Exploring the Roles of Emoticons in Emotional Representativeness, Awareness and Management

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Research Problem

Computer Mediated Communication (CMC) vs.
Face-to-face Communication (F2F)

- Support CMC:
  - People are easier to express their emotions
  - It produces positive changes in emotional states

  (Derks et al., 2008; Huang, Yen & Zhang, 2008)

- Against CMC:
  - It is impersonal and develops a bad quality of communication
  - Unclear emotion expressions and non-verbal behaviors

  (Jenson, 2005; Rice & Love, 1987)

Research Problem

How do people express emotions in CMC?

Emotion labels→ e.g. I am angry.

Appraisals→ e.g. This is scary.

Expressions and tendencies to act→ I would like to hit you.

(Derks et al., 2008)

Emoticons→ e.g. punctuation characters :-) /the graphical symbols☺
◦ They are similar to our facial expression
◦ They meant to express some kinds of human feelings

(Huffaker & Calvert, 2005; Walther & D'Addario, 2001)

Research Problem

Current Studies on Emoticons

Effects of Emoticons
- ◦ Play the supplementary role to interpret the messages
- ◦ Encourage people to express both negative and positive
- ◦ Add emotional expressions to the text-based communication

(Derks et al., 2008; Wang et al., 2014)

Drawbacks of emoticons
- ◦ Emoticons may confuse the meaning of the message
- ◦ Receivers may misunderstand the emotion from the senders
- ◦ Informal method to express emotions

(O'Dowd & Ritter, 2006; Halvorsen, 2012)

Research Problem

When emoticons are influential and useful for expressing emotion in CMC, are they presenting the authentic and consistent emotions of the users?

Are emoticons possible to be used as emotional coping strategy?

Purpose and Objectives

▶ To further study the emotion expression in CMC

▶ To understand the relationship between emoticons and emotions

▶ To apply theoretical base to understand the use of emoticons

▶ To test whether emoticon can be a coping strategy

Literature Review

Message Pattern

► The message pattern can be basically divided to pure text, emoticons and the combination of text and emoticons

(Derks et al., 2007)

► Emoticons→ enhance written communication in the same way visual or body language supports verbal communication

(Derks et al., 2008)

► Salló (2011) → the meaning of emoticons can be deduced if the message without text.

   ► Self-report through text→ report our emotional status explicitly

(Tetteroo, 2008)

Literature Review

Differential Emotions

▶ EFT → emotions are differentiated between primary and secondary emotions

▶ Primary emotions → the fundamental and initial reactions to a situation

▶ Secondary emotions → the responses to prior thoughts or feelings

(Greenberg, 2004; Greenberg, 2008)

Representativeness

▶ The consistency → People use more negative emoticons in negative contexts and more positive emoticons in positive contexts

(Derks et al., 2007)

Literature Review

Emotional-focused Model

▶ help people to become aware, accept and make sense of their emotional experience

▶ 3 principle of emotional processing

▶ Increasing the emotion awareness

▶ Enhancing emotion regulation

▶ Transforming emotion

(Greenberg, 2004)

Emotion Awareness

▶ Greenberg (2004) → encourages people to explore and make sense to their experience.

▶ The goal is also to make acceptance to their experience after the awareness

(Greenberg, 2004)

Literature Review

Emotion Management

► Emotion regulation addresses the causes of developing maladaptive emotions

  ► cognitive factors (beliefs about threat and security)

  ► emotional factors (avoidance and management of emotional experience)

  ► contextual factors (patterns of relating to others and the environment)

(Mennin, 2005)

► Emotion management requires the skills of emotional self-control, resource management and coping to emotional negative emotions, such as awareness, acceptance and assuming

(Andrieș, 2011)

► Emotion management can be assumed the step before emotional regulation in EFT

Conceptual Framework
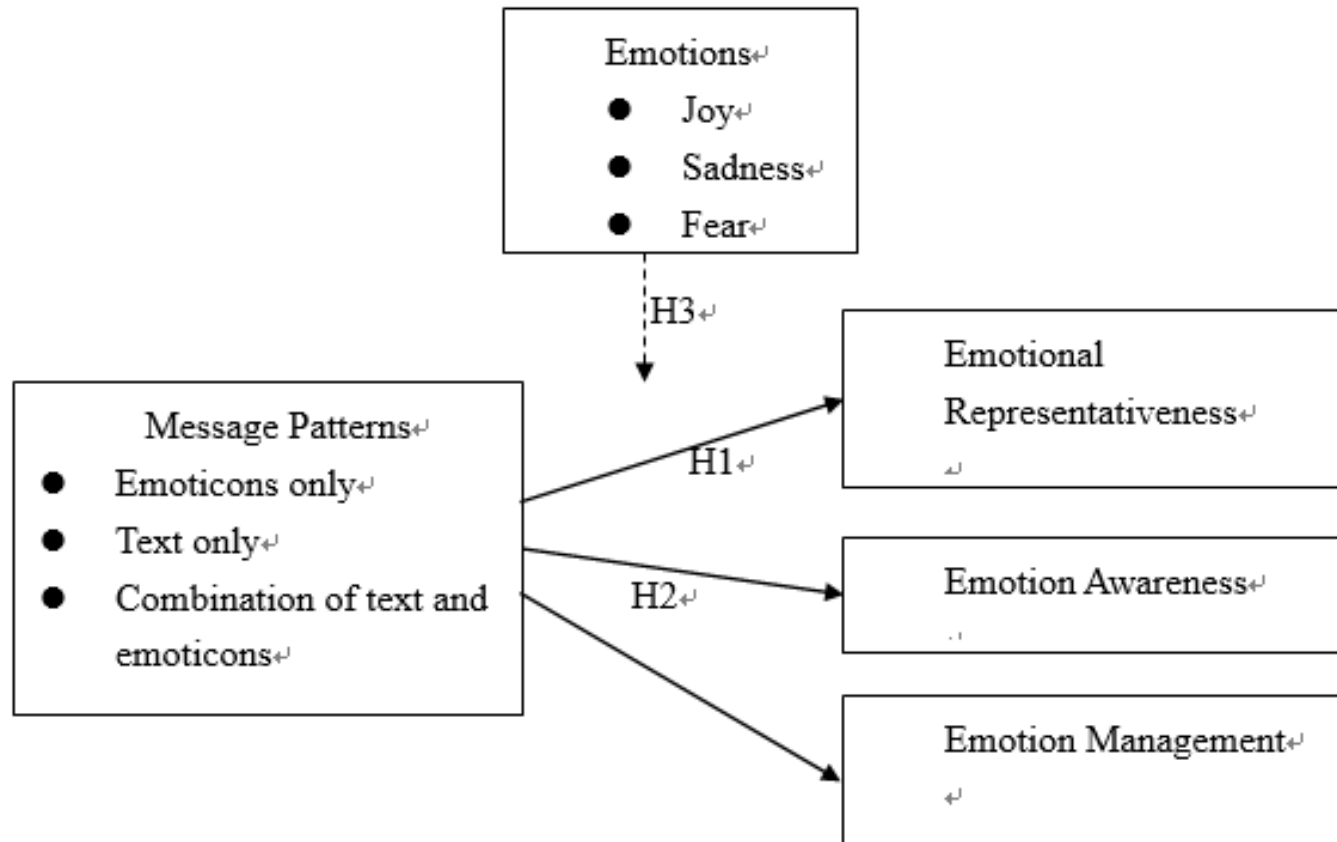
Hypotheses

- (1) Emotions have the greater representativeness when the message include text and emoticons.

- (2) The message including text and emoticons can facilitate the emotion awareness and emotion management.

- (3) Emoticons have stronger effect on emotional representativeness, emotion awareness and management in a positive emotion state.

Methodology

▶ A 3x3 factorial design experiment

▶ 142 (out of 154) participants were randomly assigned to 1 of 9 conditions

Group	Emotions	Message patterns
Experimental 1	Joy	Emoticons only
Experimental 2	Joy	Text only
Experimental 3	Joy	Emoticons plus text
Experimental 4	Sadness	Emoticons only
Experimental 5	Sadness	Text only
Experimental 6	Sadness	Emoticons plus text
Experimental 7	Fear	Emoticons only
Experimental 8	Fear	Text only
Experimental 9	Fear	Emoticons plus text

Methodology

Research Materials & Measures

▶ Video Clips → induce 3 primary emotions (about 1 min long)

▶ Joy → A family prepared a self-made ball pit at home

▶ Sadness → The changes of a little girl under war situation

▶ Fear → A scaring story in a bedroom

Methodology

Research Materials & Measures

- Emotion Representativeness
  - A self-developed item
  - 'The message can fully represent my emotions.'
  - 7-point Likert scale (1-strongly disagree to 7-strongly agree)
- Emotion Awareness
  - Emotional Self-Awareness Scale (ESAS)   (Reid et al., 2011)
  - 2 subscales will be adopted from the original scale: recognition and identification
  - 10 items; 6-point Likert scale (1-strongly disagree to 6-stronly agree)

Methodology

Research Materials & Measures

▶ Emotion Management

  ▶ A self-developed items based on the Cognitive Emotion Regulation Questionnaire   (Garnefski & Kraaij, 2006)

  ▶ 5 subscales: Acceptance, Rumination, Positive reappraisal, Refocus on planning

  ▶ 8 items; 6-point Likert Scale (1-strongly disagree to 6-stronly agree)

Methodology

▶ Manipulation check on participants' emotional state

　　▶ Pre-trials on the three videos

　　▶ Emotional Rating Scale (張珮甄, 2002)

　　▶ 16 items, 5-point Likert scale

　　▶ Select the participants who are at the neutral emotional state (score 2-3)

Methodology

▶ Emotion induction

  ▶ To check whether the video clips can induce the appropriate emotions

  ▶ Interpret the content of the message by the coding scheme

↵	Joy↵	Sad↵	Fear↵	↵	Joy↵	Sad↵	Fear↵
😍 ↵	4↵	/↵	/↵	😁 ↵	4↵	/↵	/↵
😘 ↵	3↵	/↵	/↵	😢 ↵	/↵	2↵	1↵
😚 ↵	4↵	/↵	/↵	😔 ↵	/↵	4↵	/↵
😗 ↵	2↵	/↵	/↵	😌 ↵	3↵	/↵	/↵
😙 ↵	4↵	/↵	/↵	😰 ↵	/↵	/↵	3↵

Methodology

▶ Emotion induction

	Emoticons	Emotion Words
Joy		開心(joy)、輕鬆(relax)
Sadness		傷心(sad)、悲哀(sorrow)
Fear		驚嚇(scary)、害怕(fear)

Methodology

Procedures

▶ (1) Complete an emotional rating scale

▶ (2) Participants who rate the middle range (scored 2 to 3) in the questionnaire → will be randomly assigned to 1 of the 9 groups

▶ (3) Receive the description of the study and sign the consent form

▶ (4) Sit in front of a computer with a headphone

    ▶ Distance → around 50cm from the monitor

    ▶ Resolution → about 1280x720

▶ (5) Present a 1 min video clip to induce different types of emotions

Methodology

Procedures

▶ (5) Send the message → 30 seconds to express their feelings

    ▶ A mobile phone with Whatsapp application

    ▶ Under strong wireless/ network connection

▶ (6) Complete a questionnaire including representativeness of emoticons, emotional awareness and emotional management

▶ (7) Debriefing

Results

Descriptive statistics

- Sample size: 150 selected and 136
- Male: 46 (33.8%); Female: 90 (66.2%)
- 14-16 participants in each group out of nine

Results

Manipulation check

- Pre-test (5-point Likert scale)
  - 148 participants (96.1%) rated the score between 2-3 on ERS
  - Represent most of them participate this study under the neutral emotional state
  - 6 participants (3.9%) who scored 1 and 5 are excluded in the study

- Emotion induction manipulation check
  - 142 participants' messages (92.2%) matched over 85% with the coding scheme were included in the final data analyses.

Descriptive Statistics

Descriptive Statistics and Analysis of Variance on different Patterns

DV	Emoji (N=44) M SD	Text (N=46) M SD	Emoji plus text (N=46) M SD	F	p-value
Emotion Representativeness	5.00	4.93	5.24	.728	.485
	1.24	1.39	1.18		
Emotion Awareness	4.10	4.15	4.09	.165	.848
	.45	.57	.48		
Emotion Management	4.13	4.33	4.14	1.992	.140
	.50	.58	.57		

Descriptive Statistics

Descriptive Statistics and Analysis of Variance on different Emotions

DV	Joy (N=47) M SD	Sad (N=45) M SD	Fear (N=44) M SD	F	p-value	Cronbach's Alpha
Emotion Representativeness	5.17	4.89	5.11	.622	.539	
	1.26	1.35	1.21			
Emotion Awareness	4.17	4.00	4.17	1.656	.195	
	.54	.54	.40			
Emotion Management	4.41[a]	4.15	4.03[a]	6.074	.003	.95
	.58	.44	.56			

[a] Statistical significant ($p < .05$) between Joy and Fear

Main effect and interaction effect

Emotions x Patterns factorial analysis on Emotional Representativeness

DV	DF	F	η^2	p
Emotions	2	.707	.011	.495
Patterns	2	.739	.012	.480
Emotions x Patterns	4	.663	.020	.619

- The main effect of emotions and patterns are not statistically significant on emotional representativeness

- No significant interaction effect between emotions and message patterns on emotional representativeness

Main effect and interaction effect

Emotions x Patterns factorial analysis on Emotion Awareness

DV	DF	F	η^2	p
Emotions	2	1.63	.025	.200
Patterns	2	.166	.003	.847
Emotions x Patterns	4	.287	.009	.886

- The main effect of emotions and patterns are not statistically significant on emotion awareness

- No significant interaction effect between emotions and message patterns on emotion management

Main effect and interaction effect

Emotions x Patterns factorial analysis on Emotion Management

DV	DF	F	η^2	p
Emotions	2	6.097	.088	.003
Patterns	2	2.04	.031	.134
Emotions x Patterns	4	1.169	.036	.327

- The main effect between emotions and emotion management is statistically significant. $p < .05$
  - Indicate that only emotion affect the emotion management on instant messages

- The main effect of message patterns are not significant on emotion management

- No significant interaction effect between emotions and message patterns on emotion management

Emotion Representativeness

- Results indicate that different message patterns do not affect the emotion representativeness

- The absence of nonverbal information which is important to represent speaker's meaning, tone and expression→ the message is ambiguous

- Walther and D'Addario (2001) stated that the message pattern did not generate different interpretations of emotions when the messages contained or without emoticons.

- People use emoticons not only for presenting emotions:
  →To reduce the ambiguity of the communication

(Kruger, Epley, Parker & Ng, 2005)

- People may not have accurate knowledge of emoticons' meaning

(O'Dowd & Ritter, 2006)

Emotion Awareness & Management

● Results indicate that different message patterns do not influence the emotion awareness and emotion management

● Limitations of emotion expression in Instant Message
  ● Emoticons can represent a feeling at one given instant during a discussion but are insufficient to convey moods

<div align="right">(Sanchez, Hernández, Penagos & Ostróvskaya, 2008)</div>

● Emotion expression in text
  ● It is difficult to extract emotions from written text →it is not a 'natural' form of emotion expression
  ● Text-based message is lack of subtleness→ difficult to put emotions in words

<div align="right">(Tetteroo, 2008)</div>

Emotion Awareness & Management

- Difficulties of reaching emotion awareness based on EFT
  - Emotion awareness is a long-term process
  - Emotion awareness involved:
    - → Labeling emotions
    - → Acceptance of emotional experience
    - → Emotional expression

(Greenberg, 2004)

- Therefore,
  - Emotions cannot be exactly presented through different Message patterns
  - Instant Messages cannot trigger the emotion awareness and management because emotion awareness takes time to reflect

Emotion Management

● Results shows positive emotions can be managed easier in Instant Message

- ●The expression of positive emotion are more accepted than negative emotions
- ●People display more emotions in positive contexts than in negative contexts in the presence of others

(Lee & Wagner, 2002)

● Positive emotion encourage people express more in the messages
→ facilitate the emotion management (e.g. emotional awareness, acceptance and assuming)

Strengths & Limitations

Strengths

- Understand the limited psychological effect of using Instant Messages

- Explore the influences of different message patterns

Limitations

- Individual differences
  - The ability of emotion awareness and management
  - The habits of expressing emotions in instant message

- Watching video clips may not induce the actual situation to evoke the emotion awareness and emotion management

- Limited sample size of the study

- Proportion of the gender

Further Research

- Study on other possible effect of people using different message patterns in Instant Messages

- Focus on the ways and effectiveness of expressing emotion through Instant Messages

- Emphasize on different forms of emotion expression in Instant Messages, such as videos, voice message etc.

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