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Research Article

## Effects of Emoticons on the Acceptance of Negative Feedback in Computer-Mediated Communication

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### Abstract

*Delivering negative performance feedback is inevitable in the workplace. However, recipients may feel uncomfortable and behave defensively, and may be unwilling to accept negative feedback mainly because they fear losing face. Such unproductive responses are heightened when negative feedback is delivered through computer-mediated communication (CMC) channels in which many nonverbal cues in face-to-face communication cannot be used to alleviate the concerns of losing face. This study examines the effectiveness of emoticons, which are designed as surrogates for facial expressions in CMC environments, in conveying social and emotional signals of the feedback provider. Specifically, based on the feedback process model and the dissonance reduction theory, this study investigates the differing effects of two types of emoticons (i.e., liking and disliking ones) on the acceptance of negative feedback by considering feedback specificity as a contingent factor. Our results suggest that using liking emoticons increases perceived good intention of the feedback provider and decreases perceived feedback negativity when the feedback is specific; however, it has no significant effect for unspecific feedback. By contrast, our results suggest that using disliking emoticons decreases perceived good intention of the feedback provider and increases perceived feedback negativity when the feedback is unspecific, whereas such effects are not significant for specific feedback. In turn, both perceived good intention of the feedback provider and perceived feedback negativity affect acceptance of the negative feedback.*

**Keywords:** Emoticon, Emotion, Feedback Acceptance, Feedback Specificity, Computer-Mediated Communication.

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\* Fiona Fui-Hoon Nah was the accepting senior editor. This article was submitted on 22<sup>nd</sup> September, 2011 and went through two revisions.

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# Effects of Emoticons on the Acceptance of Negative Feedback in Computer-Mediated Communication

## 1. Introduction

The past half-century has witnessed the rapid development of computer-mediated communication (CMC). The *2006 Workplace E-Mail, Instant Messaging & Blog Survey* conducted in the USA shows that 35 percent of employees use instant messaging (IM) as a means of CMC at work<sup>1</sup>. A recent report issued by the International Association of Business Communication indicates that the use of CMC has become commonplace in organizations; employees widely use IM to communicate with colleagues<sup>2</sup>. In particular, when collaborating with others as a team, people heavily rely on CMC on many occasions, including giving feedback to team members (Hartenian, Koppes, & Hartman, 2002b; Otondo, Scotter, Allen, & Palvia, 2008).

A main challenge for teams in using CMC is accepting negative feedback (Hartenian et al., 2002b; Sussman & Sproull 1999). In workplaces, negative feedback usually indicates the recipient's inadequate performance (Kluger & DeNisi 1996) and is often delivered with the goal of improving task performance (Ang, Cummings, Straub, & Earley, 1993). However, the recipient may be reluctant to accept negative feedback and behave defensively mainly because of the feeling of losing face (i.e., the recipient's desired self-image is threatened by the negative feedback) (Anseel & Lievens, 2006; Taylor, 1991). Accepting negative feedback can be even more difficult when the feedback is delivered through CMC such as IM and emails (Hartenian, Koppes, & Hartman, 2002a). Unlike in a face-to-face (F2F) situations in which various facial expressions and body languages can be used to alleviate the losing-face threats of negative feedback (Baron 1990; Byrne, Masterson, & Rogers, 2004; Koreto, 1998; Smith, 2006; Watts, 2007), feedback providers in a CMC context are unable to use these nonverbal clues to sugarcoat and soften the feedback's negativity (Sussman & Sproull, 1999; Walther & D'Addario, 2001; Yigit, 2005).

To deal with CMC's intrinsic inadequacy of delivering traditional nonverbal cues, emoticons have long been used in CMC as surrogates for nonverbal cues. Emoticons are textual or graphical symbols designed to mimic facial expressions (e.g., “:-)” or “😊” for a smile) (Derks, Bos, & von Grumbkow, 2008b). Due to the wide use of emoticons in CMC, CMC serves increasingly as a channel to exchange social and emotional information on top of transmitting task-oriented information, for which it was originally designed (Roberts, 1986).

Although emoticons have been widely used in CMC, their effects have not been thoroughly investigated or well understood in extant literature. This study fills this gap by investigating the effects of emoticons on people's responses to negative feedback delivered through CMC. We investigate whether or not emoticons can affect the acceptance of negative feedback in CMC in a similar manner as nonverbal cues used in an F2F context. More importantly, we reveal underlying effect mechanisms of emoticons and identify conditions under which emoticons are most influential.

More specifically, we address two research issues. First, we investigate the differing effects of various types of emoticons on negative feedback acceptance. In reality, various emoticons can be used to express distinct social and emotional meanings. However, not all emoticons can increase negative feedback acceptance. In F2F communication, criticizing someone angrily conveys different social and emotional information compared to criticizing the same person but with a smile, and these two ways of criticizing will very likely trigger diverse reactions from the recipients (Trees & Manusov, 1998). However, in the CMC context, we have yet to determine the exact effects of different types of emoticons (e.g., 😊 vs. 😞). In the absence of an accurate understanding of their effects, emoticons may be used inappropriately, which thereby hinders the acceptance of negative feedback. First, this research identifies the antecedents of negative feedback acceptance based on the feedback process model (Ilgen, Fisher, & Taylor, 1979), and, second, hypothesizes the effects of different types of emoticons on these antecedents.

<sup>1</sup> <http://press.amanet.org/press-releases/28/2006-workplace-e-mail-instant-messaging-blog-survey-bosses-battle-risk-by-firing-e-mail-im-blog-violators/>

<sup>2</sup> <http://news.iabc.com/index.php?s=54&cat=52>, accessed on June 27, 2012.

Second, we investigate how people's interpretation of emoticons is likely to be affected by some contextual factor of the feedback text. In F2F communication, people may interpret the same "smile" in different ways (either as a token of friendliness or a sign of scorn) depending on the conversation context. In an ambiguous scenario, people tend to interpret a particular nonverbal cue by examining its consistency with other cues. Likewise, the recipient's interpretation of a particular emoticon in CMC could be heavily affected by some characteristics of the textual content of the feedback. For example, a negative feedback message can be very general and lack detailed justifications (unspecific feedback) or it might come with concrete justifications and suggestions for improvement (specific feedback). Depending on the level of feedback specificity, the recipient may develop distinct interpretations of the emoticons embedded in the feedback text, which may affect their perceptions of the feedback provider and the feedback content (Ilgen et al., 1979; Liden & Mitchiell, 1985).

This paper proceeds as follows. In Section 2, we review the literature. In Section 3, we present our research model and develop our hypotheses. In Section 4, we describe our research method and present our results. In Section 5, we conclude the paper and discuss the implications of this research for theory and practice, and its limitations and future research directions.

## 2. Background

### 2.1. Roles of Emoticons in Expressing Social and Emotional Information

The communication literature has long found that nonverbal cues in F2F communication contain rich social and emotional information, which can be conveyed through facial expressions, tones, voice pitches, gestures, postures, and so on (Byron & Baldrige 2007; Derks et al., 2008b; Krohn, 2004; Walther & D'Addario, 2001). However, most of these nonverbal cues are not usable in CMC because of bandwidth restrictions of the communication channel (Aragon, 2003; Otondo et al., 2008; Walther & D'Addario, 2001). To replicate some of these social and emotional cues in written form, people developed emoticons (a portmanteau word of two English words "emotion" and "icon") as surrogates for facial expressions and/or body language.

Previous research has shown that people can largely identify the social and emotional meaning of an emoticon and its relative strength in accordance with the emoticon's particular graphic design (Lo, 2008; Yigit, 2005). Moreover, the message sender is perceived as expressing a stronger emotion when they use the same emoticon repeatedly in a message as compared to using it only once (Boonthanom, 2004).

Previous research has also suggested that the effects of emoticons extend beyond the expression of social and emotional meanings per se. Emoticons can also affect how recipients' evaluate entire messages and the how they perceive the message sender. However, inconsistent empirical findings have been reported in prior studies, and the underlying mechanism has not been thoroughly investigated. For example, Thompsen and Foulger (1996) found that, while using an emoticon can in general reduce the hostility of a negative message, the perceived hostility might even increase when the same emoticon is used together with hostile wordings. However, they did not report in detail the specific emoticons tested (such as the emotion type and valence), which makes it difficult to understand the underlying mechanisms of the extended effects of emoticons. In addition, at the time of their study, emoticons were not nearly as prevalent as they are today.

In this study, we focus on the extended effects of emoticons on recipients' cognitive evaluations of both the negative feedback and its provider, which ultimately impact their acceptance of the feedback. Although emoticons can be naturally associated with nonverbal cues used in F2F communication with respect to their superficial meanings, they are nonetheless different from traditional nonverbal behaviors because observers generally perceive emoticons as conscious and controlled behaviors similar to verbal expressions, rather than the direct and involuntary representations of an individual's internal states (Walther & D'Addario, 2001; Yoo, 2007). Using emoticons normally involves keying in textual symbols or choosing from a list of graphic symbols. All these behaviors "may not be so involuntarily casual in the minds of receivers" (Walther & D'Addario, 2001, p. 329). As a result, the

feedback recipient is more likely to elaborate on the sender's underlying motives as compared to those receiving feedback through F2F communication. Thus, the effects of emoticons in CMC warrant a thorough investigation.

## 2.2. Typology of Emoticons

We can categorize emoticons by three dimensions: (1) valence, (2) format, and (3) discrete emotions and facial expressions. By valence, emoticons can be classified into positive (e.g., a smile emoticon), negative (e.g., a frown emoticon), and neutral/ambiguous categories (Derks, Bos, & von Grumbkow, 2007; Derks, Bos, & von Grumbkow, 2008a; Luor, Wu, Lu, & Tao, 2010; Walther & D'Addario, 2001). People commonly use either positive or negative emoticons in CMC and neutral ones less frequently (Luor et al., 2010). Moreover, Luor et al. (2010) found that positive and negative emoticons were more influential than neutral emoticons in shaping the receivers' evaluation of a message, whereas users' evaluation of a message with a neutral emoticon exhibited limited difference as compared to that of the same message without the emoticon.

By format, we can classify emoticons as being either typographic or graphic (Huang, Yen, & Zhang, 2008; Yigit, 2005). Typographic emoticons, such as “:-)” and “:-(”, use textual ASCII characters to simulate facial expressions in an abstract and concise manner. There is limited selection of typographic emoticons, and the emotional cues they can convey are relatively simple. By contrast, a graphic emoticon is designed using a tiny bitmap/vector image. Emoticons provided in today's CMC systems are mostly graphic based, and numerous instances of such emoticons have been created in various CMC applications.

Emoticons can be also classified by the discrete emotions and facial expressions for which they are designed to surrogate, such as like, dislike, playfulness, sadness, frustration, surprise, or sarcasm (Derks et al., 2008b; Rivera, Cooke, & Bauhs, 1996). In the context of computer-mediated feedback delivery, liking and disliking are the two most frequently expressed emotion types (Trees & Manusov, 1998). Liking emoticons are mostly rendered by facial expressions such as a smiley face (e.g., 😊 and 😄), whereas disliking emoticons by facial expressions such as an angry or sad face (e.g., 😡 and 😞).

The effects of emoticons largely depend on the specific type of emotions they convey (Trees & Manusov, 1998); therefore, this study focuses on the two categories of emoticons that are most commonly used in the context of feedback delivery through CMC; namely, liking and disliking emoticons. Using emoticons to express liking and disliking emotions is in accordance with people's expression of emotions in F2F communication.

Negative feedback points out the discrepancy between the feedback recipient's desired self-image and their undesirable performance (Kluger & DeNisi, 1996). Such a state threatens an important aspect of people's face: the desire to be liked, admired, and supported by others (Brown & Levinson 1987). In the F2F context, the negative feedback's sender may express their dislike of the recipient's poor performance in a straightforward manner, which can aggravate the recipient's sense of losing face. Alternatively, people can mitigate such threats by showing liking emotions, which they can express with facial expressions such as a smile (Trees & Manusov, 1998). Similarly, we contend that the liking and disliking emoticons can be used to express corresponding emotions when delivering feedback through CMC.

## 3. Research Model and Hypothesis Development

Figure 1 presents our research model. On the basis of a feedback process model (Ilgen et al., 1979), we first identify two antecedents of feedback acceptance that may be affected by emoticons; namely, perceived good intention of feedback provider (H1) and perceived feedback negativity (H2). Then, we hypothesize the effects of liking and disliking emoticons on these antecedents identified and propose

feedback specificity as a contingent factor that moderates the effects of the emoticons (H3, H4, H5, and H6) (Tedeschi, Schlenker, & Bonoma, 1971).

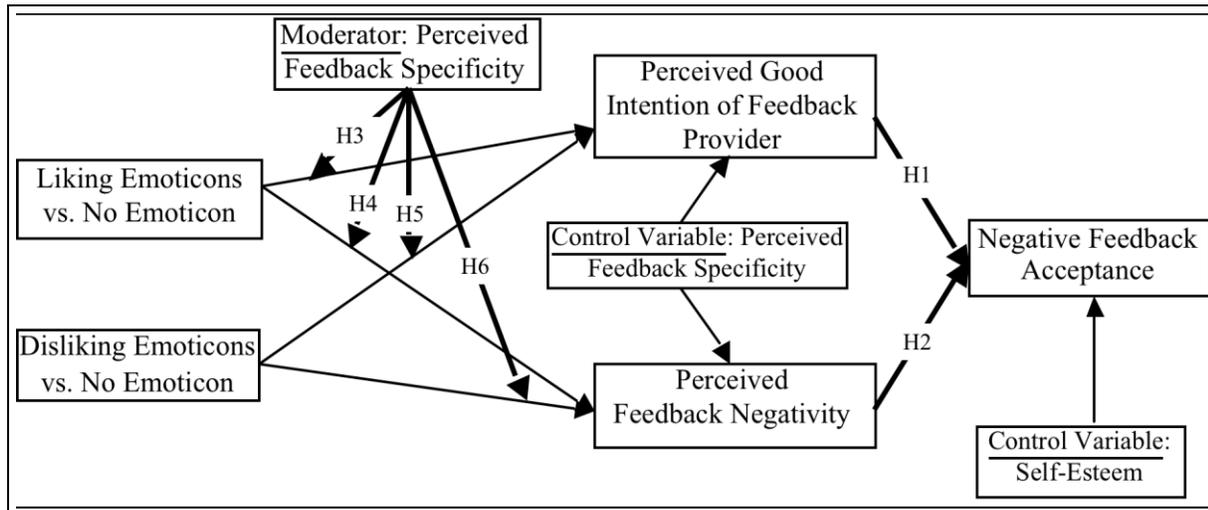


Figure 1. The Research Model

### 3.1. Feedback Process Model & Antecedents of Negative Feedback Acceptance

Ilgen et al.'s (1979) feedback process model established a foundation for subsequent research on performance feedback. The model identifies a set of factors that explain the recipient's acceptance of feedback. These factors are related to three entities involved in feedback delivery and acceptance; namely, the provider, the feedback itself, and the recipient.

This study investigates the effects of emoticons (vs. no emoticon) on recipients' acceptance of negative feedback in CMC. We do not examine a comprehensive model covering all antecedents of feedback acceptance. Instead, we identify the key factors through which emoticons may exert their impacts. Specifically, this study mainly focuses on factors related to two entities in the feedback process model; namely, the feedback provider and the feedback. These factors mediate the effects of emoticons on negative feedback acceptance. Meanwhile, the recipient-related factors are not included because it is apparent that these factors, such as the recipient's individual characteristics, would not be affected by emoticons. Nevertheless, these factors are controlled for in this study.

In terms of the factors related to the feedback provider, on receiving negative feedback, the recipients often judge the provider's motivation, expertise, personal relevance, and power (e.g., Claiborn & Goodyear, 2005; Fedor, Eder, & Buckley, 1989; Ilgen et al., 1979)<sup>3</sup>. Among these factors, we focus on the recipient's perceived good intention (i.e., the motivation) of the feedback provider because the use of emoticons will trigger the recipient's assessment of the provider's motivation for spending extra effort inserting emoticons into the feedback<sup>4</sup>.

Perceived good intention of the feedback provider is an important source-related determinant of feedback acceptance (Ilgen et al., 1979). Intention perceptions are involved in making sense of others' behavior, which, in turn, influences one's responsive behavior (Fedor et al., 1989). One of the rational determinants of the feedback recipient's responses to negative feedback is the individual's

<sup>3</sup> Previous studies have used various terms for these factors to fit their respective research contexts. Nevertheless, we can consider most of them as one of these four factors. To simplify the description, we only list these four general factors. Please refer to Table A-1 in Appendix 1 for the various terms used in the literature.

<sup>4</sup> In this research, we do not examine other factors related to the feedback provider, including their expertise and power, as potential mediators of the effects of emoticons on feedback acceptance because these factors are not likely to be influenced by emoticons. Emoticons do not contain any clues about the provider's expertise and are independent from such an individual's power.

beliefs in the eventual success of the focal task (Alder & Ambrose, 2005b). If the recipient believes that the feedback provider gives comments (even though negative) with good intention (e.g., to help improve task performance instead of to embarrass the recipient), the recipient will be more cooperative and more likely to accept the feedback. Such cooperative acceptance behavior will lead to a higher chance of the eventual success of the recipient. Prior studies have examined the effect of perceived good intention on feedback acceptance (Britt & Grandall, 2000; Fedor et al., 1989), and we validate it in this study.

**H1:** *Recipients' perceived good intention of the feedback provider will positively affect their acceptance of the negative feedback.*

With respect to the factors related to the feedback itself, perceived feedback valence has been identified as an influential factor affecting feedback acceptance (Alder & Ambrose 2005a; Ilgen et al., 1979; Liden & Mitchiell, 1985; Lim, O'Connor, & Remus, 2005; London, 1995). Because we focus on negative feedback, we investigate the factor of perceived negativity of the feedback (Claiborn & Goodyear, 2005).

People usually hold a favorable self-image because of their self-enhancement tendency, whereas negative feedback threatens people's desired self-image (i.e., losing face) (Alder & Ambrose, 2005b; Anseel & Lievens, 2006). The more negative the feedback is perceived, the less likely the recipient can maintain their desired self-image. Therefore, the recipient is more likely to behave defensively against the feedback and even reject it without much deliberation on its validity. Extending the previous finding that the feedback valence affects feedback acceptance (Alder & Ambrose, 2005b), we posit that:

**H2:** *Recipients' perceived negativity of feedback will negatively affect their acceptance of the negative feedback.*

### 3.2. Dissonance Reduction Theory and Effects of Emoticons

As surrogates for nonverbal cues, emoticons are often used to sugarcoat negative feedback delivered in CMC. The recipient may experience dissonant cognitions on receiving negative feedback with emoticons (in particular when the emoticons convey some positive information). According to the dissonance reduction theory, dissonance in cognitions causes people to fall into a psychologically uncomfortable state; therefore, people instinctively activate dissonance reduction mechanisms by altering some existing cognitions (Festinger, 1962). We apply the dissonance reduction theory in this study to elaborate the effects of liking and disliking emoticons (Aronson, 1969).

The dissonance reduction theory, which originated in social psychology, has been applied in information systems (IS) research, such as IS continuance behaviors (Bhattacharjee, 2001). Dissonance reduction theory deals with two types of cognitions about an object: consonant cognitions, when one thought follows from or is followed by the other, and dissonant cognitions, when the obverse of one thought follows from or is followed by the other (Festinger, 1962; O'Keefe, 2002).

In the context of negative feedback with emoticons, the recipient forms a text-based cognition and an emoticon-based cognition. These two types of cognitions can be consonant or dissonant with each other. We first analyze them separately.

For text-based cognition, the valence and specificity of feedback text are the two key factors affecting the recipient's evaluation of the feedback itself (Alder & Ambrose, 2005a; Liden & Mitchiell, 1985). Because we focus on negative feedback, we evaluate the recipient's cognition toward the feedback by considering feedback specificity. Feedback specificity refers to the extent to which the feedback contains attributional information (e.g., weaknesses in the task performance that lead to the negative evaluation) (Ilgen et al., 1979; Liden & Mitchiell, 1985). The provision of the attributional information implies that the feedback provider has spent significant effort in evaluating the task performance (Ilgen et al., 1979; Liden & Mitchiell, 1985). Because the detailed information by the provider can be

used to improve task performance, the recipient may form a text-based cognition that the feedback provider is actually supportive. Moreover, the recipient may conjecture that their task performance is not too bad in the eyes of the feedback provider because the provider would not have wasted time and effort in articulating the details if the performance were too poor to improve.

On the contrary, when the feedback is unspecific, it does not provide much constructive information. The feedback recipient may establish a text-based cognition that the provider is not being supportive, is being picky or overly critical, or is making groundless criticisms (Crocker, 2005). Furthermore, the recipient may infer that their task performance is so disappointing that the provider has not bothered to enumerate detailed deficiencies.

In terms of emoticon-based cognitions, when liking emoticons are used, the recipient forms a positive cognition given that such emoticons are normally used to show liking toward people. By contrast, when disliking emoticons are used, the emoticon-based cognition is naturally negative.

Table 1 summarizes the cognitions based on the feedback text and the emoticons. When an emoticon-based cognition is consonant with a text-based one, these two cognitions will be reinforced. By contrast, when two such cognitions are dissonant with each other, the recipient will be psychologically uncomfortable and will attempt to reduce cognitive dissonances (Festinger, 1962).

**Table 1. Text- and Emoticon-Based Cognitions**

	Feedback text	
	Specific: The feedback provider is supportive and intends to help improve the recipient's performance.	Unspecific: The feedback provider is not supportive and not helpful in improving the recipient's performance.
Liking emoticons	<b>Consonant</b>	<b>Dissonant</b>
Disliking emoticons	<b>Dissonant</b>	<b>Consonant</b>

Specifically, we contend that, in order to reduce cognitive dissonances, recipients will discount the emoticon-based cognition for the following two reasons. First, a receiver can reinterpret the meaning conveyed through an emoticon to make it consistent with the text-based cognition because the same emoticon can be subject to many alternative interpretations (Walther & D'Addario, 2001). By contrast, meaning conveyed through text is relatively less ambiguous. Also, compared with the verbal channel, the expression of social and emotional information through emoticons is relatively new; thus, a commonly shared protocol on emoticons' meaning in different situations has not been well-established yet (Derks et al., 2007b; Walther & D'Addario, 2001). For instance, a "smiley face" emoticon can be interpreted either as an indicator of the sender's friendliness or a sign of scorn at the recipients. By contrast, the meaning conveyed in the text of negative feedback is less ambiguous. Therefore, when the emoticon-based cognition is dissonant with the text-based one, the recipient is more likely to reinterpret the emoticon's implications to reduce this dissonance.

Second, the strength of an emoticon-based cognition is relatively weaker than that of a text-based cognition. Text-based cognitions are produced by a high level of elaboration on the feedback text; therefore, the feedback recipient is more confident in these cognitions (i.e., more robust cognitions) (Petty, Haughtvedt, & Smith, 1995; Petty & Wegener, 1999). Emoticon-based cognitions are generated with a low level of elaboration and less effort because emoticons are often treated and processed as heuristic cues. Such cognitions are less robust than text-based ones. As a result, when the two cognitions are incongruent, that the recipients are more likely to attenuate their emoticon-based cognitions.

### **3.2.1. Effects of Liking Emoticons vs. No Emoticon**

According to the analysis of different text- and emoticon-based cognitions in Section 3.2, when liking emoticons are used in specific feedback, text- and emoticon-based cognitions are consonant with each other. Therefore, using liking emoticons can strengthen the cognitions conveyed by the specific feedback.

With regard to the feedback provider's perceived intention, the recipient will be further reassured that the provider, although not satisfied with the recipient's performance, still intends to help by specifying in detail the areas how the recipient can improve with specific feedback. As a signal of goodwill, the liking emoticons can soften the tone of the otherwise critical message and indicate that the negative feedback is not meant to be taken personally (Thompson & Foulger, 1996).

With regard to perceived feedback negativity, on receiving someone's negative feedback with liking emoticons, the recipient is likely to infer that the feedback provider still appreciates the individual's performance (Hareli et al., 2009; Van Kleef, De Dreu, & Manstead, 2006). The liking emoticons can strengthen the cognitions conveyed in the specific feedback that, despite some drawbacks in the task performance, the weaknesses are not very severe and there is still chance for improvement. Thus, the use of liking emoticons can mitigate feedback's perceived negativity.

By comparison, when liking emoticons are used in unspecific feedback, the emoticon- and text-based cognitions are dissonant with each other. According to the two discounting principles previously discussed, the emoticon-based cognition will be discounted when the recipients forms a firm negative cognition based on their effortful elaboration of the unspecific feedback. The liking emoticons may not be interpreted as an indicator of genuine fondness. For instance, the liking emoticons can be regarded merely as a form of courtesy. In this case, liking emoticons will no longer serve as a reliable indicator of the feedback provider's goodwill or their real attitude about the feedback recipient's task performance. Thus, how the feedback recipient judges the feedback provider's intention and feedback would rely primarily on the textual content.

In sum, considering the effects of liking emoticons used in specific and unspecific feedback, we posit the following hypotheses:

**H3:** *The effects of liking emoticons (vs. no emoticon) on the recipient's perceived intention of the negative feedback provider will be moderated by feedback specificity.*

**H3a:** *The provider of a specific negative feedback will be perceived to have better intention when he/she uses liking emoticons than when he/she does not use any emoticon.*

**H3b:** *The provider of an unspecific negative feedback will be perceived to have the same level of good intention when he/she uses liking emoticons as when he/she does not use any emoticon.*

**H4:** *The effects of liking emoticons (vs. no emoticon) on the recipient's perceived negativity of the negative feedback message will be moderated by feedback specificity.*

**H4a:** *A specific feedback message with liking emoticons will be perceived by the recipient as less negative than the same message without any emoticon.*

**H4b:** *An unspecific feedback message with liking emoticons will be perceived by the recipient as equally negative as the same message without any emoticon.*

### **3.2.2. Effects of Disliking Emoticons vs. No Emoticon**

When disliking emoticons are used in specific feedback, the text- and emoticon-based cognitions are dissonant with each other. To reduce such dissonance, recipients are likely to discount the emoticon-

based cognition. For example, the recipient can interpret disliking emoticons merely as the provider's habit in online communication and as not reflecting the feedback provider's intention or attitude about the recipient's task performance. Even if the recipient initially viewed the use of disliking emoticons as a sign of dislike, such cognition will be attenuated when the recipient forms a relatively more positive and firmer cognition based on their effortful elaboration of the specific and helpful feedback (Petty et al., 1995; Petty & Wegener, 1999). Again, the feedback recipient's judgment of the provider's intention and the feedback negativity will be based mainly on the textual content.

By contrast, when disliking emoticons are used in unspecific negative feedback, these two types of cognitions are consonant. The recipient's negative cognition of the unspecific feedback is likely to be strengthened. Upon receiving such feedback with a dislike emoticon, the recipient is likely to interpret the disliking emoticon as a sign of hostility. The recipient is likely to be confirmed that the feedback provider intentionally disparages their performance without bothering to provide any concrete evidence. Thus, the disliking emoticons will negatively affect the recipient's perceived intention of the feedback provider.

In terms of perceived feedback negativity, when disliking emoticons are used in unspecific negative feedback, we expect the text-based cognition of recipients to be strengthened. A feedback recipient may infer that their task performance is so poor that it even triggered the provider's negative emotion. Such emotion originates from an individual's automatic and unconscious appraisal of an event, and it provides an obvious signal for the recipient to perceive the feedback to be very negative (Ellsworth & Scherer, 2003). Thus, we contend that the use of disliking emoticons will aggravate the perceived negativity of the unspecific feedback.

In sum, considering the effects of disliking emoticons used in specific feedback and unspecific feedback, we posit the following:

**H5:** *The effects of disliking emoticons (vs. no emoticon) on the recipient's perceived intention of the negative feedback provider will be moderated by feedback specificity.*

**H5a:** *The provider of a specific negative feedback will be perceived to have the same level of good intention when he/she uses disliking emoticons as when he/she does not use any emoticon.*

**H5b:** *The provider of an unspecific negative feedback will be perceived to have worse intention when he/she uses disliking emoticons than when he/she does not use any emoticon.*

**H6:** *The effects of disliking emoticons (vs. no emoticon) on the recipient's perceived negativity of the negative feedback will be moderated by feedback specificity.*

**H6a:** *A specific feedback message with disliking emoticons will be perceived by the recipient as equally negative as the same message without any emoticon.*

**H6b:** *An unspecific feedback message with disliking emoticons will be perceived by the recipient as more negative than the same message without any emoticon.*

### 3.3. Control Variables

Previous research has shown that certain individual characteristics of feedback recipients can influence feedback acceptance (Ilgen et al., 1979). A widely studied personal trait is the feedback recipient's self-esteem (Fedor, Davis, Maslyn, & Mathieson, 2001; Ilgen et al., 1979; Kernis, Cornell, Sun, Berry, & Harlow, 1993). As Fedor et al. (1989) suggest, people with high self-esteem are "better equipped to martial the motivation resources needed to improve performance by following negative feedback" (p. 82), whereas those with low self-esteem may not believe that they are able to follow the negative feedback to improve their performance. Because the recipient's self-esteem can affect the

tendency to accept the negative feedback, we controlled for it in this study. Moreover, although we focus on feedback specificity's moderation role in this study, it may also exert main effects on a feedback recipient's perceived good intention of the feedback provider and perceived feedback negativity. Feedback specificity is associated with the provider's effort to help improve the task performance. Thus, someone who provides specific feedback may be perceived as having a better intention than that someone who provides unspecific feedback. Specific feedback can also indicate that the performance can still be improved, thus reducing perceived negativity. Therefore, we also controlled for the main effects of perceived feedback specificity.

## 4. Method

### 4.1. Research Design

We conducted a laboratory experiment to test the effects of liking and disliking emoticons on the recipient's perceived good intention of the feedback provider and perceived feedback negativity, and the moderating effects of feedback specificity. We employed a 3 (emoticon type: liking vs. disliking vs. none)  $\times$  2 (feedback specificity: high vs. low) full-factorial between-subject experimental design, which produced six conditions (Table 2).

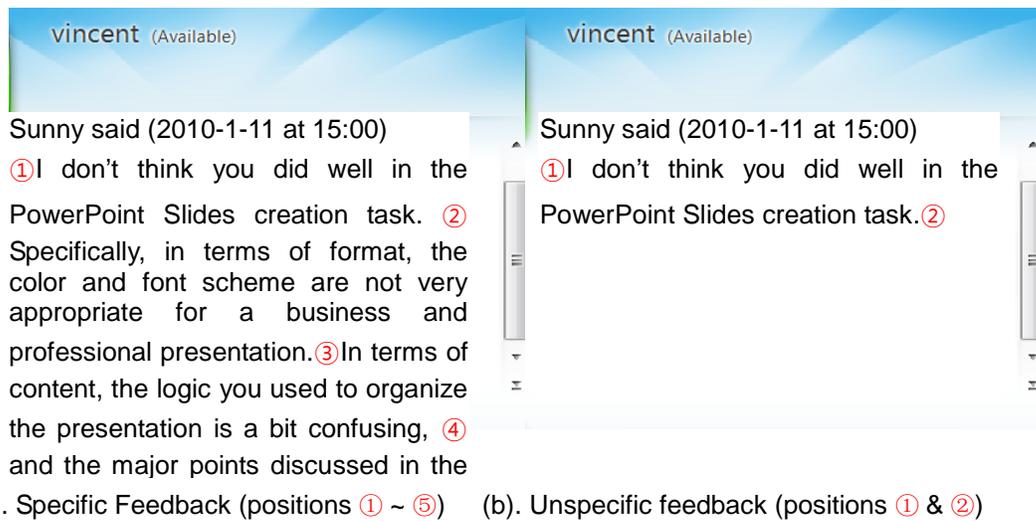
		Emoticon type		
		Liking emoticons	Disliking emoticons	No emoticon
Feedback specificity	High	Condition 1	Condition 2	Condition 3
	Low	Condition 4	Condition 5	Condition 6

We manipulated the emoticon factor with a between-subject design to minimize the sensitization effect (Greenwald, 1976) because a within-subject design (in which each participant reads two feedback messages with different emoticons) allows participants to detect the research purpose more easily. We also manipulated feedback specificity with a between-subject design to minimize the carry-over effect (Greenwald, 1976). Under a within-subject design (in which each participant reads two negative feedback messages, one specific and one unspecific), the two feedback messages strengthen each other's credibility, and thus affect feedback acceptance.

### 4.2. Stimulus Design

#### 4.2.1. Position and Quantity of Emoticons

Emoticons can be placed in various locations in text. In this study, we chose the position of the emoticons by surveying people's opinions on where emoticons are most likely to be inserted in a feedback message. Given that emoticons are normally used at the beginning or the end of a sentence (Provine, Spencer, & Mandell, 2007), we identified five candidate positions in the specific feedback and two candidate positions in the unspecific feedback (Figure 2). In a pretest, fifteen undergraduate students were recruited to evaluate the most appropriate position for both types of feedback. Twelve of them picked the end of the feedback message as the most suitable position (i.e., position 5 for the specific feedback, and position 2 for the unspecific feedback). Therefore, we put the emoticons at the end of the feedback messages in all experimental conditions.



**Figure 2. Candidate Positions to Add Emoticons**

Next, we decided on the number of emoticons to use. Previous research suggests that multiple duplicate emoticons can attract more attention from readers and increase the perceived strength of the emotion being expressed than single emoticon does (Boonthanom, 2004). Boonthanom (2004) used 1, 3, and 5 to represent the low, medium, and high levels of emotional cues, respectively, and found that the message receiver perceives a higher degree of the sender's emotion when the number of emotional cues increases. We conducted another pretest and found that, when three emoticons were used, all subjects managed to recall the presence of those emoticons and correctly identified the message sender's emotion (liking or disliking); however, when only one emoticon was used, a few subjects did not attend to it at all. Therefore, we decided to use three duplicate emoticons in all "with emoticons" conditions.

#### 4.2.2. Selection of Emoticons

This study focuses on graphic emoticons because the emoticons provided by most popular IM platforms are graphic based (Huang et al., 2008; Yigit, 2005). A variety of graphic designs exist for the two types of emoticons (i.e., liking and disliking ones) investigated in this research. We selected two specific graphic forms, one representing liking and the other disliking, through the following procedure. First, we collected 126 candidate emoticons from mainstream email clients, IM applications, and popular online communities. Two graduate students reviewed all these emoticons and identified the eight most typical ones, four for liking and four for disliking (Table 3). These eight emoticons served as candidates for further selection in the next step.

**Table 3. Results of Pretest on Liking and Disliking Emoticons**

	Emoticon candidate	Average liking score	Average disliking score
Liking emoticon		<b>4.25</b>	3.50
		3.00	4.75
		3.00	5
		3.00	5
Disliking emoticon		2.75	5.25
		2.25	5.25
		1.75	6
		1.5	<b>6.25</b>

Next, we conducted a pretest among 20 undergraduate students. In this pretest, we presented each participant with a specific and an unspecific feedback message. The emoticons in the specific and unspecific feedback were different to prevent the participants from detecting the pretest's purpose. The participants evaluated how much they liked or disliked each emoticon on a seven-point Likert scale. Based on the pretest results (Table 3), the emoticon with the highest liking score was  and the one with the highest disliking score was . Accordingly, we selected these emoticons as the liking and disliking emoticons for our main experiment.

### 4.3. Experimental Task, Participants, and Procedures

We conducted the experiment in a computer laboratory at the City University of Hong Kong. For the experiment, each participant had to create four PowerPoint slides on Hong Kong's private domestic property market through computer-mediated collaboration with two colleagues. The task instructions asked participants to imagine being a summer intern in a management consulting firm and working in a three-member project team (with a leader named William and a colleague named Sunny) to provide consultation services to a real-estate agent who planned to enter Hong Kong's property market. As the project team needed to give a presentation to the agent's senior management team in a week to introduce briefly the housing market of Hong Kong, we requested participants to create a few presentation slides using Microsoft PowerPoint. We also informed participants that all communication among team members would be conducted through MSN Messenger, a popular IM platform developed by Microsoft.

We recruited a total of 198 non-first year undergraduate students from the City University of Hong Kong to participate in the experiment on a voluntary basis. Most participants were local Hong Kong residents. Fifty-nine percent were females and most of them were in their early twenties. The sample size was sufficient to detect a medium effect size ( $f=0.25$ ) of the emoticons with an acceptable statistical power (0.80) under a significance level of  $p<0.05$  (Cohen, 1988). To be eligible for the experiment, the participants must have known how to use MSN and Microsoft PowerPoint so that they could accomplish the experimental task. We ensured that the participants were familiar with the teamwork dynamics as simulated in the experiment: most undergraduate courses in the university where the experiment was conducted require group projects and most students used IM to communicate in their group projects.

The procedure of the experiment was as follows:

- 1) On arrival, we randomly assigned each participant to one of the experimental conditions.
- 2) We asked each participants to watch a videotape for instructions on the experimental procedure. We then provided them with a page about Hong Kong's property market<sup>5</sup>, which we told them they were to assume had been provided by their pretend team leader, William.
- 3) To initiate the task, the participant sent a greeting MSN message to William, who was played by a research assistant. During the experiment, this research assistant worked in another laboratory and assumed the roles of both William and Sunny.
- 4) William then sent the task details to each participant through IM (Appendix 2).
- 5) The participants followed William's instructions to create four PowerPoint slides on Hong Kong's private domestic property market based on the reading material provided. William told participants that they could spend around 20 minutes to complete the task.
- 6) After creating their slides, William instructed the participants to send the slides to Sunny, another team member, through IM.
- 7) On receiving the slides, Sunny asked the participant to wait for feedback (Appendix 2).
- 8) Four minutes afterwards (the delay was intentionally inserted to create an illusion that Sunny was reading the slides during this period), Sunny sent a feedback message, composed according to the treatment condition (i.e., either specific or unspecific and either with or without liking/disliking emoticons) to the participant (Appendix 2). To make the specific feedback applicable to the slides designed by the participants, the details in the feedback messages were mainly about subjective evaluations of certain design factors (e.g., font, color, and format of the slides) because most slides created in a short timespan would suffer some flaws in these aspects<sup>6</sup>.
- 9) After completing the experimental task, our research assistant provided the participants with the webpage of an online questionnaire created in Google Docs with the measures of the dependent and control variables and the questions for manipulation checks. At the end of the questionnaire, the research assistant asked the participants whether or not they had detected the purpose of the experiment.
- 10) After completing the questionnaire, we debriefed and thanked each participant. We gave them a supermarket coupon worth HK\$50 as an incentive and a token of gratitude.

#### 4.4. Measures

We adapted the measures of all the three key constructs (i.e., perceived good intention of the feedback provider, perceived feedback negativity, and feedback acceptance) and those of the two control variables (i.e., self-esteem and perceived feedback specificity) from previous research with consideration of this study's particular context. We measured perceived good intention, also referred to as benevolence in the literature, with five items adapted from Selnes and Gønhaug (2000). We used two items adapted from Kurtzberg, Belkin, and Naquin (2006) and Walther and D'Addario (2001)

<sup>5</sup> This material was adapted from pages 15-18 of The Hong Kong Property Review 2009 ([http://www.rvd.gov.hk/doc/en/PR\\_fullbook/PR2009.pdf](http://www.rvd.gov.hk/doc/en/PR_fullbook/PR2009.pdf))

<sup>6</sup> We conducted a pretest to ensure that the experimental participants considered that the evidence listed in the specific feedback supported the negative evaluation in the feedback and generally made sense to them.

to measure perceived feedback negativity. We added one item to measure the recipient's general perceptions of feedback negativity (i.e., "In general, I think Sunny's feedback is very negative"). We used four items adapted from McCarthy and Garavan (2007) and Steelman, Levy, & Snell (2004) to measure feedback acceptance. We measured perceived feedback specificity, also referred to as feedback constructiveness in the literature, with four items adapted from Smith (2006). We also adapted the measurement items for self-esteem from Smith (2006). Appendix 3 lists all the measurement items.

## 5. Results

From the 198 experimental participants, we excluded 10 samples from further analysis: three participants detected the experiment's purpose; in seven other cases, the experimental manipulations were not successful (e.g., an incorrect number of emoticons were used). After excluding these samples, 188 valid responses remained for data analysis, and each treatment condition had at least 28 participants.

Table 4 summarizes the participants' distributions according to gender, year of study, and working experience. We conducted a series of ANOVA, and the results showed that the participants in all the experimental conditions were homogeneous in terms of gender ( $F=0.05$ ,  $p>0.99$ ), year of study ( $F=0.42$ ,  $p=0.83$ ), and working experience ( $F=1.72$ ,  $p=0.12$ ). No significant differences in the dependent variables examined in this study were found between male and female subjects or across subjects in different years of study.

**Table 4. Sample Demographics (Number of Subjects)**

Emoticon	Feedback specificity	Gender		Year of study				Working experience		Sum
		M	F	Yr.1	Yr.2	Yr.3	Yr.4	No	Yes	
Liking	Unspecific	13	18	3	13	14	1	1	30	31
	Specific	14	19	7	12	13	1	0	33	33
Disliking	Unspecific	13	18	7	11	12	1	3	28	31
	Specific	11	17	7	9	12	0	0	28	28
None	Unspecific	14	19	10	7	15	1	1	32	33
	Specific	12	20	6	9	16	1	0	32	32
Sum		77	111	40	61	82	5	5	183	188

The results of an ANOVA also showed that our manipulation of the feedback specificity was successful. Participants perceived the specific feedback to be more specific than the unspecific (means = 2.06 and 3.72 for the specific and unspecific feedback, respectively,  $F=99.1$ ,  $p<0.001$ ).

We first tested the effects of perceived good intention of the feedback provider and perceived feedback negativity on feedback acceptance by using a partial least squares (PLS) analysis. The measurement properties were also examined in the PLS. Then, to analyze the effects of the emoticons for both specific and unspecific feedback, we split the entire data set into two data subsets through the manipulated feedback specificity (Hsieh et al. 2008). For each data subset, we ran an ANOVA with two a priori contrasts using Tukey's HSD tests, one between the group "with liking emoticons" and the "no emoticon" group and the other between the group "with disliking emoticons" and the "no emoticon" group.

### 5.1. Measurement Model

Based on Barclay, Higgins, and Thompson (1995), we validated the measurement model in three aspects: individual item reliability, internal consistency, and discriminant validity. We assessed the individual item reliability by examining the factor loading of each item on its intended construct. Table

5 shows that the factor loadings of NEGFB1, SESTM2, and SESTM3 on their intended constructs were low for the data set of the specific feedback, and that the loading of PGINT2 on an unintended construct, feedback negativity, was higher than 0.70 for the data set of the unspecific feedback. A review of these four items indicates that deleting them would not influence the content validity; thus, we excluded them from further data analyses. With these items excluded, the factor loadings were all above the rule-of-thumb threshold of 0.707 (Barclay et al., 1995), except for one item of perceived good intention (ACPTF4: 0.68) in the data set of the specific feedback (Table 6). Nevertheless, this factor loading is generally regarded as acceptable. Thus, all items in Table 6 were kept in the subsequent data analyses.

**Table 5. Factor Loadings and Crossing Loadings (All Items Included)**

Item	Specific feedback (n = 93)					Unspecific feedback (n = 95)				
	Feedback acceptance (ACPTF)	Perceived feedback negativity (NEGFB)	Perceived good intention (PGINT)	Perceived feedback specificity (SPECF)	Self-esteem (SESTM)	Feedback acceptance (ACPTF)	Perceived feedback negativity (NEGFB)	Perceived good intention (PGINT)	Perceived feedback specificity (SPECF)	Self-esteem (SESTM)
ACPTF1	<b>0.88</b>	-0.34	0.44	0.40	-0.31	<b>0.78</b>	-0.39	0.43	0.31	-0.20
ACPTF2	<b>0.88</b>	-0.38	0.58	0.46	-0.31	<b>0.78</b>	-0.58	0.58	0.51	-0.26
ACPTF3	<b>0.86</b>	-0.45	0.51	0.52	-0.24	<b>0.80</b>	-0.31	0.48	0.26	-0.14
ACPTF4	<b>0.68</b>	-0.15	0.43	0.27	-0.06	<b>0.72</b>	-0.22	0.41	0.23	-0.08
NEGFB1	-0.12	<b>0.53</b>	-0.36	-0.20	0.16	-0.24	<b>0.72</b>	-0.53	-0.38	0.00
NEGFB2	-0.40	<b>0.88</b>	-0.34	-0.37	0.28	-0.52	<b>0.86</b>	-0.55	-0.30	0.17
NEGFB3	-0.37	<b>0.88</b>	-0.46	-0.32	0.25	-0.49	<b>0.91</b>	-0.67	-0.36	0.22
PGINT1	0.30	-0.15	<b>0.62</b>	0.23	-0.18	0.43	-0.50	<b>0.75</b>	0.25	-0.02
PGINT2	0.39	-0.51	<b>0.74</b>	0.20	-0.10	0.45	-0.73	<b>0.79</b>	0.31	-0.13
PGINT3	0.42	-0.45	<b>0.67</b>	0.30	-0.18	0.48	-0.60	<b>0.86</b>	0.35	0.00
PGINT4	0.39	-0.39	<b>0.84</b>	0.33	-0.18	0.50	-0.63	<b>0.85</b>	0.38	0.05
PGINT5	0.51	-0.15	<b>0.58</b>	0.44	-0.15	0.62	-0.33	<b>0.72</b>	0.30	-0.11
SPECF1	0.45	-0.36	0.45	<b>0.92</b>	-0.23	0.43	-0.42	0.46	<b>0.90</b>	-0.21
SPECF2	0.42	-0.28	0.36	<b>0.81</b>	-0.28	0.39	-0.30	0.31	<b>0.86</b>	-0.18
SPECF3	0.45	-0.25	0.34	<b>0.82</b>	-0.18	0.37	-0.36	0.27	<b>0.80</b>	-0.36
SPECF4	0.37	-0.38	0.32	<b>0.73</b>	-0.24	0.27	-0.24	0.22	<b>0.71</b>	-0.32
SESTM1	-0.26	0.23	-0.20	-0.24	<b>0.91</b>	-0.21	0.01	0.07	-0.20	<b>0.78</b>
SESTM2	0.13	-0.04	0.09	-0.04	<b>0.11</b>	-0.11	0.22	-0.15	-0.24	<b>0.66</b>
SESTM3	-0.08	0.11	-0.09	-0.15	<b>0.48</b>	-0.22	0.24	-0.11	-0.30	<b>0.84</b>
SESTM4	-0.14	0.28	-0.09	-0.25	<b>0.82</b>	-0.10	0.03	0.01	-0.21	<b>0.72</b>

**Table 6. Factor Loadings and Crossing Loadings (with NEGFB1, PGINT2, SESTM2, & SESTM3 Removed)**

	Specific feedback (n = 93)					Unspecific feedback (n = 95)				
	Feedback acceptance (ACPTF)	Perceived feedback negativity (NEGFB)	Perceived good intention (PGINT)	Perceived feedback specificity (SPECF)	Self-esteem (SESTM)	Feedback acceptance (ACPTF)	Perceived feedback negativity (NEGFB)	Perceived good intention (PGINT)	Perceived feedback specificity (SPECF)	Self-esteem (SESTM)
ACPTF1	<b>0.88</b>	-0.36	0.45	0.41	-0.27	<b>0.78</b>	-0.43	0.41	0.31	-0.18
ACPTF2	<b>0.88</b>	-0.40	0.58	0.46	-0.26	<b>0.78</b>	-0.58	0.58	0.51	-0.20
ACPTF3	<b>0.86</b>	-0.44	0.51	0.52	-0.20	<b>0.80</b>	-0.36	0.50	0.26	-0.13
ACPTF4	<b>0.68</b>	-0.18	0.43	0.27	0.02	<b>0.72</b>	-0.25	0.42	0.23	-0.07
NEGFB2	-0.40	<b>0.90</b>	-0.32	-0.37	0.27	-0.52	<b>0.92</b>	-0.51	-0.30	0.06
NEGFB3	-0.37	<b>0.89</b>	-0.36	-0.32	0.20	-0.49	<b>0.93</b>	-0.59	-0.36	0.06
PGINT1	0.30	-0.09	<b>0.65</b>	0.23	-0.16	0.43	-0.47	<b>0.79</b>	0.25	0.04
PGINT3	0.42	-0.45	<b>0.65</b>	0.30	-0.16	0.48	-0.55	<b>0.85</b>	0.35	0.06
PGINT4	0.39	-0.35	<b>0.83</b>	0.33	-0.11	0.50	-0.56	<b>0.83</b>	0.38	0.16
PGINT5	0.51	-0.13	<b>0.66</b>	0.44	-0.14	0.62	-0.35	<b>0.76</b>	0.30	-0.04
SPECF1	0.45	-0.33	0.48	<b>0.92</b>	-0.22	0.42	-0.34	0.45	<b>0.90</b>	-0.13
SPECF2	0.42	-0.29	0.38	<b>0.81</b>	-0.26	0.39	-0.27	0.32	<b>0.87</b>	-0.14
SPECF3	0.45	-0.25	0.38	<b>0.82</b>	-0.17	0.37	-0.35	0.25	<b>0.80</b>	-0.27
SPECF4	0.37	-0.38	0.35	<b>0.73</b>	-0.23	0.27	-0.20	0.22	<b>0.71</b>	-0.25
SESTM1	-0.26	0.23	-0.22	-0.24	<b>0.96</b>	-0.21	0.04	0.08	-0.20	<b>0.95</b>
SESTM4	-0.14	0.27	-0.12	-0.26	<b>0.85</b>	-0.10	0.08	0.01	-0.21	<b>0.76</b>

We assessed internal consistency through both composite reliability and Cronbach's alpha (Barclay et al., 1995). Table 7 shows that the composite reliabilities and Cronbach's alphas of all the constructs were about or above the 0.70 threshold. Therefore, all constructs had satisfactory internal consistency.

Discriminant validity was confirmed based on two criteria: (1) the square root of the average variance extracted (AVE) of each construct was greater than its correlations with all the other constructs, and (2) the loading of each item on its intended construct was greater than its cross loadings on other constructs (Barclay et al., 1995) (Table 7).

**Table 7. Reliabilities, Correlations, and Square Roots of AVEs**

Construct	Composite reliability	Cronbach's alpha	Feedback acceptance	Perceived feedback negativity	Perceived good intention	Perceived feedback specificity	Self-esteem
<b>Specific feedback (n = 93)</b>							
Feedback acceptance	0.90	0.85	0.83*				
Perceived feedback negativity	0.89	0.76	-0.43	0.90			
Perceived good intention	0.79	0.72	0.60	-0.37	0.70		
Perceived specificity	0.89	0.84	0.51	-0.39	0.49	0.82	
Self-esteem	0.90	0.80	-0.23	0.26	-0.20	-0.27	0.91
<b>Unspecific feedback (n = 95)</b>							
Feedback acceptance	0.85	0.78	0.77				
Perceived feedback negativity	0.92	0.82	-0.55	0.92			
Perceived good intention	0.88	0.82	0.63	-0.60	0.81		
Perceived specificity	0.89	0.84	0.45	-0.36	0.40	0.82	
Self-esteem	0.85	0.69	-0.20	0.06	0.06	-0.23	0.86

\* The diagonal elements are square roots of average variance extracted (AVE), and off-diagonal elements are inter-construct correlations.

## 5.2. Common Method Variance

We measured the constructs of perceived good intention of the feedback provider, perceived feedback negativity, perceived feedback specificity, and self-esteem in a single questionnaire; thus, common method variance could pose a threat to the findings (Podsakoff, MacKenzie, & Podsakoff, 2003). We took both procedural and statistical measures to address this issue.

First, in the post-task questionnaire, we did not group the measurement items by construct; instead, we randomized their presentation order to procedurally minimize the method bias induced by the question context (Podsakoff et al., 2003). Second, we conducted Harmon's single-factor test, which assumes that, if common method variance exists, a significant factor explaining the majority of the variances will emerge (Podsakoff & Organ, 1986). The results of the factor analysis with a principal axis factoring extraction method show that the largest amount of variance explained by a single factor was only 36.79 percent. Therefore, the common method bias is not a significant concern in this study.

## 5.3. Structural Model

Figure 3 shows the PLS results, including the standardized path coefficients and significance levels of the effects of the two antecedents of feedback acceptance. Perceived good intention had significant positive effects on feedback acceptance, and perceived feedback negativity had significant negative effects on feedback acceptance. Thus, both H1 and H2 are supported.

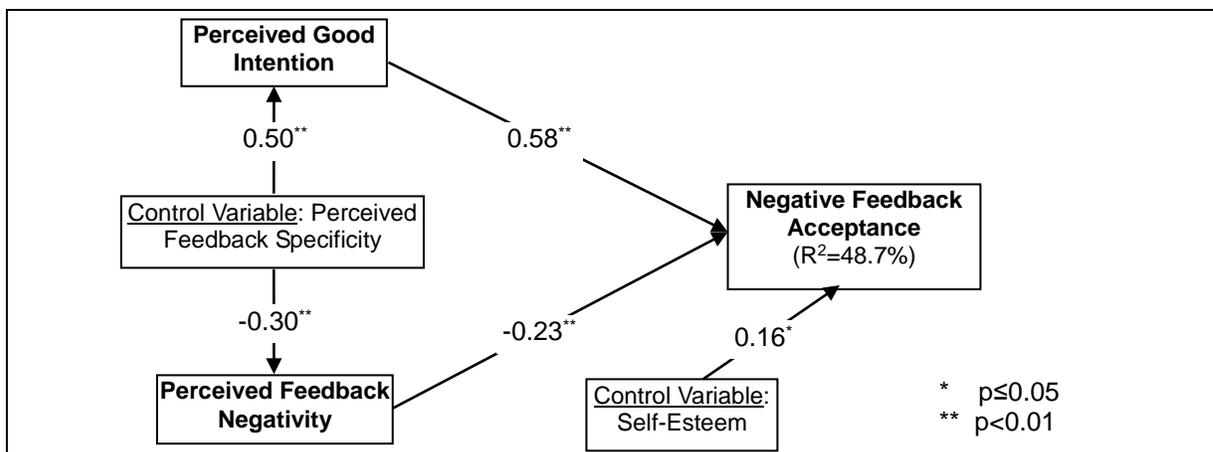


Figure 3. PLS Results

### 5.4. Group Comparisons Using Tukey’s HSD Tests

Table 8 presents the descriptive data for each experimental condition, including the means and standard deviations of all the constructs examined in this study. For each of the specific and unspecific feedback data subset, we conducted ANOVAs on the two dependent variables with two a priori contrasts using Tukey’s HSD tests, one between the “with liking emoticons” and the “no emoticon” groups (H3 and H4) and the other between the “with disliking emoticons” and the “no emoticon” groups (H5 and H6). Table 9 presents the ANOVA results.

Table 8. Means (Standard Deviations) of DVs in Different Experimental Conditions

Feedback specificity	Emoticon	Feedback acceptance	Perceived feedback negativity	Perceived good intention	Perceived feedback specificity	Self-esteem
High	Positive	4.98 (1.21)	4.79 (1.57)	4.25 (1.06)	3.76 (1.41)	5.39 (1.07)
	Negative	4.78 (1.11)	5.14 (1.27)	3.47 (0.91)	3.78 (1.15)	5.29 (1.04)
	None	4.67 (1.04)	5.28 (0.92)	3.75 (0.70)	3.63 (1.26)	5.39 (0.81)
	Total	4.81 (1.12)	5.06 (1.29)	3.82 (0.94)	3.72 (1.28)	5.36 (0.97)
Low	Positive	3.75 (1.21)	4.71 (1.05)	3.43 (1.25)	1.93 (0.99)	5.58 (0.98)
	Negative	3.47 (1.17)	5.56 (1.27)	2.70 (1.12)	2.06 (0.98)	5.56 (0.78)
	None	3.83 (1.22)	4.94 (1.38)	3.33 (1.08)	2.17 (1.04)	5.76 (0.69)
	Total	3.68 (1.12)	5.07 (1.28)	3.16 (1.16)	2.06 (1.00)	5.64 (0.82)

Table 10 shows the group comparison results. When the feedback was specific, the use of liking emoticons, compared with the no-emoticon condition, had a significant positive effect on perceived good intention of the provider and a significant negative effect on perceived feedback negativity<sup>7</sup>.

<sup>7</sup> The direction of the effects has been theoretically hypothesized; thus, the significance levels were based on one-tailed tests (Hsieh, Rai, & Keil, 2008).

When the feedback was unspecific, the use of liking emoticons did not have any significant effect on perceived good intention of the provider or perceived feedback negativity. Thus, the moderating roles of feedback specificity were confirmed for liking emoticons, which supports both H3 and H4.

**Table 9. ANOVA Results**

Specific feedback (n = 93)					
Source	DF	Sum of squares	Mean square	F	p-value
<b>DV: Perceived intention of feedback provider</b>					
Emoticon	2	9.41	4.70	5.93	0.004
Error	90	70.54	0.78		
<b>DV: Perceived feedback negativity</b>					
Emoticon	2	5.46	2.73	1.68	0.19
Error	90	144.37	1.60		
Unspecific feedback (n = 95)					
<b>DV: Perceived intention of feedback provider</b>					
Emoticon	2	6.29	3.15	2.46	0.09
Error	92	116.32	1.26		
<b>DV: Perceived feedback negativity</b>					
Emoticon	2	14.64	7.32	4.90	0.009
Error	92	135.84	1.48		

**Table 10. Multiple Comparison Results (Tukey's HSD Test)**

Group A	Group B	Specific feedback (n = 93)		Unspecific feedback (n = 95)	
		Mean difference (A-B)	Significance	Mean difference (A-B)	Significance
<b>Perceived good intention of feedback provider</b>					
With liking emoticons	No emoticon	<b>0.50</b>	<b>0.03</b>	0.10	0.49
With disliking emoticons	No emoticon	-0.28	0.27	<b>-0.63</b>	<b>0.05</b>
<b>Perceived feedback negativity</b>					
With liking emoticons	No emoticon	<b>-0.49</b>	<b>0.05</b>	-0.23	0.37
With disliking emoticons	No emoticon	-0.14	0.45	<b>0.62</b>	<b>0.03</b>

With respect to disliking emoticons, when the feedback was specific, the use of disliking emoticons, compared with the no-emoticon condition, did not exert any significant effect on perceived good intention of the provider or perceived feedback negativity. By contrast, when the negative feedback was unspecific, the use of disliking emoticons had a significant negative effect on the perceived good intention and a significant positive effect on perceived feedback negativity. Thus, the moderating roles of feedback specificity were confirmed for disliking emoticons, which supports both H5 and H6.

## 6. Discussion

Emoticons serve as a channel for exchanging social and emotional information in CMC. This study investigated the effects of two types of widely used emoticons; namely, liking and disliking emoticons,

on recipients' acceptance of negative feedback delivered in CMC. We identified perceived good intention of the feedback provider and perceived feedback negativity as the two antecedents of feedback acceptance through which emoticons exerted their effects. Our results suggest that the effects of emoticons are contingent on feedback specificity. Only when the feedback is specific, do liking emoticons influence perceived good intention of the provider and perceived feedback negativity, whereas, when the feedback is unspecific, disliking emoticons influence these two factors. In addition, our results suggest that perceived good intention of the provider and perceived feedback negativity significantly influence feedback acceptance.

We also tested the direct effects of emoticons on feedback acceptance. The results suggest that liking emoticons significantly influence feedback acceptance only when the feedback is specific (the direct effects of liking emoticons are insignificant for unspecific feedback). The direct effects of disliking emoticons on feedback acceptance were marginally significant ( $p < 0.1$ ) when the feedback was unspecific (the direct effects of disliking emoticons are insignificant for specific feedback). These results are generally consistent with the aforementioned findings.

### 6.1. Theoretical Implications

This study makes two major theoretical contributions. First, it advances our understanding of the extended effects of emoticons in CMC. We examined how the social and emotional information exchanged in CMC influences people's cognitive evaluations of computer-mediated feedback messages and their providers, and the likelihood for the feedback to be accepted. With the increasing use of CMC, the nature of information exchanged in CMC has evolved radically. Between the 1960s and the late 1980s, professionals primarily used CMC was primarily to exchange task-oriented information (Roberts, 1986). However, with the emergence of the Internet in the 1990s, people began to utilize CMC to express social and emotional information not only in their private lives but in workplaces as well.

Although previous research has confirmed that social and emotional information can be exchanged in CMC (Boonthanom, 2004; Lo, 2008), scant research has been conducted to investigate how such information affects the cognitive evaluation of the message and its sender. This study represents one of the first endeavors in the context of negative feedback delivery by focusing on emoticons, a major means of communicating social and emotional information in CMC. The empirical results support our conjectures that using emoticons can indeed affect people's evaluations of the feedback and the provider. More specifically, our results suggest that emoticons influence the recipients' cognitive evaluations of both the feedback (perceived negativity) and the feedback provider (perceived good intention), which thereby affects their acceptance of the negative feedback.

This study also extends previous research on feedback delivery, in which the use of emoticons is mainly treated as a nonverbal strategy (Alder & Ambrose 2005a; Ang et al., 1993; Baron, 1990; Gaddis, Connelly, & Mumford, 2004; Hornsey, Robson, Smith, Esposito, & Sutton, 2008; Lundgren & Rudawsky, 2000; Trees & Manusov, 1998). Although emoticons are surrogates for nonverbal cues, the use of emoticons can also be likened to conscious and controlled behavior similar to verbal expression (Walther & D'Addario, 2001; Yoo, 2007). Therefore, emoticons have characteristics of both verbal (e.g., deliberate expression) and nonverbal cues (e.g., expression of social and emotional information), but they are not identical to either of these two types of cues (Lo, 2008; Locke & Daly, 2006).

Second, this study contributes to emoticon research by investigating the differential contexts in which different emoticons (liking versus disliking) may or may not exert their effects. Previous studies on the interpretations of emoticons by feedback recipients have produced inconsistent results (Derks et al., 2008a; Walther & D'Addario, 2001), which can be partially attributed to the different contexts examined in these studies.

The essential thesis this study confirms is that the effects of emoticons depend on the context of the feedback text. This study investigated the moderating role of feedback specificity. In line with the dissonance reduction theory, the empirical results suggest that the recipients' different cognitions on

specific and unspecific feedback texts would lead to whether the emoticon-based cognition (liking or disliking) is strengthened or discounted. For instance, because the liking emoticon-based cognition is consonant with the specific, albeit negative, feedback, it will be strengthened; by contrast, because this emoticon-based cognition is not in accord with the unspecific negative feedback, it will be discounted. Our findings help reconcile the inconsistent results of previous emoticon research and provide important guidance on future emoticon research; that is, the investigation into the effects of emoticons should take the textual context into consideration.

## 6.2. Practical Implications

This research also has practical implications. It provides feasible guidelines on using emoticons in computer-mediated feedback delivery. Specifically, when delivering negative feedback to colleagues through CMC, people should use emoticons with caution. To increase the acceptance of negative feedback, a wise strategy is to provide concrete justifications to support the negative feedback along with liking emoticons in the feedback text. These emoticons can help reduce the recipient's perceived feedback negativity and express goodwill. However, if specific evidence cannot be provided along with the general negative evaluation, the feedback provider should avoid using disliking emoticons in the feedback text; otherwise, the feedback provider will be deemed as having a bad intention and the feedback message will be perceived as highly negative and thus impede its acceptance. In general, we encourage the use of liking emoticons in negative feedback because their effects are at worst neutral and at best positive. Disliking emoticons should be avoided in negative feedback because they do not produce any positive impact on the feedback acceptance. Although the acceptance of negative feedback through CMC is often challenging because of the threat of losing face, with the effective use of emoticons, such threats can be mitigated. As a result, the recipient will be less defensive and more willing to accept the negative feedback.

## 6.3. Limitations and Future Research

This research has several limitations. First, our experiment employed a scenario in which team members did not previously know each other. However, prior interpersonal interactions may influence a recipient's perception of the feedback provider, which may impact the effects of the emoticons. For example, if both parties are familiar with each other, the recipient can better judge the meaning of the emoticons. Thus, the effects of emoticons may not be easily discounted as we have discussed in this study. Future research could further investigate the effects of emoticons in CMC among dyads with various levels of familiarity.

Second, because this research focused on the negative feedback from colleagues rather than from supervisors, it did not consider the hierarchical relationship between the feedback provider and the recipient. Nevertheless, people's feedback acceptance can be influenced by the power of the feedback provider (Fedor et al., 2001). If the negative feedback is provided by a powerful team member, the recipient may be more sensitive to the emoticons used by the feedback provider, and the underlying effect mechanisms of emoticons may differ from those examined in this study. Thus, future research could investigate the effects of emoticons on the acceptance of negative feedback from people with a higher or lower status than that of the recipient.

Third, this study tested the effects of only two specific forms of emoticons; namely, liking and disliking emoticons, although many other types and forms of emoticons are used in daily life. These different emoticons convey different meanings with different levels of strength and ambiguity. Even for liking and disliking emoticons, there exist other graphical implementations (e.g., animated ones) that may express a stronger or weaker level of liking and disliking emotions. The effects of other emoticon instances merit further research as well.

Moreover, this study did not investigate the effects of the number and position of emoticons. In our experiment, three duplicate emoticons were used to produce a medium level of emotional cues. However, people sometimes use more emoticons and sometimes less. Although our results may be generalized to situations in which more than three duplicate emoticons are used, it remains unclear whether the effects will persist when just one emoticon is used. In addition, in our experiment, the

three emoticons were placed at the end of the feedback text. However, they can be placed in other places in the feedback (e.g., at the beginning or in the middle of the feedback). Whether the effects of emoticons will differ across these different places in the feedback also deserves further research.

Fourth, this study only focused on the delivery of negative feedback. Future research could examine the effects of emoticons in the context of positive feedback delivery. Emoticons used in positive feedback do not involve face-threatening issues. Therefore, the effect of emoticons in the context of positive feedback delivery will be different from that in the context of negative feedback delivery.

Finally, because the experimental participants were undergraduate students from a University in Hong Kong, caution should be exercised in generalizing the results of this study to other demographic groups. Future research is needed to test the effects of emoticons with a different sample (e.g., those who have richer working experiences, and those with different cultural background).

## 7. Conclusion

Emoticons are widely used in CMC as surrogates for nonverbal cues in F2F communication. Based on the feedback process model and the dissonance reduction theory, this study investigated the effects of two types of emoticons (i.e., liking and disliking emoticons) on negative feedback acceptance by considering feedback specificity as a contingent factor of these effects. The results of our laboratory experiment provide evidence that liking and disliking emoticons have different effects on the acceptance of negative feedback by influencing the feedback recipients' perceived good intention of the provider and their perceived feedback negativity, and these effects are contingent on the feedback specificity. With an accurate understanding of the effects of emoticons in CMC, employees can deal with the potential face threats of negative feedback by using proper emoticons, and thereby effectively deliver negative feedback to their colleagues.

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## Appendices

### Appendix A. Summary of Antecedents of Feedback Acceptance

**Table A-1. Antecedents of Feedback Acceptance**

I. Feedback provider-related antecedents
<ul style="list-style-type: none"> <li>• Intention (Fedor et al., 1989; Ilgen et al., 1979): The better the perceived intention of the feedback provider, the higher the feedback acceptance is.</li> <li>• Motive of the evaluator (Britt &amp; Grandall, 2000; Taylor, 1991): The better the perceived motive of the evaluator, the higher the feedback acceptance is.</li> <li>• Consideration shown to subordinates (Ilgen, Peterson, Martin, &amp; Boeschen, 1981): If a supervisor shows consideration to subordinates, the feedback will be more acceptable.</li> <li>• Source credibility (Bietz, 2008; Claiborn &amp; Goodyear, 2005; Steelman &amp; Rutkowski, 2004; Taylor, 1991): Feedback from a credible feedback provider is more likely to be accepted.</li> <li>• Trustworthiness (Alder &amp; Ambrose, 2005b; Audia &amp; Locke, 2003; Claiborn &amp; Goodyear, 2005): Feedback from a trusted feedback provider is more likely to be accepted.</li> <li>• Supervisor's regard for face (Smith, 2006): If a supervisor is perceived to have a regard for the face of his/her subordinates, the feedback will be more acceptable.</li> <li>• Expertise (Claiborn &amp; Goodyear, 2005; Ilgen et al., 1979): If the feedback provider is perceived to have expertise in the task evaluation, the feedback will be more likely to be accepted.</li> <li>• Source power (Fedor et al., 2001; Ilgen et al., 1979): The more powerful the feedback provider, the higher the feedback acceptance is.</li> <li>• Leader/member delivery (Morrin, Robison, &amp; Stockton, 1985): Feedback from the team leader is regarded to have a better quality than that from other team members.</li> <li>• Personal relevance (Claiborn &amp; Goodyear, 2005): If the feedback provider is perceived to have personal relevance to the recipient, the feedback will be more acceptable.</li> </ul>
II. Feedback message-related antecedents
<ul style="list-style-type: none"> <li>• Feedback valence (Alder &amp; Ambrose, 2005b; Byrne et al., 2004; Claiborn &amp; Goodyear, 2005; Ilgen et al., 1979; Jacobs, Jacobs, Cavior, &amp; Burke, 1974; Lim et al., 2005): People are more ready to accept positive than negative feedback.</li> <li>• Feedback specificity (Ilgen et al., 1979; Liden &amp; Mitchiell, 1985): Specific feedback is more acceptable than unspecific feedback.</li> <li>• Feedback informativeness (Anseel &amp; Lievens, 2009): The more informative the feedback, the higher the feedback acceptance is.</li> <li>• Feedback constructiveness (Alder &amp; Ambrose, 2005a; London, 1995): The more constructive the feedback, the higher the feedback acceptance is.</li> <li>• Feedback quality (Stelman &amp; Rutkowski, 2004): The better the perceived feedback quality, the higher the feedback acceptance is.</li> </ul>
III. Feedback recipient-related antecedents
<ul style="list-style-type: none"> <li>• Self-esteem (Fedor et al., 2001; Ilgen et al., 1979; Kernis et al., 1993): People with a high level of self-esteem are less likely to accept negative feedback.</li> <li>• Emotional stability (Atwater &amp; Brett, 2005): People whose emotions are stable are more likely to accept negative feedback.</li> <li>• Motivation orientation (Boggiano &amp; Barrett, 1985): Extrinsically motivated children respond more negatively to negative task feedback than intrinsically motivated children.</li> <li>• Match between mood and the message's Affective Tone (Esses, 1989): When the feedback recipient's mood matches the feedback message's affective tone, the feedback is acceptable.</li> </ul>

## Appendix B. Scripts of MSN Messages Used in the Experiment

**Table B-2. Scripts of MSN Messages**

Task instructions sent by William
Hi! We are tasked to deliver a presentation about Hong Kong's private domestic market in 2008 to our senior management. I sent you some materials on this issue yesterday. So, could you create four PowerPoint slides on this topic based on the materials I gave you? The slides should let our management have a basic understanding of Hong Kong's private domestic market in 2008. I will give you 20 minutes to finish this task. When you finish, please send it to Sunny immediately by MSN, and he'll give you some feedback.
Acknowledgment of the receipt of PowerPoint slides sent by Sunny
I've received your sides. Please wait for several minutes, and then I will send you my feedback.
Specific feedback sent by Sunny
I don't think you did well in the PowerPoint slide creation task. Specifically, in terms of format, the color and font scheme are not very appropriate for a business and professional presentation. In terms of content, the logic you used to organize the presentation was a bit confusing, and the major points discussed in the materials were not covered well. [emoticons]
Unspecific feedback sent by Sunny
I don't think you did well in the PowerPoint slide creation task. [emoticons]

## Appendix C. Measurement Items

**Table C-1. Measurement Items**

Feedback acceptance (1=Strongly Disagree, 7=Strongly Agree) (adapted from McCarthy & Garavan, 2007; Steelman et al., 2004)
ACPTF1: I agreed with the feedback that I received from Sunny.
ACPTF2: The feedback from Sunny was an accurate reflection of my work performance.
ACPTF3: I would like to accept the feedback provided by Sunny.
ACPTF4: I would revise my slides based on Sunny's feedback.
Perceived good intention of the feedback provider (1=Strongly Disagree, 7=Strongly Agree), adapted from (Selnes & Gønhaug, 2000)
PGINT1: Sunny was willing to support me in the creation of the slides.
PGINT2: Sunny considered my feelings when delivering the negative feedback.
PGINT3: Sunny responded with understanding when there were problems with my slides.
PGINT4: Sunny considered how his feedback would affect me when giving me the feedback.
PGINT5: Sunny wanted to help me improve the quality of the slides.
Perceived feedback negativity, adapted from (Kurtzberg et al., 2006; Walther & D'Addario, 2001)
NEGFB1: How did Sunny feel about your performance? (1=Very Good, 7=Very Bad)
NEGFB2: What did you think about the feedback you received from Sunny? (1=Very Positive, 7=Very Negative)
NEGFB3: In general, I think Sunny's feedback is very negative. (1=Strongly Disagree, 7=Strongly Agree)
Manipulation check and control variable: Perceived feedback specificity (1=Strongly Disagree, 7=Strongly Agree), adapted from (Smith, 2006)
SPECF1: When Sunny gave me the feedback about my work, he provided me with specific information.
SPECF2: When Sunny gave me the feedback about my work, he commented on specific things about it.
SPECF3: When Sunny informed me about the slide creation task I had done, he offered detailed comments on it.
SPECF4: When Sunny gave me the feedback about my work, he provided me with general information that wasn't very helpful. (reverse coding)
Control variable: Self-esteem (1=Strongly Disagree, 7=Strongly Agree), adapted from (Smith, 2006)
SESTM1: I am able to do things as well as most other people.
SESTM2: I have a positive attitude about myself.
SESTM3: On the whole, I am satisfied with myself.
SESTM4: I feel that I am a person of worth, at least on an equal plane with others.

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