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Empathy and online interpersonal trust: A fragile relationship

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Abstract. The rapid growth of personal email communication, instant messaging and online communities has brought attention to the important role of interpersonal trust in online communication. An empirical study was conducted focusing on the effect of empathy on online interpersonal trust in textual IM. To be more specific, the relationship between empathic accuracy, response type and online interpersonal trust was investigated. The result suggests both empathic accuracy and response type have significant influence on online interpersonal trust. The interaction between empathic accuracy and response type also significantly influences online trust. Interestingly, the results imply a relationship between daily trust attitude and online interpersonal trust. People who are more trusting in their daily life may experience more difficulty in developing trust online. There is also some evidence to suggest that different communication scenarios may have an influence on online trust.

1. Introduction

Much of the research on trust in human-computer interaction (HCI) focuses on users trusting web sites, that is, do users feel that a certain online merchant is reputable and will deliver the products ordered (Olson and Olson 2000). The factors that establish a trustworthy website tend to be related to showcasing the physical (face-to-face) nature of the organization, such as buildings and employees (Fogg 2001). Another aspect of trust is interpersonal trust in computer-mediated communication, which has been studied by Olson and Olson and their colleagues. For example, they report that face-to-face, video and audio communication support trust better than text chat (Bos *et al*. 2002) and that meeting face-to-face prior to communicating online helps to promote trust (Zheng *et al*. 2002). It also appears that textual exchanges between people before they communicate online have the same effect (Rocco 1998).

Empathy is an important phenomenon in interpersonal communication which refers to the ability of accurately inferring another person's feeling and responding compassionately to another person's distress (Ickes 1993). So far, the impact of empathy on interpersonal trust in online textual communication has not been studied. This seems an important omission given the continued prevalence of textual communication. Especially as it is claimed that trust and empathy are closely related (Ickes *et al*. 1990), and it is also documented that empathy depends heavily on nonverbal cues in face-to-face communication (Ickes *et al*. 1990, Ickes 1997). However, despite this lack of nonverbal cues in online textual communication, people appear empathic towards each other in some contexts (Preece 1999a). Furthermore, the information that they share suggests that trust develops (Preece 1999b, 2000).

What causes users who have never met their communication partners face-to-face, to trust or not to trust them online? Without the presence of face-to-face cues or previous face-to-face meetings, how do people online decide whether they trust each other? There are many such questions that need answering.

In order to develop online environments that support people in establishing trust easily and quickly, it is important to first identify the basic factors that influence interpersonal trust between people who have never met each other face-to-face. Empathy appears to be one important potential factor. The review of the related literature that follows examines empathy in more detail, and summarizes the research on trust, and how trust is measured. The review frames the need for, and the nature of, the empirical study that follows. This study

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examines the impact of empathy on interpersonal trust in online textual environments.

2. Related research

2.1. *Trust*

Trust has been an important research issue in the areas of Psychology and Sociology since the late 1950s. Deutsch (1958) investigated the effect of 'expectation' and 'anticipated positive and negative motivational consequences' on trusting behaviour using a two person 'prisoners' dilemma' game. The result shows 'expectation' and 'motivation' increase the probability of engaging in trusting behaviour. Deutsch (1960) also found a significant correlation between trust and personality predispositions. Wrightsman (1966) found a high correlation between trust and people's view toward human nature.

Rotter (1967) developed an interpersonal trust scale. In developing this scale, trust was defined as 'an expectancy held by an individual or a group that the word, promise, verbal or written statement of another individual or group can be relied upon'. Rotter (1971, 1980) used this scale in many of his later research projects on trust. Subsequently, many researchers (Macdonald *et al*. 1972, Kaplan 1973, Chun and Campbell 1974) investigated the validity of Rotter's IT scale and found it to be valid. Rotter's scale measures general trust towards others and society, but not towards specific people. In contrast, Rempel *et al*. (1985) developed a scale for measuring trust in a specific person in close relationships. This scale was based on a firm grounding in theory. Three components of trust were defined in this model: predictability, dependability and faith.

2.2. *Trust online*

Sproull and Kiesler (1991) reported that since the development of the Internet, there is considerable evidence that developing supportive interpersonal relationships online are important. They argue that in a networked organization, the focus of attention changes from the relationship between a person and technology to the relationship between a person and other people. People who never know each other work collectively though information sharing and group communication. Many people provide open access of data and information to others on the network, implying that certain level of trust may exist because the information owner's credit and privacy is at risk. Parks and Floyd (1996) found that personal relationships are common in online settings; personal relationships evolve naturally as a function of time and experience in the online environment; and online relationships often broaden to include interaction in other channels or settings. Wallace (1999) discussed trust in virtual teams and e-commerce. She suggested the initial willingness to show trusting actions leads swiftly to actual trust. And that frequent communication between team members helps to promote trust.

Friedman *et al*. (2000) looked particularly at ethical issues online and emphasized the distinction between trust in e-commerce and trust in online interpersonal interactions. They explored the nature of online trust and offered 10 characteristics of online interaction: reliability and security of the technology; knowing what people online tend to do; misleading language and images; disagreement about what counts as harm; informed consent; anonymity; accountability; saliency of cues in the online environment; insurance; performance history and reputation.

Olson and Olson (2000) summarized research results on trust and discussed two research approaches for exploring trust: fieldwork using survey methods and laboratory study using a 'social dilemma' game. They proposed that the keys to designing a trust-engendering software system are appropriate background information, attention, trusting and trustworthy behaviour. Bos *et al*. (2002) investigated the emergence of trust in four different communication situations: face-to-face, video, audio, and text chat. Face-to-face, video and audio combined resulted in significantly higher levels of trust than text chat. Video and audio conferencing groups were nearly as good as face-to-face communication, but both showed some evidence of delayed trust (slower progress toward full cooperation) and fragile trust (vulnerability to opportunistic behaviour).

Rocco (1998) investigated the influence of meeting before computer-mediated communication on trust engenderment through a social dilemma game. He found that trust broke down in online environments, but a pre face-to-face meeting could help promote trust. Zheng *et al*. (2002) investigated a similar issue. They found that in textual communication environments trust is much higher if participants engage in various getting-acquainted activities over a network, than if the participants do nothing beforehand.

Meyerson *et al*. (1996) defined the concept of 'swift trust' for temporary teams whose existence is formed around a clear purpose and common task with a finite life span. The elements of 'swift trust' include a willingness to suspend doubt about whether others, who are strangers, can be counted on so that everyone can get to work on the group's task with a positive expectation that the group activity will be beneficial.

Hiltz and Turoff (2002) suggested that swift trust is also important in instructor-student interaction in online communities.

2.3. *Empathy*

Ickes *et al*. (1990), Ickes (1993) reported seminal work on empathy, suggesting that empathy is strongest between people who identify similarities with others or who share experiences. Peiris *et al*. (2000) found that a computer interview could be made more effective by simulating the human interviewer technique of empathizing with interviewees, suggesting that empathy could be delivered in a computer environment. Klein *et al*. (2002) showed that users continue to interact with the system that had caused their frustration significantly longer after interacting with the empathy-support agent than the conditions without empathy-support. Preece (1999a, 2000) found that empathy is an important ingredient in some types of online discussion and that the balance between empathic and factual communication is influenced by the discussion topic. There are two major elements of empathy. One is empathic accuracy, which Ickes (1993) defined as the ability to accurately infer the specific content of other people's thoughts and feelings. The other is supportive response, which means 'responding compassionately to another person's distress' (Coke *et al*. 1978). The two elements don't necessarily always present together.

To our knowledge the relationship between empathy and trust has not been investigated in computer-mediated communication. Yet it appears from the review above that this relationship is important. Furthermore, some professionals appear to assume such a relationship. For example, Goleman (1995) suggested that groups in which people had similar background and could rely on each other safely for frank feedback developed strong mutual trust. In order to fully understand the nature of online interpersonal trust, it is important that the key factors influencing online interpersonal trust be correctly identified. Only then can researchers start to provide useful guidance to online community developers and other practitioners on how to promote and foster interpersonal trust online. The aim of this study is, therefore, to focus on the effect of empathic accuracy and response type on online interpersonal trust in a text environment.

3. Research objectives and definitions

In this study, we investigate the influence of empathic accuracy and response type on the development of online interpersonal trust. In addition, we explore whether different scenarios affect online interpersonal trust and whether 'liking' a conversation partner influences trust. The following working definitions are used in this study.

Interpersonal trust: An expectancy held by an individual or a group that the word, promise, verbal or written statement of another individual or group can be relied upon. (Rotter 1967)

Empathic accuracy: The ability to accurately infer the specific content of other people's thoughts and feelings. (Ickes 1993)

Response type: The way people respond to other person's distress. In this study, we investigate two specific types: supportive response and non-supportive response.

4. Main research hypothesis

The main focus of this study is the relationship between empathic accuracy, response type and online interpersonal trust. We expect empathic accuracy and supportive response to have a positive influence on online interpersonal trust. Thus we propose the following major hypotheses.

Hypothesis 1: Empathic accuracy has a positive effect on online interpersonal trust. The presence of empathic communication will increase the Rempel's trust score.

Hypothesis 2: Response type has a positive effect on online interpersonal trust. The presence of supportive response will increase the Rempel's trust score.

5. Research methodology

5.1. *Participants*

Twelve participants took part in the study. They are all native English speakers without any documented physical, cognitive, visual, hearing, or speech impairments. Six participants were female and six participants were male. The participants' average age is 25.5 years old, and their ages range between 18 to 45 years old. All the participants have several years of online communication experience.

5.2. *Apparatus*

Participants interacted with conversational partners using a customized online Instant Messaging (IM) software that provides text input and editing functions similar to most commercial Instant Messaging software.

Since it is installed on a local server, the processing speed is stable and not affected by web traffic. The text messages of participants and conversational partners are coloured differently, so they can be easily distinguished. The research investigator can observe the actions of the participant and the conversational partner simultaneously through the server computer, and save the data for later analysis.

5.3. *Tasks*

A within-subject repeated measures experimental design was employed. All participants took part in three sessions. In each session, participants completed four tasks corresponding to four different communication styles under a certain scenario. Each session of four communication tasks employed a different scenario because it has been suggested that the types of online community or discussion topic might influence the relationship between empathic accuracy, response type and trust. One scenario used in the experiment is about campus parking. The second scenario is about a database course project. And the third one is about a medical problem. The three scenarios are topics that are familiar to the participants that took part in the study. Thus it is easy for participants to imagine the situation and complete the role-playing scenario. Participants normally took 1.5 to 2 h to complete each session, with an average of 25–30 min for each task.

Participants completed four communication tasks one by one in each session. In each task, participants asked a certain number of pre-determined questions in a certain order. Participants' questions were the same in all four tasks. However, they got answers in four different communication styles: empathic accurate with supportive response, empathic accurate with non-supportive response, empathic inaccurate with supportive response, and empathic inaccurate with non-supportive response. The four-style repeated measures experiment design is illustrated in table 1. The order in which participants interacted with different communication styles was randomized in each session. To demonstrate the four communication styles, we list one sample question and its corresponding answers from the database scenario.

Table 1. Illustration of task design

		Response type	
Factors		Supportive	Non-supportive
Empathic accuracy	Accurate	H1	H2
	Inaccurate	H3	H4

5.3.1. *Database scenario* Participant: Hey. Has anyone been bothered by the course project? I found it really complicated and difficult. I need some help!

Empathic accurate and supportive style: Yes. I feel exactly the same way. I would like to discuss the problems with you if that'll help.

Empathic accurate and non-supportive style: Yes. I feel exactly the same way. But it is your own responsibility to complete the project. Don't bother others.

Empathic inaccurate and supportive style: What! The project is a piece of cake! Anyway, I would like to discuss the problems with you if that'll help.

Empathic inaccurate and non-supportive style: What! The project is a piece of cake! It is your own responsibility to complete the project. Don't bother others.

5.4. *Procedures*

Participants completed three sessions. During the first session, after getting their informed consent, participants were asked to answer Rotter's interpersonal trust (IT) scale questionnaire. Rotter's scale allows us to measure participants' general trust level toward people and society. Then the research investigator explained the task to participants. Participants were told to role-play the person in the dialogue and the investigator encouraged them to think themselves into these roles. Participants were then asked to interact with each communication style. After each task, participants were asked to answer Rempel and Holmes' trust scale about their impression of the specific communication partner in that task.

Participants could take a break whenever they wanted. Demographic information and a short survey were completed after they finished interacting with all four communication styles. After finishing the first scenario, participants came back in a few days to complete the other two scenarios. The three scenarios took place on different days, in order to minimize the influence among the three scenarios.

5.5. *Trust measurement*

In this experiment, we used Rotter's IT scale to get a baseline measure of each participant's general trust level toward people and society before they interacted with any communication styles. Higher scores on Rotter's IT

scale suggest the person is more likely to trust others. We used Rempel *et al.* (1985) trust scale to measure each participant's trust level towards a specific communication partner. To meet the needs of the online environment, minor modifications in wording were made to a few of the questions. At the end of the Rempel *et al.* (1985) scale, we added a new question asking about participants' general feeling of liking or not liking their communication partner. Both scales have been empirically tested and widely applied in the Psychological field. We conducted two successful pilot studies testing the task design and measurement scales.

6. Results

6.1. *Empathic accuracy, response type and online interpersonal trust*

We conducted a regression analysis using gender and age as predicting variables and the Rempel's scores as the dependant variable. The result indicates that neither gender nor age has a significant influence on Rempel's scores ($F(1, 142) = 0.02$, n.s., $F(1, 142) = 2.55$, n.s.). So we excluded those two variables in the following discussions.

Figure 1 illustrates the average and standard deviation of Rempel's scores for four different communication styles in three scenarios. The average Rempel's scores of the empathic accurate and supportive communication partners are much higher than the other three groups. As shown in table 2, a One-Way Analysis of Variance (ANOVA) test with Rempel's scores as the dependent variable and 'communication style' as the predicting variable indicates a highly significant difference among the Rempel's scores of four different communication styles ($F(3, 140) = 26.55$, $p < 0.001$). *Post hoc* test shows the Rempel's scores in the empathic accurate and supportive condition are significantly higher than the other three conditions.

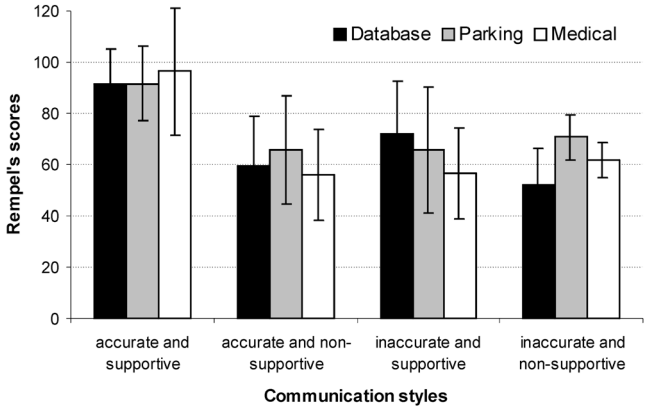

Figure 1. Average Rempel's scores for different communication styles in three scenarios ($n = 12$).

A multiple regression analysis was conducted using empathic accuracy, response type, scenario and the interaction effects between those variables as predicting variables and the Rempel's scores as dependent variable. As shown in table 3, the result indicates that empathic accuracy has a significant effect on Rempel's scores ($F(1, 136) = 14.43$, $p < 0.001$). Empathic accurate partners are likely to get higher Rempel's scores. Empathic accuracy explains around 9% of the total variances in Rempel's scores. This result supports our hypothesis that empathic accuracy has a positive effect on online interpersonal trust.

Response type has a significant effect on Rempel's scores controlling the effect of empathic accuracy ($F(1, 136) = 30.74$, $p < 0.001$). Participants are more likely to give higher Rempel's scores to partners who respond supportively. Response type explains around 16% of the total variances in Rempel's scores. This result supports our hypothesis that supportive response has a positive effect on online interpersonal trust.

Scenario doesn't cause a significant effect on Rempel's scores controlling the effect of empathic accuracy and response type ($F(1, 136) = 2.015$, n.s.).

More interestingly, the interaction effect between empathic accuracy and response type has a highly significant effect on Rempel's scores controlling the individual effect of empathic accuracy, response type and scenario ($F(1, 136) = 23.92$, $p < 0.001$). Because the interaction effect is highly correlated with empathic accuracy ($r = 0.58$, $p < 0.001$) and response type ($r = 0.58$, $p < 0.001$) and overshadows the effect of the two individual variables, the B coefficients of empathic accuracy and response type become non-significant when the interaction effect was entered in the regression model (see table 4). The interaction effect explains around 11% of the total variances in Rempel's scores. As is shown in figure 2, empathic accurate partners who were supportive got a much higher average trust scores (93.2) than empathic accurate partners who were non-supportive (60.3). However, the average trust scores for empathic inaccurate partners who were supportive (64.8) and those who were non-supportive (61.4) are very close. More importantly, the empathic accurate and non-supportive partners got the lowest trust scores, indicating that a person who can accurately infer the others' feelings but isn't supportive are not likely to get more trust than people who are ignorant of the others' feelings.

The interaction effect between empathic accuracy and scenario, and the interaction effect between re-

Table 2. ANOVA table for Rempel's scores across four communication styles.

	Sum of squares	Degree of freedom	Mean square	*F*	Significance
Between groups	26430.47	3	8810.16	26.55	0.00
Within groups	46464.17	140	331.89		
Total	72894.64	143			

Table 3. Full regression model summary for Empathic accuracy, response type, scenario, and Rempel's scores $n = 144$.

Model	Adjusted R square	Standard error	R square change	*F* change	Significance of *F* change
1	0.09	21.59	0.09	14.43	0.00
2	0.19	20.34	0.11	19.01	0.00
3	0.19	20.27	0.01	1.88	0.17
4	0.36	18.13	0.16	36.03	0.00
5	0.35	18.15	0.00	0.77	0.38
6	0.35	18.15	0.00	0.94	0.34
7	0.35	18.16	0.00	0.89	0.35

1 Predictors: (Constant), Empathic accuracy.
2 Predictors: Model 1 plus response type.
3 Predictors: Model 2 plus scenario.
4 Predictors: Model 3 plus interaction between empathic accuracy and response type.
5 Predictors: Model 4 plus interaction between empathic accuracy and scenario.
6 Predictors: Model 5 plus interaction between response type and scenario.
7 Predictors: Model 5 plus three way interaction.

Table 4. Regression model coefficients and significance, $n = 144$.

	B	Std. Error	*t*	Significance
(Constant)	64.75	3.03	21.40	0.00
Empathic Accuracy(EA)	− 4.47	4.28	− 1.05	0.30
Response Type(RT)	− 3.36	4.28	− 0.79	0.43
Scenario	4.50	3.71	1.21	0.23
Interaction between EA and RT	36.28	6.05	5.99	0.00
Interaction between EA and Scenario	0.25	5.24	0.05	0.96
Interaction between RT and Scenario	− 0.08	5.24	− 0.02	0.99
THREEWAY interaction	− 7.00	7.41	− 0.94	0.35

Dependent variable: Rempel's scores

sponse type and scenario are both non-significant ($F(1, 136) = 0.77$, n.s., $F(1, 136) = 0.89$, n.s., respectively). Finally, the interaction effect among the three predicting variables is non-significant ($F(1, 136) = 0.94$, n.s.). Overall, the regression model explains about 38.5% of the variance in Rempel's trust scores.

6.2. *Online interpersonal trust and liking*

A question concerning the extent to which participants like their partners was asked in the post-task questionnaire. The Rempel's scores are highly correlated with the liking scores in all three scenarios. In the database scenario, the correlation between the Rempel's scores and the liking scores is highly significant (Pearson's $r = 0.65$, $p < 0.001$). In the parking scenario, the correlation between those two factors is highly significant (Pearson's $r = 0.74$, $p < 0.001$). And in the medical scenario, the correlation between those two factors is also highly significant (Pearson's $r = 0.77$, $p < 0.001$). This indicates that in the online environment, interpersonal trust is closely related with liking in various types of online communities. People who are liked more by others are also more likely to win their trust.

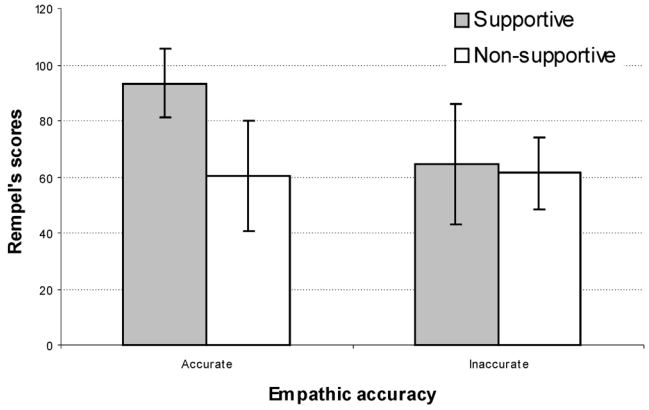

Figure 2. Interaction between empathy and predictability ($n = 12$).

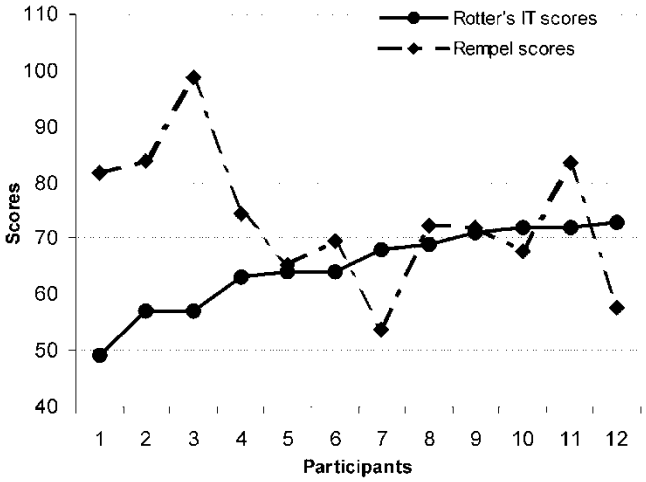

Figure 3. Average Rotter's IT scores and Rempel's scores in the parking scenario ($n = 12$).

6.3. *Online interpersonal trust and general trust*

A correlation analysis was conducted between Rotter's IT scores (representing people's general trust level) and the Rempel's scores (representing people's trust level towards their communication partner). In the database scenario and the medical scenario, Rotter's scores are not significantly correlated with Rempel's scores (Pearson's $r = -0.07$, n.s.; Pearson's $r = -0.12$, n.s.; respectively). However, in the parking scenario, Rotter's scores are significantly correlated negatively with Rempel's scores (Pearson's $r = -0.33$, $p < 0.05$). The negative correlation between Rotter's scores and Rempel's scores in the parking scenario is illustrated in figure 3. As the Rotter's general trust scores climb up, the Rempel's specific trust scores show a general downward trend.

The fact that there is no positive correlation in all three scenarios is interesting because it highlights the danger of a common assumption that people's online interpersonal trust attitude reflects their general trust attitude in daily life. However, as the data indicates, there is no positive or negative relationship between people's general trust level and their online trust attitude in the database scenario and the medical scenario. More surprisingly, in the parking scenario, people who are more likely to trust others in their daily life are more reluctant to trust people in the online environment. And people who are less likely to trust others in their daily life are more ready to trust people online. So it is not reasonable to assume that people who are more trusting in their daily life will also be more trusting in an online environment.

Furthermore, since the correlation effect between Rotter's general trust scores and Rempel's scores exists in the parking scenario, but does not exist in the database scenario and medical scenario, it may suggest that the transformation of trust attitude between daily life and online environment is influenced by the types of scenarios and topics involved. For instance, people may be more likely to trust those that they work on projects with. This might support the findings of Meyerson *et al.* (1996) that teams formed around a clear purpose and task often form 'swift trust.' With swift trust, doubt about the trustworthiness of others is suspended in order to get the work done. However, we would like to present the negative correlation and the influence of scenarios on online trust with caution because the negative correlation is only found in one scenario and further studies need to be conducted before we can draw a definitive conclusion.

7. Conclusions

In order for online communities to survive and thrive, it is important that there is online trust between people. The main focus of this study is the effect of two major elements of empathy, specifically, empathic accuracy and response type, on interpersonal trust in an online IM environment. An empirical study was conducted to investigate how people react to different online communication styles. It showed that both empathic accuracy and response type have a significant influence on online interpersonal trust. Communication partners who talked in an empathic accurate and supportive way were most trusted by the participants.

Importantly, the interaction effect between empathic accuracy and response type is highly significant and explains a big portion of the variance in participants' Rempel's trust scores. Communication partners who are

empathic accurate but non-supportive did not get more trust than empathic inaccurate partners. The key contribution of this result is that it suggests that empathic accuracy itself does not guarantee trust. In order to win other people's trust online, a person not only need to correctly infer the other's feeling, but also provide supportive response.

In addition, online interpersonal trust is closely related to the degree of liking. People who are more liked by others also gain more trust from them. Perhaps people can become more likable online by providing more information and stories about themselves.

Finally, the relationship between online interpersonal trust and people's general trust attitude in their daily life seems to be very complicated. There is no positive relationship between general trust and online trust in any of the three scenarios, which is contrary to people's popular belief. Furthermore, in the parking scenario, participants who are more likely to trust others in their daily life demonstrated less trust toward their online communication partners. This suggests that the level of trust might change, when people move from communicating with others in a face-to-face environment, to communicating in an online environment. How people's daily trust attitude influences their online trust may be influenced by the type of online communities and discussion topics.

8. Future directions

Our regression model explains around 38% of the total variance in Rempel's trust scores. The significant amount of variance explained indicates that the model is effective and the variables involved in the model are important factors in online interpersonal trust development. However, there is still around 60% of the variance that hasn't been explained. This suggests that, besides empathic accuracy and response type, there are still other unidentified factors that play important roles in online trust. Future research needs to be conducted to further explore those hidden factors and make the model more complete.

The transformation between daily trust attitude and online interpersonal trust is another area of interest. This study revealed a negative transformation between daily trust and online interpersonal trust under a certain scenario. However, we need to be cautious about the generalization of this result since types of scenarios and topics might influence the transformation. It would be very interesting to investigate the relationship between daily trust attitude and online interpersonal trust under a variety of different scenarios and topics. It would be even more instructive to explore whether online communication experiences have any influence on people's daily trust level. Since so many people, especially the young generation, are spending a considerable amount of their time online, the influence of online communication on their daily trust attitude will be a significant issue not only for online community researchers, but also for sociologists, psychologists, and social workers, as well as educators and society at large.

Finally, it should be noted that this study was artificially set up and conducted in a laboratory environment. Participants were asked to role-play the interaction with their communication partners. All the scenarios, questions and answers were pre-determined by the researchers. Therefore participants could not interact with their communication partners freely. Therefore, to some extent, the experiment limited participants' opportunity to get to know their communication partners. This is a well documented problem with this type of study. Naturalistic studies might provide additional useful information about the role of empathy in online trust and will be considered for future studies

9. Implications for interface design

9.1. *Empathic accuracy*

Psychologists have found that shared experience and similarity between people help to build empathic accuracy. For example, people who have the same gender, occupation, close age, or similar expressions are more likely to detect other's feelings accurately (Ickes *et al.* 1990). So developing artifacts to help people to identify others who are similar to themselves or who have similar experiences may be helpful for promoting empathic attitudes that build interpersonal trust. For example, we are exploring the following approaches. First, stories seem to be a powerful way of allowing people to identify similarities. Story telling could be encouraged informally by inviting people to send messages or post web pages about themselves (Peiris *et al.* 2000), or more formally with specially designed templates that would enable participants to more easily identify similar others.

Directories that enable people to search for others with similar interests might also be helpful; for example, to find those of similar age, those with similar problems or experiences, those with the same illness, or same profession, or same working or learning experiences.

Finally, it is important to encourage people to extend the boundaries of their relationships by looking for deeper and more personal similarities. A role playing game might be a good candidate for providing this experience.

9.2. *Response type*

It seems common sense that if you want the others' trust, you should show them you are supportive and helpful. However, this is easy to say than done. Everyday there are millions of malicious and assaulting messages being posted on BBS or other online communities. And it is so easy for a kind and friendly online discussion to turn to a spiteful fight. In fact, many research have proved that the anonymous characteristic of online communication makes people more spiteful and easier to blow out since the traditional social ties that restrict people's behaviour in the daily life don't exist any more. Therefore, in order to promote trust in online community, it will be helpful to encourage people to expose themselves more to the other online members and build tighter ties among community members. It is also suggested to design some functions to detect spiteful messages and remind the sender that they are almost out of temper and might be better to calm down for a while.

9.3. *Message consistency*

Empathic accuracy and supportive response can both help build online trust. But our findings suggest that the two elements intertwine with each other. Users are highly sensitive to mixed or contradictory messages, in which empathic accuracy and response type are inconsistent. In such situations, trust is fragile and easily damaged. Developers could help users avoid contradictory messages by including advice on writing style in netiquette guidelines. Ultimately, text parsers may be developed that can identify contradictory messages and signal the problem to the message author.

9.4. *Scenario*

It is possible that people might have different expectations towards trust in computer mediated communication, under different scenarios. For example, people might expect more trust in a healthcare-related online community, where they expect people to be trustworthy, than in an online community for football fans. Our work shows that empathic accuracy and response type influence trust on a one-to-one basis in a textual instant messaging environment, but the extent and nature of this influence may be affected by the mission and context of the communication, who else is present, and the supporting software.

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