages (e.g., Horgan, McCarthy, & Sweeney, 2013; Høybye, Johansen, & Tjørnhøj-Thomsen, 2005; Morrow, 2006; Wen, McTavish, Kreps, Wise, & Gustafson, 2011). Little research has examined the link between features of online support-seeking and those of support-provision (e.g., Barak & Bloch, 2006).

To the extent that there are numerous support-seeking postings available online in almost every hour on every day, it is theoretically and pragmatically relevant to examine what prompts people to take the time and effort to respond to and help an unknown and distant support-seeker. Of particular interest to the present study is the question: "How online support-seekers' user profile can be strategically used to enhance their chance of obtaining high-quality support from others?" In the sections that follow, we first present the theoretical concepts and frameworks that guide our predictions and explanations of how identity cues in support-seeker's user profile may influence the degree of person-centeredness and politeness in the support they receive from others. We then present an empirical study that tested our predictions.

Identity Cues, Social Presence, and Trust in Online Communication

It is a well-established position among researchers of computer-mediated communication (CMC) that, in comparison with traditional face-to-face communication, CMC is characterized by a lack of identity cues. Identity cues, sometimes referred to as "social context cues," may include demographic (e.g., age, gender, race, socioeconomic status, residence) and personal characteristics of communicators (e.g., appearance, dress, accent, tone, mood, size, and attitude; Kiesler, Siegel, & McGuire, 1984; Sproull & Kiesler, 1986; for reviews, see Bordia, 1997; Walther & Parks, 2002). While the absence or lack of identity cues can afford greater anonymity and "disembodiment" to users of CMC and thus promote greater participation in online communication, especially task-oriented communication (e.g., Kahai, Sosik, & Avolio, 2003), it can also have detrimental effects on the quality of online communication (Bordia, 1997).

Various theoretical perspectives, such as the Social Presence Theory (Short, Williams, & Christie, 1976), the Cuelessness Model (Rutter & Stephenson, 1979), and the Reduced Social Cues Approach (Sproull & Kiesler, 1991), suggest that when identity cues are absent or lacking, the quality of interpersonal communication may be impaired. These theoretical approaches suggest that anonymity in online communication can function as a double-edged sword. On one hand, it can facilitate sharing of information, thoughts, and feelings, and promote equality in communication between individuals of differing status (Christopherson, 2007). On the other hand, the reduction in awareness of each other and hence greater levels of uncertainty (Berger, 1988) that follow from anonymity can result in negative behavioral outcomes, such as slow feedback, deceptions, group polarization, and provision of poor-quality information (Herring, 2002). Consistent with these notions, research has shown that personal identifiability or visibility of the other tends to elicit enhanced awareness and more positive perceptions of the other (Tanis & Postmes, 2007). In virtual community, identity also plays a key role in motivating people to participate in online discussions (Donath, 1998). Prior theory and research on CMC suggest that the existence of identity cues in virtual environment can influence people's online communication behavior through at least two specific kinds of cognitive interpretations—perceptions of the other's social presence and trustworthiness (Short et al., 1976; Tanis & Postmes, 2007). Each of the concepts is elaborated below.

Social Presence

The concept of social presence is perhaps one of the most influential concepts that have been applied to understand user experiences in mediated communication (e.g., Lee, 2004; Lee & Jang, 2013). In their Social Presence Theory, Short et al. (1976) defined social presence as "the degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships" (p. 65). Since its introduction, somewhat different interpretations of this definition and conceptualizations of the construct have emerged. For example, social presence has been referred to as "the

degree of illusion that the other in the communication appears to be a 'real' physical person" (Kreijns, Kirschner, Jochems, & van Buuren, 2004, p. 157). Other researchers have highlighted different aspects of social presence, including copresence, psychological involvement, and behavioral engagement (Biocca, Harms, & Burgoon, 2003; Heeter, 1992; Lombard & Ditton, 1997). Despite variations in their conceptual foci, existing explications of the social presence construct seem to share the view that social presence reflects the *psychological* distance between an individual and his or her interactional counterpart. Research that examines mediated "human-to-human" interactions (as opposed to "human-to-computer agent" interaction; Skalski & Tamborini, 2007) is concerned primarily with the extent to which individuals feel they are actually in the presence of their interaction partner (Lee & Jang, 2013, p. 30).

In non-mediated communication contexts, social presence of an individual is largely dependent on the physical presence of the person (Huguet, Galvaing, Monteil, & Dumas, 1999). In the context of mediated communication, social presence should be conceptualized as a continuum along which a mediated other is perceived as more or less present. Research has shown that the degree of social presence in mediated contexts depends largely on the number of communication cue systems the technology can convey: The greater the number of communication cues, especially nonverbal cues and social context cues, the greater the social presence of communicators (Walther & Parks, 2002). As Mesch and Beker (2010) pointed out, the lack of social context cues in textual CMC may lead to a dehumanization perception of unseen counter social players and may create the feeling of communicating with a nonhuman subject. The dehumanization perception of unseen others occurs even when the CMC users are intellectually aware of their human counterparts. In asynchronous online communication, which is characteristic of most online forums, it can be argued that social presence is further reduced because of the lack of immediate, two-way interaction and an "other" at the moment messages are viewed (Taylor, 2011).

Despite the general view that text-based CMC is characterized by decreased social presence, a growing amount of research evidence indicates that the degree of social presence and the level of warmth and intimacy that individuals can experience in a given form of mediated communication can be enhanced with the aid of communication techniques and strategies, such as the use of avatars and emoticons (Cassell, Sullivan, Prevost, & Churchill, 2000). Not surprisingly, employing communication techniques and strategies to increase users' sense of social presence has consistently been a major design goal in areas involving speech interfaces, social robots, or embodied agents (e.g., Brooks, 1999; Cassell et al., 2000).

Trust

Trust plays an important role in the development and maintenance of personal relationships, and is a critical factor influencing computer-mediated communication among people who do not share a relationship offline (Kanawattanachai & Yoo, 2002; Walther & Bunz, 2005). In the present study, trust is conceptualized as a perception of another person that is specific to the relational and contextual factors that are involved in an interaction (Hosmer, 1995), as opposed to trust of people in general. This

perspective views trust as "a cognitive process associated with one's confidence in another's goals or purposes, and the perceived sincerity of another's word" (Tanis & Postmes, 2005, p. 413). In virtual environment, not "knowing" one's interaction partner can increase uncertainty about the other (Berger, 1988), and may thus provide a less firm basis for trusting the other (Tanis & Postmes, 2005). Unsurprisingly, interpersonal trust has been found to diminish with the lack of visual and vocal cues in text-based CMC. Meanwhile, substantial research reveals that the use of certain media properties, such as portrait pictures, humanoid interface agents, and avatars, can facilitate online interpersonal trust, suggesting that there may be a positive relationship between trust and social presence (e.g., Cyr, Hassanein, Head, & Ivanov, 2007; Hassanein & Head, 2007).

Users of online forums often have the option of using profiles to reveal information about themselves (Hinduja & Patchin, 2008; Liu, 2008). Prior research suggests that the ostensible portrait picture and first name of an interactant can serve as two salient cues to identity that lead to positive interpersonal impressions (Tanis & Postmes, 2007). Of critical importance in the perceptions of portrait picture and first name is not the genuine identity of the interactional counterpart (i.e., the portrait picture may be of someone else and the first name may be a pseudonym) but the interpretations of the interactional counterpart that those identity cues trigger. More specifically, it was predicted that a user profile that includes an ostensible portrait picture and first name ID would lead to higher perceptions of social presence and trust of the profile owner. Hence, the following hypotheses were proposed:

Hypothesis 1 (H1): Participants will perceive higher degree of social presence of support-seekers whose profile contains a portrait picture and first name ID than support-seekers whose profile does not contain those cues to personal identity.
Hypothesis 2 (H2): Participants will perceive greater trust of support-seekers whose profile contains a portrait picture and first name ID than support-seekers whose profile does not contain those cues to personal identity.

Quality of Support Messages

A fundamental assumption underlying most supportive communication research is the notion that not all forms of supportive communication are equally effective: Some forms of supportive communication are qualitatively better than others—at least with respect to certain objectives and as evaluated by certain criteria (MacGeorge et al., 2011). Based on prior research and theorizing of social interactions, the current study identifies two dimensions along which quality of support messages can be assessed: person-centeredness and politeness of support messages.

Verbal Person-Centeredness of Support Messages

Research investigating the features of effective supportive efforts, especially those aiming at alleviating the target's emotional distress, reveals that high person-centeredness is a quality that reliably characterizes sensitive and helpful supportive messages (e.g.,

Jones, 2004). Person-centeredness "reflects an awareness of and adaptation to the subjective, affective, and relational aspects of the interactants and the communicative contexts" (Burleson, 1987, p. 305). In contexts of support-provision, verbal person-centeredness refers to the extent to which supportive messages explicitly acknowledge, elaborate, legitimize, and contextualize the distressed other's feelings and perspectives (see MacGeorge et al., 2011).

Messages that are low in person-centeredness deny the other's feelings and perspectives (e.g., by criticizing or challenging the legitimacy of the target's feelings). Support messages that display a moderate level of person-centeredness implicitly acknowledge the distressed other's feelings (e.g., by attempting to distract his or her attention from the stressor). Support messages that exhibit a high degree of person-centeredness explicitly recognize and legitimize the other's feelings (e.g., by helping the other to articulate those feelings, elaborating reasons why the other is experiencing those feelings, and assisting the other to see how those feelings fit in a broader context). Substantial research evidence demonstrates that highly person-centered support messages are more effective at reducing recipient's emotional distress and facilitating the recipient's coping than lower person-centered messages (see High & Dillard, 2012). It is thus theoretically and pragmatically relevant to examine factors that contribute to production of person-centered support messages.

The theory of constructivism suggests that the production of person-centered messages requires (a) sophisticated social perception capacities, including cognitive complexity, affect recognition and understanding, and social perspective-taking ability (Applegate, 1980; Burleson, 1985); and (b) motivation to produce highly person-centered messages. In other words, support providers differ not only in their capacity to produce high-quality supportive messages but also in their motivation or desire to provide high-quality support messages. In the latter case, the quality of support providers' messages may vary as a function of the helper's perceptions of the support-seeker and the support situation. For instance, a helper's motivation to provide sensitive support may be influenced by the helper's appraisal of the support-seeker's responsibility for the problematic situation (MacGeorge, 2001). In the present study, it was predicted that variations in viewer perceptions of an online support-seeker's social presence and trustworthiness can explain variability in the person-centeredness of support messages that viewers provide. Accordingly, we proposed the following hypotheses:

Hypothesis 3 (H3): Responses to support-seeking posting whose profile contains a portrait picture and first name ID will exhibit a higher level of person-centeredness than responses to support-seeking posting whose profile does not contain those cues to personal identity.

Hypothesis 4 (H4): Participants' perceptions of the social presence and trustworthiness of support-seeker will mediate the effect of personal identity cues on the person-centeredness of support messages.

Politeness

The concept of politeness in interpersonal interactions has received substantial research attention in the field of sociolinguistics and communication. Drawing upon Goffman's (1967) work on face, Brown and Levinson's (1987) politeness theory views politeness as a universal phenomenon. Politeness theory divides face into two types: positive face and negative face. Positive face refers to the desire to have one's image and behaviors recognized and approved by others; whereas negative face concerns the desire to maintain one's own autonomy and rights. In addition to maintaining one's own positive and negative face, politeness theory postulates that people often attend to the positive and negative face needs of others because of the relational interdependence among people. Politeness theory suggests that, in order to mitigate the degree of face threat contained in a speech act or to enhance the level of politeness a speech act can convey, a speaker can employ a variety of positive and negative politeness strategies (also referred to as facework). Positive politeness is targeted primarily at the receiver's positive face wants and can be achieved in a variety of ways, such as by claiming in-group membership, complementing, and expressing liking. Negative politeness, on the other hand, focuses primarily on addressing the receiver's negative face needs (Brown & Levinson, 1987).

Among the many complexities that are involved in supportive communication, the complexity involving face concerns is perhaps one of the most salient (Aakhus & Rumsey, 2010). Having a problem, experiencing negative emotion, or revealing a need for help to other people, even if they are strangers in the virtual world, are all potentially threatening to an individual's sense of autonomy and competence. Consequently, distressed individuals' face concerns may aggravate their emotional distress and lower their confidence about solving the problem (Goldsmith, 1994). Thus, by offering support in a manner that is attentive to the recipient's face needs, a support provider can reduce distress and promote more successful problem-solving (MacGeorge, Feng, Butler, & Budarz, 2004). Research has consistently shown that support messages that are perceived as demonstrating attention to the recipient's positive and/or negative face needs is generally seen as more sensitive, appropriate, and effective. On the other hand, messages that fail to address the face concerns of the recipient (e.g., bald-on-record advice) or those that explicitly threatens the face needs of the recipient (e.g., advice that conveys a negative attribution of the recipient) is generally perceived as unhelpful and ineffective (MacGeorge et al., 2011).

Social context cues, including nonverbal cues and personal identity cues, play a substantial role in the contextualization of politeness. The reduction of personal identity cues in CMC may lead to decrease in social presence and trust of interactants, which may in turn result in decreased adherence to social norms such as politeness (Hiltz & Turoff, 1978). It is thus reasonable to make the inference that the employment of personal identity cues in a support-seeker's user profile may contribute to greater use of facework in the support messages that viewers produce. Hence, the following hypotheses were proposed:

Hypothesis 5 (H5): Responses to support-seeking posting whose profile contains a portrait picture and first name ID will exhibit greater use of politeness strategies than responses to support-seeking posting whose profile does not contain those cues to personal identity.

Hypothesis 6 (H6): Participants' perceptions of the social presence and trustworthiness of support-seeker will mediate the effect of personal identity cues on the use of politeness strategies in support messages.

Method

Participants

Data were collected from students who registered in communication classes at a large west coast university. The participants were recruited through an in-class announcement and they signed up on a voluntary basis at the beginning or end of a class period. Participants were offered a small amount of extra credit for their participation. A total of 202 undergraduate students participated in the study. The majority of the participants were Asian Americans (50%, $n = 101$) and Caucasian (32.2%, $n = 65$), but the sample also included Hispanic Americans (4.5%, $n = 9$), African Americans (6%, $n = 3$), and participants who reported themselves as belonging to other ethnicity groups (10%, $n = 21$). Four participants were excluded from subsequent data analysis because responses from those four participants could not be linked to their respective survey data. This resulted in a total sample size of 198 (52 male, 146 female).

Experimental Design and Procedure

Given that a portrait picture will almost necessarily reflect the sex (i.e., male or female) of the person, three conditions were created for the manipulation of identity cues: male portrait picture and male name ID (Andrew), female portrait picture and female name ID (Whitney), and no portrait picture and non-name ID (rz1990). The two photos that were chosen for inclusion in the current study were rated by a mixed-sex group of college students ($n = 50$). Both photos were relatively neutral in attractiveness (male: $M = 5.90$; female: $M = 6.10$) on a scale from (0) *very unattractive* to (10) *very attractive* (Antheunis & Schouten, 2011). To enhance generality of findings, two different problem types that were relevant to college students' life were included: failing an exam versus conflict with parents. Therefore, a 3 × 2 between-subjects factorial design, with cues to personal identity in profile as the first factor and problem topic as the second factor, was employed in the experiment. Within each topic, the content of the posting (i.e., the verbal support-seeking message) was identical across conditions (see Figure 1). Each participant was randomly assigned to one of the six conditions.

In order to simulate real online support-provision experience for the participants, a virtual forum that resembles the appearance and function of a real online forum was designed for the experiment. The manipulated support-seeking posting was embedded in a list of 12 threads. Upon arrival at the research lab, each participant was guided to an isolated cubicle with a PC, and received a handout with instructions for participating

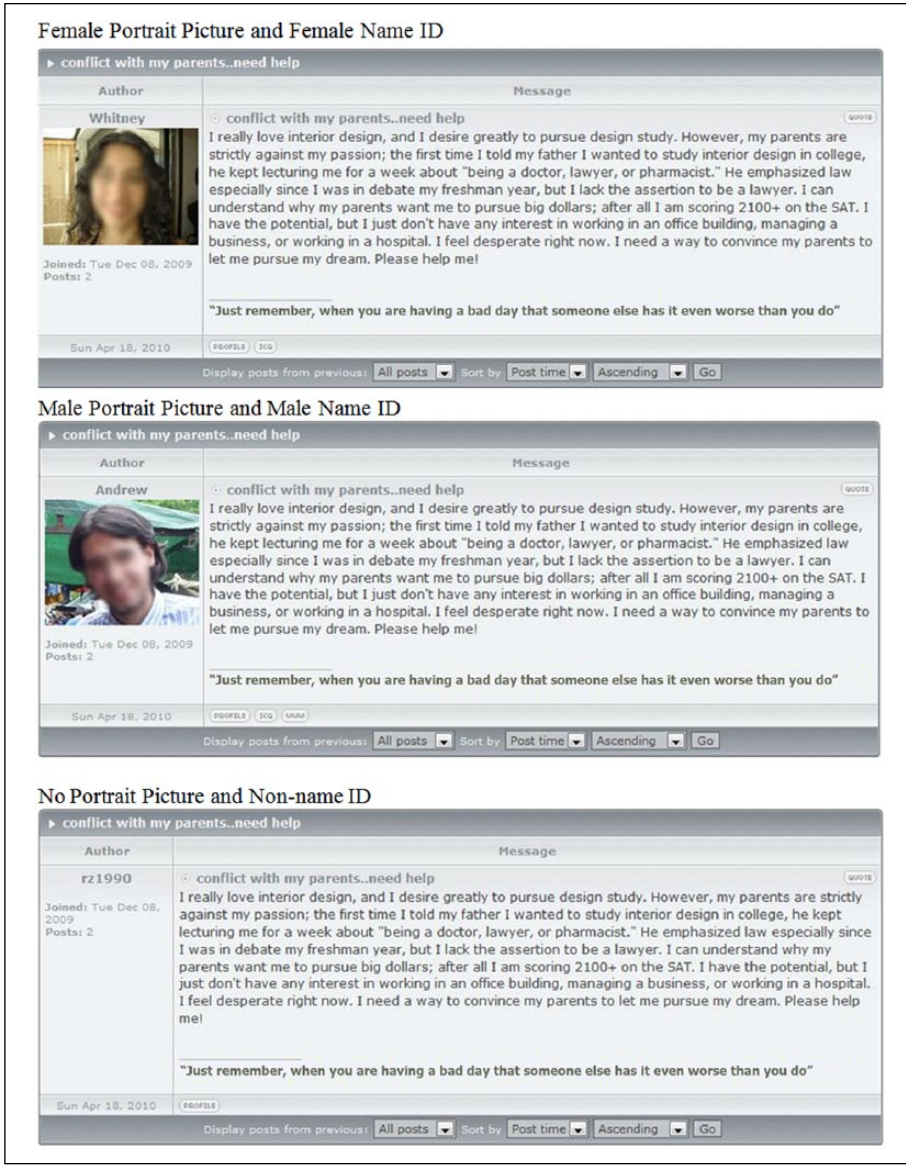

Figure 1. Example of manipulation of support-seeker profile.
Note. Faces have been blurred in this figure.

in the study. Participants were informed that they would log onto an online forum and would read and respond to a posting. Each participant was then asked to randomly draw a number from an envelope, which would then determine which thread on the forum they would be reading. Unknown to the participants, however, was the fact that they would be given an envelope containing the same numbers (e.g., all 3s), and would

thus draw the same number and read the same thread. Participants were then instructed to log onto the online forum, which showed a list of 12 threads. Participants then clicked on the selected thread, the hyperlink of which instantiated another web page that showed the actual posting. After reading the support-seeking posting, participants were instructed to type in and post their responses. The experiment was designed in such a way that a participant's response would appear directly beneath the support-seeking posting on the forum after it was posted. In other words, each participant would only see his or her reply and would not see other participants' replies. Participants were then directed to a web-based survey that included questions about their demographic information and perceptions of the posting and the support-seeker. Upon completion of the experiment, participants' responses were downloaded from the web server and saved separately for coding purposes.

Measures

Social presence. Four items on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*) were used to measure participants' perception of the social presence of the support-seeker. The items were adapted from Lee and Nass's (2005) scale of social presence and modified for use in the current study. The items assessed the extent to which participants were able to mentally imagine the support-seeker, to feel that they were communicating with a warm body, or being with the support-seeker. Confirmatory factor analyses using structural equation modeling (SEM) confirmed the single-factor structure of this instrument (comparative fit index [CFI] = .99, normed fit index [NFI] = .98, root mean square error of approximation [RMSEA] = .05; $\chi^2 = 2.90$; $df = 2$). The three items demonstrated satisfactory internal consistency ($M = 4.63$, $SD = 1.16$, $\alpha = .74$).

Perceived trustworthiness. Six items on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*) were used to measure participants' trust toward the support-seeker (e.g., "I felt the person is honest in describing the problem," "What the person wrote in the posting is not believable," "I felt the person who wrote the message is trustworthy"). The six items were drawn from two existing scales of trust (Rempel, Holmes, & Zanna, 1985; Wheeless & Grotz, 1977) and were modified for use in the current study. This measurement is consistent with the study's focus on trust in a specific person rather than trust in other people in general, and it reflects our conceptualization of trust as a cognitive process associated with one's confidence in another's goals or purposes, and the perceived sincerity of another's words (Tanis & Postmes, 2005). Confirmatory factor analyses using SEM confirmed the single-factor structure of this instrument (CFI = .92, NFI = .90, RMSEA = .15; $\chi^2 = 48.68$; $df = 9$). The six items constituted a reliable scale ($M = 5.55$, $SD = 0.89$, $\alpha = .84$).

Coding for Person-Centeredness

Two graduate research assistants who were unaware of the experimental condition associated with each message were trained to code the messages for person-centeredness. The *hierarchical* system for coding person-centeredness developed by Applegate

Table 1. Person-Centeredness Coding Hierarchy and Examples.

Major Level 1

1 Speaker condemns the target's feelings.
Example: I know this part was really important to you. However, I don't think you should be upset with anyone but yourself because I know you didn't give it your best effort.

2 Speaker challenges the legitimacy of the target's feelings or actions related to those feelings.
Example: But you cannot go back and change how you did so there is no point in still feeling down about it.

3 Speaker ignores the target's feelings by *not* talking about the target's feelings or telling the target to ignore his or her feelings.
Example: If I were you, I would have a candid talk with my parents.

Major Level 2

4 Speaker attempts to reframe the situation in a positive way by diverting the other's attention away from the event, "smoothing over" the negative feelings, offering some sort of compensation, or suggesting a method of repair.
Example: You should at least be happy that your parents really care about your future career.

5 Speaker acknowledges the target's feelings but does not attempt to help the target understand why those feelings are being experienced or how to cope with them.
Example: I know you won't be graduating in June is upsetting, but on the other hand, you can retake the class in summer which is cheaper and can save time.

6 Speaker provides a non-feeling-centered explanation of the situation intended to reduce the target's distressed emotional state. This explanation must forward some circumstance or principle for interpreting the target's situation.
Example: I think the biggest thing to remember is that one test does not define your college career. You have obviously done well enough to pass your classes and make it up to this point, so failing one test does not show your academic ability or competence in the slightest.

Major Level 3

7 Speaker explicitly recognizes and acknowledges the other's feelings and provides a non-elaborated explanation of these feelings.
Example: I'm sorry that you failed your test. I can understand that you are feeling very upset about this, especially with graduation coming up. Even though you have been feeling very upset, try to stay focused on what you need to do and get done to graduate. Many people have problems with classes, so don't feel like you are the only one.

8 Speaker provides an elaborated acknowledgment and explanation of the other's feelings.
Example: I am sorry to hear that you are feeling bummed; I know that it's really frustrating to study really hard for something and still do poorly. Are you saying that you think you will fail your next six exams because you are too busy being upset about your previous one? If it helps you concentrate, try to make yourself better about the past exam by attributing your performance to external circumstances beyond your control. Then you can anticipate your mistakes and do better on the next exam. This way, you won't have to hate yourself. If you do well in the May exam that you retake, you might still be able to graduate in June, right?

9 Speaker helps the other to gain a perspective on her own feelings (feelings in the situation are explicitly elaborated and legitimized) and attempts to help the other see feelings in relation to a broader context or the feelings of others in the situation.
Example: I know how it feels to go from being determined to overwhelmed, confused, and depressed just by one exam, but do NOT hate yourself. So many students are going through the same thing you are. Although it is heartbreaking and upsetting to find out that you failed an exam, you shouldn't let it deter you from your goals. This is an important time in your life and even though you might not finish your undergraduate studies as soon as you thought, it doesn't matter! You came into college with a goal, and you should leave accomplishing that same goal, with no time restraints. Look at this as a learning experience. Next time you will do better. Try and set a positive mind-set for yourself, which will help you greatly in the future. And live by the words in your quote . . . it could be worse. Remember, don't doubt yourself and know that everyone makes mistakes, but it should not stop your life completely. Things will start looking up once you realize that!

(1980) and Burleson (1982) was used. The coding system classifies support messages at one of nine levels that are grouped into three major levels (Table 1). This hierarchical coding system reflects the conceptualization of person-centeredness as a continuum. Messages that deny the target's feelings by condemning them, challenging their

legitimacy, or ignoring them were coded in one of the three levels within Major Level 1. Messages that implicitly recognize the target's feelings by attempting to distract the target, offer expressions of sympathy, or present explanations of the situation were coded in one of the three levels within Major Level 2. Messages that explicitly recognize and legitimize the target's feelings by helping the target to articulate them, elaborating reasons why the feelings might be felt, or assisting the target to see how the feelings fit in a broader context were coded in one of the three levels within Major Level 3. Each message (i.e., the participant's response as a whole) was coded according to the nine sublevels (range = 1-9). Messages that appeared to represent more than one sublevel were coded into the highest sublevel represented in the message. Two graduate assistants independently coded a random sample of about 40% of the data (84 messages). Interrater reliability (intraclass correlation coefficient) was .80. Coding disagreements were resolved through discussions. The remaining coding was split evenly between the two graduate assistants.

Coding for Politeness

A coding scheme for politeness strategies was adapted from Brown and Levinson's (1987) characterization of positive and negative politeness strategies as well as coding schemes for politeness strategies developed by other scholars (Holtgraves & Yang, 1992; Schallert et al., 2009). Twelve positive strategies and six negative politeness strategies were identified as relevant for the current study.

Two undergraduate research assistants who were unaware of the specific objectives and hypotheses of the current study were trained for coding the participants' responses for politeness. A detailed coding manual was developed to guide the coding, and several training sessions were conducted before the coders independently coded a random sample of approximately 50% of all response messages (n = 100). Coders coded the presence or absence of each politeness strategy in participants' messages (1 = *present* and 0 = *not present*). Disagreement was resolved through discussion. The coding agreement rates (number of coder agreements/number of agreements plus number of disagreements; see Holtgraves & Yang, 1992) for the specific politeness strategy items ranged from 91% to 100%. Interrater reliability (intraclass correlation coefficient) for coding the overall (sum of) politeness strategies (range = 0-18) was .82. Examples of politeness strategies coded in this study are provided in Table 2 and 3.

Results

Preliminary analyses were conducted to examine if the ostensible gender of support-seeker (as reflected in the portrait picture and ID name in support-seeker's profile) and problem type had any effect on participants' perceptions of the social presence and trustworthiness of the support-seeker, as well as the degree of person-centeredness and politeness of the support messages. Results of these analyses did not reveal any significant main effect of support-seeker's gender or problem type on social presence, trust, person-centeredness, or politeness of support messages. None of the interaction

Table 2. Positive Politeness Strategies and Examples.

1. Use informal address/greeting phrase	*Hi, Whitney*
2. Shows interest in, or approval of, a message the support-seeker wrote in the posting	*You are right, you do need to put this behind you and focus on the future.*
3. Use in-group identity markers to convey in-group membership	*I come from a cultural background similar to yours.*
4. Include the support-seeker in the discussion by using first person plural pronouns to refer to the writer or reader	*Our parents just want us to be happy.*
5. Use discourse marker	*Please don't stress.*
6. Use joke or slang	*Shit happens.*
7. Be optimistic; use optimistic words	*Hope all goes well and you get to pursue your dreams!*
8. Show sympathy or understanding of the support-seeker's feelings or situation	*I can totally relate to your situation*
9. Acknowledge the support-seeker's competence or positive attributes	*You are almost done with college, which tells me that you are a smart, dedicated, focused person.*
10. Soften negative attributions about the support-seeker	*Everyone fails at something.*
11. Give reasons for the recommended behavior (e.g., explaining why the suggested action will work)	*It is nice to have many people working together, so if one person does not know something, another person in the group probably does.*
12. Assume or assert reciprocity	*Reply back if you have any more concerns.*

Table 3. Negative Politeness Strategies and Examples.

1. Use formal address/greeting phrase	*Dear Whitney*
2. Be conventionally indirect by questioning the hearer's ability or willingness to perform an act	*Can you find a classmate that you can study with for the next exam?*
3. Hedge; using words to indicate that the writer is not assuming that the reader will want to comply with the writer	*Perhaps you can meet them halfway.*
4. Minimize the imposition; using words to imply a lesser imposition on reader than it seems	*If I were you, I would make it clear to your parents that it is your decision as an adult what you want to do with your life!*
5. Show deference by using words to abase the support provider or to raise the support-seeker's status	*I don't know much about interior design, but if I were you, I would . . .*
6. Impersonalize the situation or discussion by using general words	*When parents don't agree with their child's choice of career, the best thing for the child to do is to convince the parents that h or she can be happy and successful pursuing the career he or she wants.*

terms was significant either. Therefore, these three factors were not examined further in the subsequent hypotheses tests.

H1 predicted that participants would perceive higher degree of social presence of support-seekers whose profile contained a portrait picture and first name ID than support-seekers whose profile did not contain those cues to personal identity. This hypothesis was tested with a univariate analysis of variance with personal identity cues as the independent variable and perception of social presence as the dependent variable. The analysis revealed a significant effect for level of personal identity cues, $F(1, 196) = 4.49$, $p < .05$, $\eta_p^2 = .02$. Participants reported higher social presence of the support-seeker when the support-seeker's profile contained a portrait picture and first name ID ($M = 4.80$, $SD = 1.14$) than when the support-seeker's profile did not contain those cues to personal identity ($M = 4.45$, $SD = 1.16$). Therefore, H1 was supported.

Table 4. Zero-Order Correlations Among Variables.

	1	2	3	*M*	*SD*
1. Social presence				4.63	1.16
2. Interpersonal trust	.45***			5.55	0.89
3. Person-centeredness	.11*	.03		4.97	1.65
4. Politeness	.13*	.09	.27***	2.53	1.59

*$p < .05$. ***$p < .001$.

H2 predicted that participants would perceive greater trust of support-seekers whose profile contained a portrait picture and first name ID than support-seekers whose profile did not contain those cues to personal identity. This hypothesis was also tested with a univariate analysis of variance with personal identity cues as the independent variable and perceived trustworthiness of support-seeker as the dependent variable. The analysis did not reveal a significant effect for personal identity cues, $F(1, 196) = 0.01$, *ns*. Therefore, H2 was not supported.

H3 predicted that responses to support-seeking posting whose profile contained a portrait picture and first name ID would exhibit a higher level of person-centeredness than responses to support-seeking posting whose profile did not contain those cues to personal identity. This hypothesis was tested with a univariate analysis of variance with personal identity cues as the independent variable and person-centeredness of response messages as the dependent variable. The analysis revealed a significant effect for personal identity cues, $F(1, 196) = 6.17$, $p < .05$, $\eta_p^2 = .03$. Participants provided support of higher levels of person-centeredness when the support-seeker's profile contained a portrait picture and first name ID ($M = 5.26$, $SD = 1.70$) than when the support-seeker's profile did not contain those cues to personal identity ($M = 4.68$, $SD = 1.56$). Therefore, H3 was supported.

H4 was concerned with the mediating role of perceived social presence and trustworthiness of support-seeker on the link between personal identity cues and person-centeredness of support messages. Given the finding that perceived trustworthiness of support-seeker did not vary as a function of the manipulation of personal identity cues in support-seeker profile, subsequent analysis was conducted to assess the mediating role of social presence. The "personal identity cues in support-seeker profile—social presence of support seeker—level of person-centeredness in support messages" model was tested with PROCESS, a conditional process modeling program that utilizes an ordinary least squares or logistic-based path analytical framework to test for direct and indirect effects in mediation models (Hayes, 2013). Level of person-centeredness of support messages was entered as the outcome variable, presence of personal identity cues was entered as the independent variable, and perceived social presence of support-seeker was entered as the mediator. Given that perceived social presence was found to be correlated with perceived trustworthiness (see Table 4), trustworthiness was entered as a covariate in the mediation model. The direct effect of personal identity cues on person-centeredness was significant, $b = .49$, $SE = .23$, $t = 2.10$, $p < .05$.

The indirect effect of personal identity cues on person-centeredness was also significant ($b = .08$, $SE = .06$, 95% CI = [0.0037, 0.2406] and confirmed by bootstrapping test based on 5,000 resamples. Therefore, perceived social presence partially mediated the relationship between personal identity cues in support-seeker profile and level of person-centeredness in received support messages. Therefore, H4 was partially supported.

H5 predicted that participants would employ more politeness strategies in their responses to support-seeking postings whose profile contained a portrait picture and first name ID than postings whose profile did not contain those cues to personal identity. A univariate analysis of variance revealed a significant effect for level of personal identity cues, $F(1, 196) = 40.02$, $p < .001$, $\eta_p^2 = .20$. Participants used more politeness strategies when the support-seeker's profile contained cues to personality identity ($M = 3.17$, $SD = 1.59$) than when the support-seeker's profile did not contain cues to personal identity ($M = 1.87$, $SD = 1.29$). This hypothesis was further tested by examining the differences between the experimental conditions with regard to participants' use of positive and negative politeness strategies, respectively. Univariate analysis of variance revealed that participants used more positive politeness strategies, $F(1, 196) = 23.88$, $p < .001$, $\eta_p^2 = .10$, as well as negative politeness strategies, $F(1, 196) = 22.95$, $p < .001$, $\eta_p^2 = .10$, when the support-seeker's profile contained a portrait picture and first name ID (positive politeness: $M = 2.16$, $SD = 1.29$; negative politeness: $M = 1.01$, $SD = 0.69$) than when the support-seeker's profile did not contain those cues to personal identity (positive politeness: $M = 1.31$, $SD = 1.16$; negative politeness: $M = 0.56$, $SD = 0.63$). Therefore, H5 was supported.

H6 was concerned with the mediating role of perceived social presence and trustworthiness of support-seeker on the link between personal identity cues and use of politeness strategies in support messages. The revised hypothesis with social presence being the mediator and trust being the covariate was tested with PROCESS. The direct effect of personal identity cues on politeness was significant, $b = .18$, $SE = .03$, $t = 5.38$, $p < .001$. The indirect effect of personal identity cues on politeness was not significant ($b = .01$, $SE = .01$, 95% CI = [−0.0165, 0.0131]). Therefore, H6 was not supported.

Discussion

The demand for social support at a distance and from people who do not know each other offline raises questions about how sensitive and helpful social support can be obtained through computer-mediated communication (Aakhus & Rumsey, 2010). Given the limited time, energy, and motivation people have to read and respond to others' requests for help, a significant proportion of online support-seeking postings end up being completely ignored or given scant attention. It is thus of both theoretical and pragmatic significance to identify factors that affect online forum users' voluntary provision of support to unknown others. The current study contributes to extant understanding of online supportive communication in at least two ways. First, it identifies several features of online support-seeking that are associated with the quality (especially in terms of person-centeredness and politeness) of support messages. Second, to

our knowledge, this study provides the first empirical testing of a potential mechanism that underlies the connection between online support-seeking and the quality of received support messages.

As the typical "first act" in supportive communication, support-seeking can be an important determinant of whether support is received as well as the quality of that support (Goldsmith, 1994). Many studies of social support, especially those conducted in the sociological and psychological traditions, tend to exhibit a "more is better" orientation, assuming that increased *quantity* of received support or support availability is associated with enhanced indexes of recipient well-being (Rini & Dunkel-Schetter, 2010). Research on supportive communication that is guided by a communication perspective, however, appreciates the crucial role of support *quality* in facilitating support recipient's coping of problematic situations (MacGeorge et al., 2011). Accordingly, the current study addresses the question of what features of online support-seeking can contribute to the provision of high-quality support.

While various aspects of online support-seeking may be associated with receipt of high- or low-quality support (e.g., problem type, resonance with support provider's personal experience, rhetorical features of support-seeking message), the current study focused on how a relatively unique aspect of online support-seeking—features of support-seeker's user profile—may influence the quality of received support. To our knowledge, no prior research has investigated factors that might influence the production of person-centered messages in virtual environments. From the perspective of constructivism theory (Burleson, 1985), production of person-centered messages is influenced by social perception capacities and motivation. While social perception capacity is a relatively stable information processing ability an individual possesses, motivation or desire to produce highly person-centered messages is likely to be influenced by both dispositional and situational factors. Specific factors that may influence motivation to produce highly person-centered messages in virtual environments may differ from those in face-to-face settings. Given that user profile is a unique feature of communication in online forums, it is pertinent to examine its impact on quality of online supportive communication. Our findings confirmed the prediction that the inclusion of ostensible personal identity cues in user profile can contribute to the success of online support-seeking in the sense that it can result in the receipt of more person-centered and polite support messages from viewers of the support-seeking posting. In addition, consistent with prior research on mediated communication, this study demonstrates the value of social presence in making mediated communication such as CMC more "personal" and "social" (Bordia, 1997; Tanis & Postmes, 2008). More specifically, personal identity cues in the form of portrait picture and first name ID can elicit enhanced perceptions of social presence, which in turn lead potential support providers in cyberspace to provide more sensitive and socially appropriate support.

Given that compiling a user profile is a "once and for all" task and the profile can remain a relatively enduring aspect of online communication, strategic construction of one's user profile can thus be employed as an efficient online communication strategy. As data from this study suggest, the inclusion of ostensible personal identity cues in

the form of a portrait photo and first name ID in user profile may help create a context conducive to supportive interactions among CMC users. Seen in this light, it is worthwhile for online support-seekers to take profile features into consideration as they construct their support-seeking messages. On the other hand, it should be noted that the role of identity cues in facilitating socially rich and personalized online interactions may be comparatively more important in initial online encounters where reducing uncertainty is a primary concern (Berger, 1988) than in relatively well-established virtual relationships. In the latter case, if the message poster is a "seasoned" ID (i.e., someone who posts on the forum frequently) and reputable member of the online community, viewers of a new posting by the same ID may already be familiar with the poster through the poster's previous postings or have had satisfactory interactions with the poster in the past. In other words, because social presence and other related perceptions of an "old" poster may been previously established, the impact of adding identity cues in the poster's user profile on viewer responses may be lessened to some degree. One direction for future research is to investigate how relational and situational characteristics may moderate the influence of cues to identity on support-provision.

A couple of caveats concerning the effects of cues to personal identity on the quality of online supportive communication need to be considered. First, despite their potential utility as an effective communication strategy in mediated contexts, cues to identity cannot (and should not) be employed as a substitute for the more "substantive" aspect of communication, that is, messages that convey the core purpose of interaction. As findings from this study revealed, the magnitude of the impact of cues to support-seeker identity on the quality of received support messages was relatively small, suggesting that cues to identity explained a relatively small portion of variance in quality of received support.

Second, it should be recognized that the benefits of using cues to identity in online support-seeking are not guaranteed. Although the current study demonstrated that employing cues to identity in support-seeking can facilitate provision of high-quality support through enhanced perceptions of the support-seeker's social presence, enhanced social presence alone may not be sufficient to elicit a positive response from a potential support provider. The direction and magnitude of the impact of identity cues on online support-seeking effectiveness may change as a function of the positivity (or negativity) of other forms of impressions and interpretations triggered by detection of those cues, such as likability and attractiveness of the support-seeker. For instance, when cues to identity elicit *unfavorable* perceptions of the support-seeker, viewers may not be interested in responding, or may be inclined to produce insensitive or socially inappropriate responses (e.g., criticizing, flaming). Under those circumstances, enhanced social presence combined with negative appraisals of the support-seeker may actually backfire, although this is an empirical question to be addressed in future research. Relatedly, it is worthwhile to take into consideration the possible benefits of not using cues to identity (i.e., anonymity). Some studies, especially those informed by the Social Identity Model of Deindividuation Effects (Tajfel & Turner, 1986), have shown that the *inability* to form individualized or personalized impression of others can promote the development of positive social interactions (e.g., Lee, 2006;

Sassenberg & Postmes, 2002). This is because lack of information about the idiosyncratic characteristics of a person can "accentuate the perceptual unity of the group and enhance group members' feelings of attraction and identification to the group" (Tanis & Postmes, 2008, p. 97). Seen in this light, adding too much personal individuation information in a profile (or the message content) might dilute anonymity—the core attraction of online forums to support-seekers (Winzelberg, 1997).

Results of the current study revealed a partial mediating effect of social presence but did not detect evidence for a mediating effect of perceived trustworthiness. An obvious implication of this finding is that online interpersonal trust is shaped by a variety of individual, relational, and contextual factors (Henderson & Gilding, 2004); in the current study, participants' trust of an online support-seeker might have been influenced by factors other than the manipulated personal identity cues, such as cues to group identity and credibility of posting content. This is a plausible explanation in light of the design features of the current study. The forum that the participants viewed was presented as an online support forum used among college students, which has likely triggered perceptions of shared group identity. In addition, the postings described a situation that many college students may encounter (failing an exam or having a conflict with parents over choice of major). Perceptions of similarity and legitimacy of the posting content might have contributed to high trust of the support-seeker across experimental conditions (an average trustworthiness rating of approximately 5.6 on a 7-point scale), leaving little room for manipulations of personal identity cues to exert a significant enough impact on perceptions of trust. However, this explanation is largely speculative and awaits empirical assessment in future research. From a theoretical standpoint, our findings also suggest that the concepts of social presence and trust are not adequate to capture the dynamics of online communication. Future research should thus investigate alternative mechanisms, including those speculated earlier, that may underlie the process of online supportive communication.

Several limitations of this study merit discussion. First, portrait picture and first name ID are two of the many possible cues to identity in user profile that might be used to enhance viewers' perception of the profile owner's social presence. It remains an empirical question as to whether other identity cues, such as motto and interests, may generate similar effects on viewers' perception of profile owner's social presence and their responses to the profile owner's posting. Second, within one study, it is difficult to examine all the possible psychosocial mechanisms that may explain the effect of identity cues on features of received support. Future research should explore other mechanisms linking the use of identity cues in support-seeking with quality of received support. Third, as an experiment, this study employed a relatively simple design in order to test the theoretical model of interest. Like other forms of human interactions, online supportive communication is a complex phenomenon involving the influences of various individual, relational, and situational forces. To uncover the richness and dynamics of this phenomenon, future research needs to examine the conditions under which using identity cues in support-seeking tend to have a stronger or weaker impact (or no impact) on potential support providers' responses. Finally, the use of a convenience sample of college students limits the generalizability of this study's findings.

Accordingly, future research can build on the current study by using more diverse samples (e.g., older adults, people from different ethnic backgrounds, less educated population).

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