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EMOTICONS USAGE AND MEANING

**Perception of Meaning and Usage Motivations of Emoticons
Among Americans and Chinese Users**

By

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Communication & Media Technologies

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Abstract

Do people of different cultures agree on the meaning and use of emoticons? This study addresses this question from an inter-cultural perspective and explores the use of emoticons in the American and Chinese Computer-mediated communication (CMC) communities. The research indicates that both the Americans and Chinese participants use emoticons for entertaining, informational and social interaction motivations but the Americans are more likely to use emoticons for information motivations than the Chinese and the Chinese participants are more likely to use emoticons for social interactions than the Americans participants. The results correspond to the cultural differences between the two countries in low-/ high-context and individualism/collectivism dimensions. Moreover, the results also show that the Americans and the Chinese disagree on the meaning of most emoticons used in the study.

Introduction

Computer-mediated communication is “a type of interpersonal communication which is facilitated through the use of computer network or conferencing systems” (Jettmar & Rapp, 1996, p. 2). With rapid technological advancements around the globe, computer-mediated communication (CMC) has become a significant world medium. Web sites of various languages and country origins flourish on the Internet. Users have many opportunities to be exposed to foreign cultures on the Internet and can interact with people of different cultural backgrounds much more easily than ever before. The unique characteristics of CMC attract users in a very short time and have significant effects on the users’ communication behaviors (Danet, 2001). The Internet greatly expands users’ communication capability but it also has its own limitations. Communication channels such as visual and audio are limited in CMC and nonverbal cues that are rich in face-to-face communication cannot be transferred in most CMC. Many people believed that because of the limitations of channels, CMC was unfit for social, relational and emotional communication. However, CMC users have created ways to make up the limitations in nonverbal cues or information and greatly enriched the capacity of CMC for social interactions. To compensate for the limited cues available in CMC, people have developed new cues such as online paralinguages. Electronic paralinguages such as acronyms and emoticons have been widely used in email, bulletin boards and instant relay chats (Danet, 2001).

Emoticons are basically graphic accents that look like faces with emotions. They are widely used in BBS, email, chat programs, etc. Programs such as Microsoft Instant

Messenger and Yahoo! Messenger offer a large selection of emoticons for their users. As an important part of the paralinguistic cues in CMC and an emergent popular practice among Internet communities of various languages, emoticons have attracted scholarly attention (Asterooff, 1987; Rezabek & Cochenour, 1998; Walther, 2001; Katsuno & Yano, 2002). But research on emoticons is still limited. A basic question to be answered is: do people across cultures share the same meaning of emoticons? Scholars presumed that the meanings of emoticons were common knowledge among emoticon users and the users had consensus agreement on the interpretation of emoticons (Walther & Tidwell, 1995). But this idea needs to be further investigated in cultural contexts. Most research literature in English on CMC focused on practices in English and developments in online communication in other languages are mostly neglected (Herring & Danet, 2003). Emoticons have been widely used in online communications around the world and the language and cultural backgrounds of emoticons users are as diverse as those of the Internet users have been but there are only a few reports on the emoticon uses by people who primarily speak languages other than English (Danet, 2001, Katsuno & Yano, 2002). Reports on emoticon use in Japan (Katsuno & Yano, 2002; Pollack, 1996) indicated that diverse cultural backgrounds of emoticon users affected their use of emoticons. But these researchers always confined their studies of emoticons use among people of a single cultural background and seldom looked into emoticons use across cultures. How people of one cultural background compare with those of other cultures in emoticon use is unknown and emoticon use among people of different cultures has not been studied from an intercultural perspective. This research will compare emoticon use by American and Chinese Internet users and look into this question from an intercultural perspective.

Literature Review

With widespread advancements in computer and Internet technologies, CMC has become important in many people's everyday life. As Madden and Rainie (2003) revealed in their report on American Internet users and their online activities, the Internet has become an indispensable part of many American people's life. In the fall of 2003, 63% of the American adult population (age 18 and over) had Internet connections. Among those between the ages of 12 to 17, more than three quarters were Internet users. They used the Internet for working, studying, shopping, entertaining and even socializing. They check email each day, read news from news web sites, shop at online stores, chat with friends at remote distance with Instant Messaging programs, participate in chat room conversations, play online games and download digital music. These Internet users depended upon the Internet to seek health, religious and financial information, to do research for school or work, to manage their bank accounts or stocks and to keep in touch with families and friends (Madden & Rainie, 2003). CMC is vital to business operations too. Many organizations have implemented computer networks in their work places and use email, computer bulletin board systems, computer conferencing and other related systems for inter-organizational communication and to communicate with clients and partners (Walther & Burgoon, 1992).

The Internet has also become an important world medium. "The Internet is at once a world-wide broadcasting capability, a mechanism for information dissemination, and a medium for collaboration and interaction between individuals and their computers without regard for geographic location" (Leiner & al., 2003). The traditional physical

boundaries between countries that restrict most mass communication media such as newspaper, radio and television from reaching foreign audience have little influence on the users of the Internet. Internet users can access websites that are physically located inside other countries at a speed of seconds and at minimum cost (Rice & Love, 1987).

The Internet is used by people around the world. According to statistics, by the end of 2003 there were 940 million Internet users (Global Reach, 2004). 68.8% of the North Americans, 49.1% of the Oceanians and 30.4% of the Europeans have access to the Internet (Internet World Statistics, 2004). The online population grows rapidly throughout the world. Internet users in Latin America Africa and Asia grew about two hundred percent from 2000 to 2004. English is the most widely used language on the Internet. 35.8% of the web surfers are English speakers, 37.9% use European languages excluding the English and 33% use Asian languages (Global Reach, 2004). Although the languages used in web sites can be different and users who do not know the languages cannot understand the texts, they can understand the meaning of emoticons. Many Internet users of various languages and cultural backgrounds use emoticons in their online interactions such as in email, chat rooms, Multi-User Dungeons (MUDs), Internet Relay Chatting (IRC), instant messaging programs and bulletin boards systems (BBS) (Katsuno & Yano, 2002, Utz, 2000). Emoticons, as an important component of paralinguistic cues and a popular way of emotional expression on the Internet, needs to be studied from an intercultural perspective.

Theories in socioemotional content in computer-mediated communication

At the early stage of Internet development, the capacity of computer-mediated networks for social communication was under debate. In work settings, message exchanges in CMC were thought to be serious and work-oriented. CMC was perceived as cold, unemotional and lacking in social presence because of the absence of rich nonverbal cues in face-to-face interactions (Danet, 2001).

To understand the role of social-emotional content in CMC environments, it is essential to know some important theories such as Social Presence Theory (Short, Williams & Christie, 1976), Media Richness Theory (Draft, Lengel & Trevino, 1987), Cues-Filtered-Out Theory and Social Information Processing Theory that have been widely used in the study of emotional expression in CMC.

Media Richness theory proposes that communication media have different capacities to mediate messages for solving ambiguity, modifying information and facilitating understanding (Draft, Lengel & Trevino, 1987). Participants want to overcome the uncertainty in the communication process and some media work better for certain tasks than other media depending on the communication richness required by the tasks. Several criteria can be applied to evaluate the richness of the media and the capacity of the media to facilitate the information processing: the availability of instant interactions, the capacity of the medium to transfer multiple cues such as body movements and voices, the application of natural language and the engagement of personal focus of the medium. Face-to-face communication is the richest and the most natural communication medium and CMC, with its text-only content capacity and lack of nonverbal cues, is deemed as a lean medium. CMC was regarded as task-oriented and unfit for communicating emotions.

Empirical researches also proved that messages in CMC were more task-oriented in content than those appearing in face-to-face communication (Hiltz, Johnson, & Turoff, 1986).

Social presence is “the degree of salience of another person in an interaction and the consequent salience of an interpersonal relationship” (Walther & Burgoon, 1992, p. 52). Social presence theory assumes that the amount of attention paid by the user to the other social participants’ presence during the communication process corresponds to the communication channels that are available within a communication medium. The fewer the channels, the less the social presence would be (Walther & Burgoon, 1992). Since CMC lacked audio and video channels as existed in television and face-to-face communication, social presence in the CMC communication was very much limited and the new medium was considered as incapable of transmitting the natural richness of interpersonal interactions in face-to-face communication.

The Cues-Filtered-Out theory proposes that because the channels in CMC are limited and the types of information that can be transmitted are confined, the natural richness of nonverbal cues that exist in face-to-face communication is filtered out in CMC. Nonverbal information plays an important part in interpersonal communication and when the nonverbal cues are screened out in CMC, it is inevitable that CMC would be regarded as impersonal, unemotional, task-oriented and unfit for socially oriented communication. As concluded by Rice and Love (1987), early researchers found that

as bandwidth narrows, media allow less ‘social presence’, communication is likely to be described as less friendly, emotional or personal and more serious, businesslike, or task oriented. If the social presence concept is accepted, CMC,

because of its lack of audio or video cues, will be perceived as impersonal and lacking sociability and normative reinforcement, so there will be less socioemotional (SE) content exchange. (p. 88)

However, some scholars found that CMC was not completely unemotional and impersonal. Messages highly charged with socioemotion (SE) content can be developed in CMC such as online flaming. Flaming is “hostile verbal behavior in CMC” (Thompson, 1996, p. 226) and as undesirable socioemotional messages, flaming happens quite often in online communication (Thompson, 1996; Fehلمان, 2002). Rice and Love (1987) believed that “lack of social control that nonverbal cues provide” (p. 89) was the reason why flaming happened easily among CMC users and the “lack of nonverbal cues about physical appearance, authority, status, and turn-taking allows users to participate more equally and with more extreme affect on CMC systems than in many face-to-face interactions” (p. 89). Rice and Love (1987) reported that to compensate for the limitations in communication channels, CMC users created ways to express the filtered-out nonverbal information in written forms such as online paralinguistic features. These paralinguistic cues include “the use of capital and lowercase letters, ellipsis, exclamation marks, intentional typing errors, and emoticons” (Jacobson, 1999, para. 18). The uses of paralinguistic cues enrich people’s CMC experience and have been proved to enhance social, emotional and relational communication via computer-mediated networks (Asterooff, 1987; Utz, 2000).

Social Information Processing Theory (SIP) proposes (Walther & Tidwell, 1995) that although the exchange of information is slow in CMC environments, social and relational information exists in task-oriented interactions in the language-only environment of CMC.

Participants' motivations to affiliate are similar among communicators via CMC and in Face-to-face communication (Walther, 1992). Driven by affiliation motivation, participants develop relational communication and make social impressions, especially when they anticipate interacting over a long period of time in the future. It will take more time for participants in CMC to build up interpersonal relationships than in face-to-face communication where the multiple parallel cue systems exist. Walther (1994) found out in his research among college students that the differences in social presence caused by communication channels would diminish over time and CMC users were able to build up relationships during their interactions. CMC users could transmit relational and emotional communications as well as in many other media and the lack of social presence due to limitation of channels could be compensated for in many other ways. Although nonverbal cues such as those in the face-to-face communication, video media or telephone mostly do not exist in the CMC environment, CMC users find alternative ways to express emotions and build up relationships with other users through the CMC.

Walther and Tidwell (1995) found that users inferred relational and social implication from chronemic cues in emails and these nonverbal cues could affect the perception of social relational communication expressed in email exchanges. Sending a business email during off-hours implied an attempt of control and domination over the receiver's temporal activities because it intruded and commanded leisure life of the receiver. An immediate reply to a business email could be read as a sign of friendly work relationship and a delayed reply to a social message indicated the relationship was casual and affectionate. Asteroff (1987) examined email exchanges between college students and their professor and found that with only ASCII characters, the participants were able to

use paralinguistic features such as intentionally misspelling, capitalization, repeating, and emoticons to scream and to express joy, frustration, and other emotions as would appear in face-to-face communication. Similarly, Utz (2000) reported that MUD players used emoticons to express feelings and build up relationships. She examined the uses of emoticons and the friendship building among MUD users from the perspective of Social Information Processing theory. The results supported the SIP theory that emoticon use increases with time and the more emoticons one uses, the more friendships one develops.

Use of emoticons is a convenient way to express feelings and emotions online and can facilitate social information processing in computer-mediated interactions. The extensive use and rapid development of emoticons in various instant messaging programs also confirms the importance and success of emoticons in social and relational communication in CMC environments. As an extension and upgrade from the ASCII emoticons, graphic emoticons including still images and animated cartoons are provided by various instant messaging programs. For example, there are 69 emoticons in the Microsoft Instant Messenger 6.1 program. They describe emotions, actions and words and phrases that appear in conversations from sarcastic (☹), thinking (🤔), pizza (🍕) to island with a palm tree (🌴). In the new updated versions, many of the icons are animated to resemble the action processes such as crying and winking. The program also allows users to create emoticons by themselves. Emoticons are widely used in web sites of languages other than English. *The New York Times* reported usage of emoticons in Japan (Pollack, 1996). The most popular Chinese instant chatting program, Tencent QQ, boasts more than 6 million users logging onto the program at the same time in March 2004 (See <http://www.tencent.com/index.shtml>). Tencent QQ offers 95 still and animated emoticons


with some that express similar feelings, actions and words that appear in the MSN messenger such as smiling (😊), thumb up/down (👍/👎) and telephone (☎). Some emoticons describe experiences that are unique to Chinese Internet users such as smiley with a mask (😷) appeared in 2003, mimicking the faces when people had to wear masks in public during SARS outbreak in China in the spring. Comparing some of the emoticons offered by MSN Messenger and Tencent QQ, it is obvious that emoticons used in different languages and cultural environments share similarities and also represent the unique experiences of the users from the cultures. Comparing emoticon usage in different cultural contexts will offer more insights to the knowledge of CMC and its relationship to intercultural communication in the new information age.

The definition Issue

Generally speaking, emoticons are “icons for the expression of emotion” (Danet, Ruedenberg-Wright & Rosenbaum-Tamari, 1997, para. 5). The first use of the electronic smiley :-), the original emoticon, was traced back to a post written on September 19th, 1982, by Scott E. Fahlman (2002), who was then a graduate student at the Computer Science Department of the Carnegie Mellon University. Fahlman found that a reader would easily miss a satire or joke in another person’s post in the text-base online bulletin boards without the nonverbal elements that were usually present in conversations. Misunderstandings due to lack of nonverbal cues caused flame wars from time to time and hindered the online communication process. Concerned with the flame wars, Fahlman proposed using :-) as joke markers for posts that should not be taken seriously. He wrote on a bulletin board discussion at the University, “[r]ead it sideways. Actually, it

is probably more economical to mark things that are NOT jokes, given current trends. For this, use :-(“ (Fahlman, 2002, para. 1). Although the frown was intended as a “non joke marker”, it rapidly developed into a marker of angry and sadness. The electronic smiley and frown were soon spread all over CMC communities around the globe and inspired original CMC users to create more and more emoticons to express almost every emotion and even personalities. An emoticon dictionary may have thousands of different emoticons, describing facial expressions from wining (;-)) to interesting TV figures such as Marge Simpson (*****:-)) (Marshall, 2003).

Emoticons are mostly used to express emotions and indicate the user’s emotional state. There are several types of emoticons. The original emoticons are smileys (: -)) and frowns (: -)). Later on, creative users derived many other emoticons from the original smileys and created many well circulated versions of emoticon dictionaries online and offline (Marshall, 2003; Jansen, 2004; Hiroe, 2002; Sanderson, 1993). Emoticons are made of punctuations marks and other ASCII characters and can be put together on screen by typing the component ASCII keys. Emoticons made of ASCII characters will be referred to as ASCII emoticons in this research.

A more recent development is software program adds graphic features to ASCII style emoticons. For instance, Microsoft Instant Messenger (MSN Messenger) is able to recognize many widely used ASCII emoticons and the program converts them into colorful graphic images or faces when the ASCII emoticons are typed. For example, the ASCII smiley emoticon :-)) is converted to  automatically when the ASCII smiley is inserted in conversations. MSN Messenger provides dozens of graphic emoticons. Users can insert emoticons in conversation by clicking symbols in the emoticon menu. In the

recent versions of the MSN Messenger, some emoticons are animated and illustrate a brief process of emotional behaviors such as crying or rolling eyes. To have a comprehensive and up-to-date knowledge about emoticon use, this study will include selected symbols from all the three types of ASCII emoticons, graphic emoticons and animated graphic emoticons in the test.

Most original emoticons illustrate emotional faces but later developments have greatly expanded the realm. There are many emoticons designed to represent experiences and objects that often appear in people's daily life offline such as "thumbs up" ((Y) or 🍷 in MSN Messenger emoticons) or "rose" (🌹 in MSN Messenger emoticons and @}->-- in Canonical Smiley List).

Emoticons are widely used among CMC communities in languages other than English. Emoticons are very popular in Japan, especially among young people. Besides heavy use among Internet users, mobile phone users also use a large amount of emoticons in their text messages. In a survey of Japanese college students in 2001, 32.2 percent of Internet users used emoticons in their messages sent via computer and 53.5 percent used emoticons in their mobile phone email. Japanese users created emoticons to represent their experience and their unique culture and language heritage such as "m(._.)m", representing "bow thanks politely" (Katsuno & Yano, 2002; Hiroe, 2002). Different from most emoticons made of ASCII characters which have to be read at perpendicular angles to the words with the reader's head tilted to the left such as :-), the Japanese emoticons such as (^_^) are always read in line with words and there is no need to change the direction of the reader's head.

The various types of symbols, functions and origins and the ever expanding tendency of new emoticons make it difficult for scholars to make a comprehensive and accurate definition for these symbols. Most CMC scholars define emoticons in terms of their form. However, many of them differ in some degree on what should be categorized as emoticons. In Wolf's opinion (Wolf, 2000), emoticons "consist of various punctuation marks and are viewed by turning the page sideways or tilting one's head to the left" (p. 828). Wolf's definition excludes some popular emoticons made of English letters such as open mouth smile (:D) that is made of a colon and a capitalized letter and appeared in the newsgroups she examined. Rezabek and Cochenour (1998) defined emoticons as "visual cues formed from ordinary typographical symbols that when read sideways represent feelings or emotions" (Rezabek & Cochenour, 1998, p.201). They gave the example of the smiley face:

...the combination of symbols :-) represents a typical smiley face and conveys the sentiments that the person sending the message and using that particular emoticons is pleased, happy, agreeable or in a similar state of mind. (p. 201)

Some symbols in the MSN messenger emoticons that are used to represent roses (🌹) and animals (🐾) are not categorized as emoticons according to their definition. Katsuno and Yano's definition of emoticons had the same problem because the two researchers defined emoticons as "manipulations of keyboards symbols to create faces" (p. 205) in their research on the use of "kaomoji," the Japanese emoticons.

As emoticons became a popular style of communication, their definition expanded. For instance, Sanderson used the term "smiley" in his book and stated that "a smiley is a sequent of ordinary characters you can find on your computer keyboard" (Sanderson,

1993, p. 1). But this broad definition includes too many types of online symbols to be an accurate definition of emoticons.

In contrast, the older definitions above fail to include the newer graphic emoticons that dominate various instant chatting programs' emoticon collections. When most definitions were made, cartoon emoticons and animated emoticons were not widely used and reports on foreign emoticons were rarely seen in English.

A more recent report carried out by Randall (2002) on the online paralanguage defined emoticons by their function, “[w]hile they are not abbreviations for any words in particular, they act as abbreviations for expressions of mood, tone of voice, or instructions to the reader” (p. 27). The report used smiley, the original emoticon, to illustrate the appearance, usage and function of emoticons. According to Randall, the smiley was designed to convey

...a sense that an expression was not to be taken seriously. Typed as :-), this notation looks like a smiling face if you tilt your head 90% to the left, and it has become, in effect, a punctuation mark for the online age. Today it is typed as :-), :) or ☺, and most recent versions of instant messaging programs offer cartoon versions of emoticons. (p. 27)

Scholars also use different terms to refer to these visual symbols. Walther (2001) regarded emoticons as an important way in which email users could invest social meaning in their otherwise impersonal messages. Emoticons were referred to as “graphical expressions that many email users embed in their messages” (Walther, 2001, p. 325) and they were also “smiley faces” and “relational icons”, “...created with typographic symbols that appear sideways as resembling facial expressions” (p. 325).

Witmer and Katzman (1997) used “graphic accents” (GAs) to refer “generically to emotional, artistic, and directional devices” (p. 3) in their research on gender differences in emoticon usage.

Asteroff (1987) adopted “smiley face” in her thesis on online paralanguages as one of the “spatial arrays.” A spatial array is “the systematic spatial arrangements of characters to create a graphic or an identifiable image” (p. 125). Asteroff believed that some type of spatial arrays could provide more information than words and were more effective in communication. Smiley faces were defined as “various combinations of symbols, letters, and numbers create several different kinds of faces which when viewed sideways create an image” (p. 126). Asteroff examined the email exchanges between a university professor and her students. She found that the teacher and the students used emoticons effectively to express their various feelings and the emotional messages were well communicated via these simple icons. She concluded that like other types of spatial arrays used in email she observed, smiley faces could also “directly express a variety of emotions including humor, irony, sadness, unhappiness and anger” (p. 126). These face symbols were usually used to “...support or modify the written language when they are placed at the end of a sentence or message, or they can be the entire communication alone” (p. 126).

In this study, the term “emoticons” refers to nonverbal cues made both of ASCII characters, graphic symbols and animated graphic symbols that are used in popular instant messaging programs, emails, Bulletin Board Systems, discussion groups and other online programs to represent emotions, actions, objects, words and phrases. Selected ASCII and graphic emoticons will be tested in this research.

The meaning of emoticons

In the academic research on emoticons, the meanings associated with emoticons are seldom the subject of study. It is presumed that people who use emoticons understand what they mean. This argument has seldom been put to test. But issue of meaning of emoticons may not be as simple as it might seem to for many people.

As Lane (2003) pointed out, paralinguistic cues used in CMC such as emoticons should be used “with intent, typically interpreted as intentional, used with regularity among members of a speech community, and have consensually recognizable interpretations” (p. 6). Walther and Tidwell (1995) noted that certain paralinguistic features such as emoticons had “become commonly-shared codes to accomplish the metacommunicative business in CMC that nonverbal behaviors typically perform in FtF interaction” (p. 357). It’s underlying knowledge that the meaning of emoticons comes from their resemblance to facial expressions in face-to-face communication. But as facial expressions carry multiple meanings for different people across cultures and the meanings of facial expressions are not always correctly interpreted, as a result, the meanings of emoticons can also be complicated (Ekman & Friesen, 1975).

In his research on the impact of emoticons on message interpretation among American college students, Walther (2001) examined whether students agreed on the connotations of the three basic emoticons under test in the study: the smiley (:-) or :)), the frown (:-(or :(and the wink (;-) or ;)). Participants were asked to select one of three emoticons to associate with the following emotional labels: sad, happy, seductive, anxious, joking, angry, secretive, honest, sarcastic, surprise, disguise and afraid. There

was consensus on the basic meaning for the smiley and the frown. More than 98 percent of the participants agreed that the smiley was associated with happiness and the frown was associated with sadness. Walther claimed consensus on the meanings of most emoticons, but data on the meanings of the wink and the other meanings of the smiley and the frown showed that the consensus was not completely convincing. Participants' opinions were split on which emoticon had the connotation of being anxious, joking and surprised. 33.1 percent of the participants believed that the smiley had the connotation of "being anxious," 38.4 percent selected the frown and the rest opted for the wink. More than half believed the wink was the joking mark and the rest chose the smiley.

Since most emoticons are used as nonverbal cues in juxtaposition with verbal expressions in interactions, the context of the interchanges can be important to the interpretation of emoticons' meanings. As Katsuno and Yano (2002) pointed out in their research that *kaomoji* (emoticons)

express in part from their juxtaposition within a particular social context of interchange. In many ways, one could say that *kaomoji* "speak" much like a mask does, in particular a mask with very little written on its face, and therefore one into which much may be read. In addition, although dictionaries identify *kaomoji* with specific meanings, ..., we argue that users themselves do not necessarily take each *kaomoji* at face value for its stereotypical meaning. In stead, *kaomoji* remain open to interpretation, adding to the texts they embellish, which drawing upon those texts for their own meaning. The meanings of *kaomoji* ... are highly contextual and interpretative. (p. 218)

In an earlier research in 1998, Rezabek and Cochenour also suggested that “emoticon interpretation is highly contextual” (p. 214). Rezabek and Cochenour argued that a symbol without shared meaning among its users was unlikely to be highly used. Although there were a huge amount of creative emoticons available, only those highly frequently used emoticons were likely to be best understood. Users could only choose a small variety of emoticons. Many of the creative emoticons had multiple meanings and were difficult to interpret. Users’ preference and creativity affected “the development of new emoticons, the use of emoticons, and the context within which emoticons are interpreted.... [U]sers both understand and use a limited number of emoticons and that emoticon interpretation is highly contextual” (Rezabek & Cochenour, 1998, p. 214).

The assumption that the meanings of emoticons are shared knowledge across cultures among emoticon users has not been tested in empirical studies. Emoticon meanings are deeply rooted in cultures and cultures create the code that makes emoticons intelligible to users (Danet, 2001; Katsuno & Yano, 2002). As caricatures of emotion, emoticons may be highly culturalised in use and interpretation as it is in the use and interpretation of emotions. This study will test to see if emoticons are understood differently in American and Chinese cultures.

Dimensions of culture

This study attempts to explore the impact of culture on the meaning of emoticons and people’s motivations to use emoticons. This chapter will explain some dimensions of culture and characteristics of the American, Chinese and Japanese cultures that are related to the question under study.

Edward T. Hall was a pioneer in intercultural communication. After years of working closely with people from different cultures and doing research work in intercultural communication, Hall proposed the theory of high context culture and low context culture, which has been proved accurate and resourceful in practice and in research. According to Hall (1976),

a high-context (HC) communication or message is one which most of the information is either in the physical context or internalized in the person, while very little is in the coded, explicit, transmitted part of the message. A low-context (LC) communication is just the opposite; i.e., the mass of the information is vested in the explicit code. (p. 79)

American culture is considered a typical low-context culture and Japanese and Chinese cultures are typical high-context cultures (Hall, 1976). In low-context cultures, meaning is carried out in words; in high-context culture, meaning is not solely transferred in words. Instead, the relationship and situation are also very important in making up and understanding the meaning. Subtle nonverbal cues are important in transferring meaning. Intercultural research and real life interactions show that people of high-context and low-context cultures differ greatly in communication style, nonverbal communication and many other aspects of behaviors (Hall, 1976; Ting-Toomey, 1988). Scholars identified other dimensions of culture such as Individualism-Collectivism (I-C) and Power Distance (Triandis, 1972; Hofstede, 1980). Individualistic cultures emphasize the value of independent individual and value individual needs and benefits over group needs and benefits while members of collectivistic cultures have strong in-group identity and value collective needs and benefits over individual needs and benefits. Individualist cultures

encourage individuality and uniqueness while collectivistic cultures encourage in-group harmony and cooperation. American culture ranks high towards the individual end of the I-C scale and Japanese and Chinese culture are representative of the collectivism culture. Researchers find that culture differences in low-/high-context and I-C dimensions indicate differences in emotional expressions and nonverbal behaviors. For example, it is reported that people of individualist cultures display more varieties of emotions than people from collectivistic cultures because collective cultures are less tolerant of individual variations and discourages such variations (Matsumoto, 1991). These cultural differences should be reflected in how people use emoticons and how the meanings of emoticons are interpreted.

Emoticon uses and culture

The use and development of emoticons were seen as “confluence of social interaction, technology and culture” (Katsuno & Yano, 2002, p. 206). Since academic research was not found on the use of emoticons in CMC in China, I will discuss the use of Japanese emoticons, called *kaomoji* in the stead. Chinese emoticons and kaomoji share many symbols such as (^_^) and (*_*). In the cultural aspect, both Japanese and Chinese cultures are high-context cultures and share a lot of connections and similarities (Hall, 1976).

A scholar with Japanese background, Katsuno and an American scholar Yano collaborated on a research on the emoticon use in Japan in 2002. They explored the technological, social and cultural origin of kaomoji. The two scholars conducted a survey among Japanese Internet users on emoticon uses in various domains of Internet

communication. Some kaomoji users were interviewed for detailed knowledge on their motivations to use kaomoji and on the ways how they used kaomoji. Their research provided useful information on emoticon use in Japan and insight into the influence of culture on the use of emoticons.

Before Internet technology was widely available for the general public in 1990s, the Japanese Internet users were divided into academic users linked through the noncommercial computer network (JUNET, Japanese Unix Network) and a small number of general public users connected through commercial networks. Because of the long standing transnational relation between American and Japanese academics, The JUNET identified with a cyber culture of the Americans more than that of the general public network users. As a result, the American emoticons were mostly used in JUNET interactions. Although the invention and/or the first use of *kaomoji* was untraceable, it is believed that the basic and the most popular kaomoji symbol (^_^) appeared in 1986 among the general public users' networks. Kaomoji were first used as cyber signature and then they started to be used in the body of messages. When the Internet was made easily accessible to the general public, the Japanese cyber culture created by the early commercial network users overwhelmed the JUNET's American style cyber culture and kaomoji soon became very popular. Both the number and variety of kaomoji increased rapidly.

There are differences between the American emoticons and the Japanese kaomoji on the surface level. As mentioned before, one is the ways in which the American and the Japanese emoticons are read. The American emoticons are written sideways and the Japanese emoticons are written right side up. When Pollack, a *New York Times'*

correspondent in Japan reported on the use of Japanese emoticons in 1996, he relegated this difference between kaomoji and the American emoticons to the discomfort of the Japanese users to tilt their heads when reading and thus an inability to recognize the American symbols. The American and the Japanese emoticons also differ in expressive focus. The American emoticons emphasize the mouth and kaomoji emphasize the eyes. Pollack thought that the Japanese basic smiley (--) bore more resemblance to a face than its American counterpart but because the mouth did not curl up (no keyboard character can do that) as in the American emoticon, the symbol could hardly be understood as a smile without knowing the specific context.

The differences in Kaomoji from the American emoticons originate in part from the difference between the Japanese and the American writing systems and computer input systems (Katsuno & Yano, 2002; Pollack, 1996). The early planners of the Internet were mostly American and the invention of the Internet was to facilitate communication in English, possible problems associated with online communication in other languages were not anticipated. The protocol to transmit text over the Internet is based on the character set of the American Standard Code for Information Interchange (ASCII). The ASCII set is based on Roman alphabets and the sounds of English. Each of the keyboard letters and punctuation marks is transmitted as one byte made of a string of eight zeros and ones. The Japanese written system is based on *kanji* (Chinese characters) which are pictographic ideographs. To produce these intricate pictograms, computer users have to use Japanese word processing programs and a keyboard specially designed to handle the Japanese language. Users enter words in phonetic alphabets and the computer automatically converts the text into *kanji*. The Japanese characters are made of two bytes.

For the punctuation marks, people can choose between one byte or double bytes characters. The double bytes characters appear to be double spaced and look wider. Emoticons made of double bytes characters convey a stronger feeling than their single byte counterparts (Pollack, 1996; Katsuno & Yano, 2002). The Chinese computer users have almost identical problems of converting the Roman alphabets into Chinese pictograms. But unlike the complex Japanese phonetic systems, the Chinese phonetic system was Romanized decades ago. Computer users can enter the Roman alphabets and computers will automatically convert the phonetics into Chinese characters with word processing programs. Similar to the Japanese kanji, the Chinese characters are also made of two bytes to allow for enough combinations to represent all the characters. The Chinese punctuation marks also take two bytes. Emoticons made of two-byte characters will look larger than those made of one byte characters.

Japanese computers allow users to customize their keyboards. Users can program their computers to call up emoticons automatically when the correspondent keystroke characters designated in their programs are typed in. For example, a user can program his or her computer to call up the emoticon (^_^) when the word “smile” is typed in. As the production of kaomoji is made easy and Internet use becomes widespread, the uses of kaomoji are popular and extend from the Internet to other communication media such as pagers and mobile phones. Pager and mobile phone users utilize emoticons heavily in text messaging. The popularity of kaomoji among pager and mobile phone users in turn accelerate the development of these symbols and imbue into these symbols the characteristics of their users and the traces of the media technologies via which they are used.

Different from Japanese emoticons which are mostly the inventions of the Japanese users and written right side up, the Chinese emoticons are made of some American emoticons that are read sideways and some Japanese emoticons that are read in line with texts. It may be impossible to know when and where the first American-style and Japanese style emoticons appeared in Chinese network communication. It is also unclear whether these emoticons of two different styles were invented by Chinese computer users or were imported from their original countries. It is possible that the academic Internet users under the influence of American cyber culture are more likely to use American emoticons than the general public Internet users and the general public users, especially teenage girls who covet Japanese culture, are more likely to use Japanese style emoticons than the academic Internet users. Emoticons of both styles have their problems. Since Chinese computers generally do not allow for customizing keyboards to produce emoticons like Japanese computers, it is troublesome for the Chinese PC users to produce Japanese style emoticons. When the American style emoticons are typed in with double-byte Chinese characters, the icons not only look ugly, they also lose the comic gestalt effect and potential meaning of the original emoticons made of single space characters. For example, the original smiley face made of one-byte ASCII characters :-) will be changed into : ——) when it is typed in with Chinese word processing programs. The two-byte smiley emoticon is hardly recognizable as a smiling face. To keep its original one-byte form, the word processing system has to be switched from Chinese to English. It is quite troublesome to insert a one-byte American emoticon into the two-byte Chinese texts since the computer's word processing system has to be shifted back and forth. It is unclear at this time whether one style will prevail upon the other one or both styles will

co-exist alongside. But with the graphic emoticons as a powerful option, it is probable that users of both the American style and the Japanese style emoticons will gradually converge into one style of graphic emoticons.

It was reported that Japanese use emoticons more frequently than Westerners. Part of the reason might be that Japanese are used to reading and using pictograms, since their written language is based on pictographic Chinese characters (Pollack, 1996). This phenomenon may also reflect the differences between the Japanese and the American cultures. Contrary to the Americans, the Japanese people tend not to express everything explicitly in words. They rely heavily on facial expressions and personal understanding of the context to pass the message through. It is difficult to express feelings with plain text for all the Internet users of various cultural backgrounds but it is especially troublesome for the Japanese users. Lack of nonverbal cues in computer mediated interactions seriously affects not only the transmission of feelings but also the wholesome and correct communication of meaning in a negative way. So it is almost predictable that in the discussion of reasons why they used emoticons, Japanese users unanimously claimed they used emoticons to modify the nuances of text messages (Pollack, 1996; Katsuno & Yano, 2002; Nishimura, 2003). Katsuno and Yano (2002) interviewed representative Internet and emoticon veterans on motivations to use emoticons in various forms of communication media such as Internet chats and mobile phone text messaging. One participant explained on his emoticon uses at online bulletin boards that,

“I used kaomoji when my messages sounded too serious. Kaomoji have the power to soften the nuances of a message. Conversely, I also used them when I wanted to put emphasis on something. Then I would use a kaomoji that showed my

emphasis. Whereas in my face-to-face conversations, I felt I could always transmit the nuance of my sentence through my tone or voice or facial expression, in cyberspace-chat or email communication, I cannot express the gap between what the sentence represents and what I want to say. To fill this gap, I used to use kaomoji.” (p. 215)

He described his dilemma during participation in news group discussions with many other people. Some times opinions had to be expressed in formal language against his intention but if he used casual expressions to prevent the formality of the statement, he would sound insulting to other readers and this might evolve into flame wars. To solve this problem he often added emoticons to his formal statement to soften his cyber dialogues and to convey the intended mood. The emoticons delicately modify the nuances of shades that voice and body languages contribute in face-to-face communication.

It has been noted that CMC is susceptible to foster negative argumentative discussions, known as online “flaming.” The first inventions of both American and Japanese emoticons were smileys, intended as joke markers to defuse the seriousness of words-only arguments.

Katsuno and Yano’s (2002) interviews of Internet chat participants revealed that Internet chatters use emoticons for the fun emoticons inspired in interactions between friends. Major chat rooms and Instant Messaging programs offer basic emoticons. They saved the users’ trouble to type in emoticons by calling up the intended emoticons by clicks of the mouse and inserting them at the desired places. Chat room and instant messaging conversations operate as synchronous interactions and require heavy

engagements of participants. Messages are sent to the receiver's end of the network terminals immediately after the sender hit the "send" signal. The ongoing of the interactions rely heavily on the participants' typing speed because typed messages are the basis of conversations. Many users sacrifice accurate transmission of meaning for the smooth flow of social interactions. Besides helping express feelings, emoticons also greatly increase the typing speed and facilitate online conversations. Chat room and instant messaging conversations tend to be light and informal, where uses of emoticons are natural and appropriate. People tend to use emoticons in conversations also because of the fun that uses of emoticons set off in interactions between two friends. An Internet veteran told Katsuno and Yano (2002) in his interview that,

"[w]hat I thought was fun about kaomoji was taking the time to make and use such an unproductive symbol. I always try to jump on my friends by creating new kaomoji....[C]hat rooms conversation takes place one after another. This makes me want to use kaomoji, because somebody will respond immediately with another kaomoji." (p. 216)

Both the Japanese and the American emoticon users use emoticons to supplement verbal messages and to have fun. But Japanese users' reasons to use or not to use emoticons have been deeply affected by the Japanese culture. A female emoticon user explained on her kaomoji use choices,

"Kaomoji certainly function to make the nuance of sentences clear. But such marks are not needed in messages sent between my close friends and me. We can understand what the other party means to say without such marks. Actually, I feel that kamoji have the power to make the tone of my message less serious.

Therefore I use them only when sending little messages or jokes to some people I know. Also, I use them with those with whom I'm not so familiar, although with them I only use a happy mark. Of course, I can't use angry kaomoji when I really want to. I also can't use an apologizing kaomoji when I really should, because it doesn't convey the seriousness of my intentions to the other party.” (Katsuno and Yano, 2002, p. 219)

The relationships and social distance between the sender and receiver have an impact on users' choices where emoticons are used, how emoticons are used, to whom the emoticons are addressed and also what emoticons can be used. Emoticons uses become a way of socialization when use and non-use of emoticons turn to be an indicator of social distance between the sender and the receiver. When the user explained that she and her close friends did not use emoticons, she indicated that their knowledge of each other made it possible for them to assume familiar and embedded contexts and they did not need the help of emoticons to get the correct messages across. This resonates the characterizations of Japanese culture as a high-context culture (Hall, 1976). These motivations and behaviors in kaomoji uses may also exist in emoticon use among Chinese users since Chinese culture is also regarded as a high-context culture. Katsuno and Yano's study on kaomoji use motivations indicates that culture affected the reasons why people use emoticons. In consistent to expectation, people of high-context cultures tended to add emoticons to clarify the meaning of plain text and modify the nuances of words. They also tended to use emoticons as an indicator of social relationships to create harmonious relationships in their communities. This use of paralinguistic cues could be a substitute for nonverbal cues that are important in high-context cultures. The Americans

used emoticons as a “joke marker” (Fahlman, 2002) to lubricate Internet interactions but their social interaction motivations are far less sophisticated than those of the Japanese users. This tendency should be reflected in emoticons use motivations in intercultural computer-mediated interactions and it is likely that users of collectivistic cultures are more motivated to use emoticons for social interactions than users of individualistic cultures because collectivistic cultures are more sensitive to the missing nonverbal cues. The cultural difference in the high- /low-context and collectivistic/individualistic dimensions may affect users’ motivations of emoticon usage and users of different cultural backgrounds may associate different meanings with emoticon usage.

Emoticon use: intentionality and effect

Scholars agree that emoticons can provide supportive information to written texts in the same way that nonverbal facial expressions enhance people’s experience of verbal messages in face-to-face communication and emoticons users use these symbols to disambiguate the meaning of written messages (Rezabek, 1998; Walther & D’Addario, 2001; Danet, 2001; Katsuno & Yano, 2002). However, intentional connotations associated with emoticons may not be the same as nonverbal behaviors. Nonverbal behaviors are thought to be made with intentions, but many forms of nonverbal behavior are less controlled and deliberate than verbal messages. Some behaviors communicate actions that the others can assume are performed for reasons other than the information communicated in this specific way and are perceived as unintentional. People are not always aware when they are smiling or not. Some facial displays are considered involuntary (Walther & D’Addario, 2001; Lane, 2003). But as typed out symbols,

emoticons are seldom left unpoliced and their uses may be no less deliberate and intentional than verbal messages in electronic communication. Marvin (1995) recognized the intentionality of emoticon uses and commented on this phenomenon in her discussion of MOO interaction that,

smiles in face-to-face contexts can be strategic or spontaneous and unintentional. In the context of the MOO... every smile must be consciously indicated. In private something flowing across the computer screen might causes a participant to spontaneously smile, but a conscious choice must be made to type it out; a participant might frown at the keyboard and but [*sic*] strategically decide to type a smile. (para. 13)

But do emoticons affect the meaning of messages in the intended way? What impacts do emoticons have on message interpretation in CMC? Walther and D'Addario (2001) did an experiment among American college students to find out the actual effects of emoticons on interpretation of meaning in Internet communication. They paired each positive and negative verbal message with a smile emoticon, a frown emoticon or a wink emoticon in supposed email exchanges and observed participants' reaction towards the messages in terms of interpretation of the message and ambiguity of meaning. The results revealed that

[i]n most cases, emoticons were overwhelmed by the valence of verbal statements that they accompanied. In almost all cases, email messages containing emoticons did not generate different interpretations than did messages without emoticons. In terms of the known functional relationships of nonverbal communication to verbal

communication, the emoticon may serve the function of complementing verbal messages at best but not contradicting or enhancing them. (p. 341)

Limitations of their study are obvious. Contradictory verbal messages paired with the same emoticons were presented together for the participants' judgment and this might have caused confusion. Although the participants were required to read the statements as recipients of a friend's email messages, nonetheless they might fail to do so, since the setting was flawed and might have affected the participants' judgment. Walther and D'Addario (2001) proposed another potential reason for these findings that emoticons had been overused and the impact of these symbols had diminished, culturally and historically. Some Japanese emoticon users also reported that they stopped using emoticons because emoticons were overused (Kastuno & Yano, 2002). As signs of common knowledge, emoticons may have their initial dramatic impacts on communication and uses become prosaic. However, the three emoticons under test were the most common ones and effects of less typical emoticons may be different. As pointed out in previous chapters, there was potential disagreement on the meanings of the emoticons. Since this disagreement was not considered in the test, it might also have affected the reliability of the final results.

The similarities and differences in the use of emoticons between the Japanese and Americans as shown in Kastuno and Yano's (2002) thorough investigation on emoticons in Japan have proved that culture has an impact on emoticon use. Culture not only has affected a particular niche in Internet applications, it has affected CMC in general. To clarify the meanings associated with emoticon usage across cultures, this study compares uses from a high-context culture with a low-context culture.

Culture and CMC

The Internet has become a conspicuous international medium. It is a convenient choice for international communication because its speed is faster and its cost is much lower than most traditional media. The limitation of geographic locale is transcended in network communication. The Internet is becoming a new hub for global communication. Intercultural communication scholars have predicted that the information technology will greatly reshape intercultural communication (Chen, 1998; Ma, 1996).

The Internet is deeply rooted in people's daily lives and taken the place of traditional media in many situations, from e-government, e-business to an individual's summer vacation well planned and prepared via the Internet. For some people, email has replaced telephone calls and letters between friends and relatives. It is possible that emails are less intimate and impersonal for such communications than telephone and letters, but their low cost and demand on involvement also allow users to connect with remote friends whom they do not contact via telephone or letter. New programs and technologies have been invented to enrich the Internet interpersonal communication. People can speak with a friend via Internet phones and MSN Instant Messenger.

Internet technologies have affected the Chinese culture and reciprocally, the Chinese culture leaves its traces in the development of cyber culture. An example is the recreation of the Chinese New Year celebration on the Internet.

Kozar (1995) found through email exchanges with Chinese overseas students in 1992 that, the Chinese used ASCII characters to recreate traditional Chinese cultural symbols

on the Internet, including sending electronic cards made of punctuation marks to celebrate Chinese New Year and Mid-Autumn Festival. Kozar claimed that,

Ethnicity and identity are being made both global and local by the proliferation of electronic media. Not only does this kind of communication allow people to renew and strengthen friendships, but it also provides them with an interface for play and through play for the creation of new patterns for the performance of tradition. (para. 7)

The creative celebrations of the Chinese New year proved the “power of the Internet as both tool and object for cross-cultural ethnographic research” (Kozar, 1995, para. 1) and demonstrated how culture influenced Chinese computer users’ application of the Internet.

Network technologies have made intercultural communication much easier than before and increased intercultural interactions will in turn promote Internet communications. Because of the Internet, people have more chances to be exposed to foreign cultures. They can interact with people from various cultures and greatly expand their horizon. The increased knowledge may also facilitate intercultural communication both online and offline.

Empirical studies have shown that the Internet can be an effective medium to promote intercultural communication. Chen (1998) organized a twelve-week international email debate project among college students enrolled in business courses in the United States, Denmark, France, Hong Kong and Turkey to measure the effect of intercultural CMC on the improvement of intercultural sensitivity. The participants’ responses suggested that email debates greatly increased their cultural sensitivity. The students reported that

communicating and making friends with fellow students in other countries was exciting. They also found that as business majors it was important to see how individuals from different cultures and countries viewed things and to learn about the different values and ideas people from different cultures had. Students welcomed intercultural communication on a regular basis over a long period of time and found that debate on cultural or social issues with international impact enhanced their understanding of the importance of these issues from the perspective of foreign students. Chen concluded that email exchange had a positive impact on intercultural communication. The experiment proved that intercultural electronic communication could be beneficial for all the participants. The computer communication systems, applied on a global scale, could provide more opportunities for intercultural communication and enhance intercultural sensitivity.

Ma (1996) interviewed college students from the United States and East Asian countries who participated in intercultural relay chats. Most of the US and the Asian participants reported that they had increased understanding about their partner's culture after they finished the project. It is known that Asians are more "indirect" in communication while the Americans are direct and adaptation to the opposite style often happens during cross-cultural communication between the Americans and the Asians. (Ting-Toomey, 1985, 1988) However, most participants from both cultures reported that they did not perceive much effort in adapting to their partners' culture and communication style. The informality of the Internet Relay Chat "culture" allowed both parties to preserve their own cultural style and to communicate successfully despite the differences. Participants also found that they were more direct in relay conversations than they would be in face-to-face situations since the restraints that ordinarily hold them back

from some behaviors in face-to-face communication did not exist any more in the online situation. However, most American participants who did not have much previous experience interacting with Asians reported that their Asian partners were “polite, reserved, and indirect” (Ma, 1996, p. 182). Both East Asian students and the US students found that they engaged in a higher level of self-disclosure in the relay chats than in face-to-face interaction, but East Asian participants were still reported to be affected by behavior restraints in their cultures. For example, an American participant found that the east Asians “are extremely nice and polite, but do not initiate self-disclosure” (Ma, 1996, p. 183) and another American student thought they did not talk about themselves. Instead, the disclosed information was mostly facts about their culture. Without some of the nonverbal information in face-to-face communication such as appearance and speech, most participants felt that status difference was minimized in the computer-mediated intercultural relay chats and the medium was more egalitarian than face-to-face communication. Students also reported that the computer-mediated conversation was more informational than face-to-face chats because without the visual cues, they were able to focus more on verbal messages. The students’ experience demonstrated that the Internet had the potential to be an efficient medium for intercultural interaction. CMC offers many opportunities for people of different cultural backgrounds to interact and it is especially helpful to promote cultural sensitivity of people who have few chances to be exposed to foreign cultures via traditional media.

However, there are significant limitations in the application of these researches’ conclusions and the capacity of CMC to promote cross-cultural communication. Both of the two intercultural Internet communication projects were highly task-oriented in design.

In Chen's (1998) experiment, participants were engaged in debates on international business affairs for school credits. Both the content and form of the interactions were formal and impersonal. Although Ma's (1996) experiment took a lighter and less formal form of Internet Relay Chat, the participants' discussion focused on cultures and the content was mostly impersonal. Existence of socioemotional content was not reported in either of the reports. It was unclear what kind of relationships participants were able to build up with their experiment partners during the interactions and whether the relationships would terminate or continue when the projects ended. Although the researchers reported that intercultural CMC promoted the participants' cultural sensitivity, yet it was unknown how the quality of the computer-mediated interactions compared with that of face-to-face cross-cultural interactions. But when nonverbal information which is vital to interpersonal communication is filtered out, it is doubtful that the quality of cross-cultural interpersonal interactions via CMC can surpass face-to-face communication among people across different cultures. Use of paralinguistic features that are common in online communication among people within the same culture was not mentioned in the two studies. Although CMC can help promote intercultural interactions in many ways, due to the limitations of communication channels, it cannot match the richness and variety of face-to-face intercultural experience and replace face-to-face intercultural communication. Nonverbal communication is significant in both online and face-to-face intercultural communication to enrich cultural experience and build up relationships among people across cultures. Comparing emoticon uses across cultures, this study offers insights to socioemotional content and relational communication in computer-mediated intercultural interactions.

Emoticons and the culturalized nonverbal communication

Emoticons have become an important form of socioemotional communication in CMC. As both the name and the form suggest, emoticons are symbolic online facial expressions of emotions. People use them to compensate for the lack of nonverbal cues in CMC. Katsuno and Yano (2002) argued that emoticons “re-embody Internet-based communication by pictorialising emotion as both sub- and supra-text ” (p. 206) and the process of re-embodiment was made possible because emoticons are stereotyped forms of graphic representation of facial expressions. Scholars assume that the meaning of emoticons and how people use emoticons in CMC are closely associated with the way nonverbal cues, especially the facial affect displays in face-to-face communication. Thompsen and Foulger (1996) thought that emoticons were “nonverbal surrogates, suggestive of facial expressions” (p. 230). Rezabek and Cochenour (1998) believed that emoticons contributed to verbal messages “in much the same way that visuals or body language can enhance verbal communication” (p. 202).

Since online behaviors reflect human interactions offline, many scholars use existing communication theories in face-to-face interaction and via other media as reference to gain insights on people’s online behaviors (Walther & Tidwell 1995; Herring, 1996). Due to the connection of emoticons to visual cues and to emotions, it is natural that many researchers use theories from nonverbal communication and emotions as a theoretical framework to explore the use of emoticons online or as reference theories to understand the effect of emoticons (Knepp, 2002; Walther & D’Addario, 2001). Knowledge of

emotions and nonverbal communication is essential to the understanding of emoticon usage.

There are six functions of nonverbal communication in human interaction: repeating verbal message, contradicting verbal message, substituting for verbal message, complementing verbal message, accenting verbal message and relating and regulating verbal message (Knapp, 1972). However, most of the dimensions and functions of the nonverbal cues are missing in the CMC. For example, cues such as vocal pitch and tempo and physical characteristics such as physique, body shape, color, height, weight and general attractiveness are all screened out in CMC. Emoticons can be used as facial expression substitutes on the Internet to reflect a small part of the nonverbal cues missing in CMC interactions.

Researches have proved that culture has a significant impact on nonverbal behaviors. Since facial expressions are one of the most conspicuous visual cues in social interactions, many researchers focus their study on them (Matsumoto, 1991; Ekman and Friesen, 1975). Ekman and Friesen (1975) have demonstrated through experiments that facial expressions of certain primary emotions such as anger, happiness, disgust, and fear are universal regardless of cultural backgrounds.

Ekman and Friesen (1975) conducted laboratory experiments in which Japanese and American college students were shown stress-inducing films. Each participant watched the film alone for part of the time and then watched the film while talking to an assistant about the experience. The viewer's actions were captured on the video to measure the actual facial muscle movements. Comparison of the results showed that when watching the film alone, Japanese and Americans had identical facial expressions. However, when

watching in the presence of another person where, according to Ekman and Friesen (1975), “cultural rules about the management of facial appearance (display rules) would be applied” (p. 24), the Japanese masked their facial expressions of negative feelings more than the Americans. The study demonstrated that facial expression is universal, but culturally specific.

Ekman and Friesen (1975) did another experiment with people from several cultures to prove the universality of emotion expression. They showed photographs of different emotion displays to observers and asked each participant to choose one from six primary emotion words they offered to describe the emotional state depicted in each photograph. There was consensus to a quite high rate (> 90%) in the descriptions of some feelings such as happiness and disgust, but agreement dropped sharply over emotions such as fear and anger. Ekman and Friesen extended the experiments to the originals in New Guinea that were visually isolated from mass media and had no chance to learn emotional expressions from mass media. The experiment also confirmed the universality of facial expressions with one exception: the New Guineans did not distinguish between facial expressions of surprise and fear. All together, the studies showed that the appearance of face for primary emotions was common to all people but facial expressions also varied across cultures. Cultures had impact on display rules in given situations.

Ekman et al (Ekman et al, 1987) later proposed that three problems limited the findings of the experiments. First, these experiments were the only study of the facial expression of emotions and they had yet to be replicated to be convincing. Second, not all of the six emotions portrayed and presented in the experiments were accurately identified. The distinction between fear and surprise was vague to many participants from America,

Brazil, Chile, Argentina and Japan. The American observers also had difficulty in distinguishing portrayals of fear and surprise posed by the New Guineans. Third, the facial expressions used in this study were posed. Judgments based on posed expressions had to be validated before they could be extended to the spontaneous expression of emotions in real life.

Problems remained concerning the validation of the experiment results in spontaneous emotions. Spontaneous emotional expressions were not as pure as the posed expressions. On the contrary, emotion displays always varied in intensity and were blended with secondary emotions. Ekman et al. (1987) established experiments in ten Western and non-Western countries to validate their former findings on the universality of emotions. Facial expressions of posed emotions, spontaneous expressions and photographs of adult Caucasians moving facial muscles under instructions were shown to observers. The observers were asked to identify the emotions on the pictures shown to them and to rate the intensity of the emotions. The results showed cross-cultural agreement on the secondary emotions signaled on facial expressions and the relative strength of facial displays of the same emotions. This study also provided evidence of cultural differences in intensity judgment of emotion. The participants were found to attribute less intense emotions to expressions that were posed by foreigners. The posers were white Americans. For the Asian judges, it was obvious that they were from cultures quite different from theirs and the factor probably affected the accuracy of their judgments. Ekman et al. proposed a possible explanation that people attributed less intensity to a foreigner's emotional expression than to similar expressions of member of their own culture due to politeness or greater uncertainty.

To study the possible effect of culture on nonverbal communication, many scholars have compared subjects in high-context and low-context cultures because cultural difference in high-/low- context and collectivism/individualism dimensions coordinates with difference in emotional expression and nonverbal communication (Matsumoto & Ekman, 1989; Matsumoto, Kasri & Kookan, 1999). Japanese and American cultures are taken as classic examples of high-context/ collectivistic and low-context/Individualistic cultures. Many studies on the influence of cultural differences in these dimensions on emotion displays choose American and Japanese subjects for their research and the results are indicative to behaviors of the cultural categories each of them represents.

Matsumoto and Ekman (1989) duplicated the experiment of Ekman et al. (1987) in Japan and the results showed that Japanese participants rated the same facial expressions less intense than their American counterparts. They proposed differences of the judges' cultural backgrounds may have affected the intensity ratings of facial display. According to Matsumoto and Ekman, display rules in Japanese culture attenuated emotional expressions and this might affect the way emotions were interpreted adversely. It might lead to downplaying the intensity of emotional expressions of other people regardless of their cultural background. The problem of translation was brought up. The authors (Matsumoto and Ekman, 1989) found that the "differences... in the intensity levels implied by the translations of the different emotion terms may have produced the cultural differences in intensity ratings" (p. 145). They cited the example of the translation of the English word anger, whose Japanese translation implied a more intense level of anger and thus would have affected the accuracy of the judgment of emotional intensity for the Japanese participants.

To address these problems, the two scientists chose for their new experiments pictures of emotional expressions posed by both Caucasian and Japanese and part of the judgment was obtained with “anchorless intensity rating” (Matsumoto and Ekman, 1989, p. 145) without references to emotional terms. Pictures of seven emotions (anger, contempt, disgust, fear, happiness, sadness, and surprise) were shown to American and Japanese participants for intensity rating. The results showed that the Americans rated all the emotions except disgust significantly higher than the Japanese regardless of the gender and culture of the posers depicted. Matsumoto and Ekman finally concluded that the fact that the Japanese participants attenuated perception of emotional display intensity indicated that Japanese display and interpretation rules might affect the expression and perception of emotions. Other experiments also confirmed the American and Japanese cultural differences in intensity judgment of emotional expressions (Matsumoto, Kasri & Kookan, 1999; Matsumoto et al., 2002). Matsumoto, Kasri and Kookan’s work (1999) compared the American and Japanese cultures in intensities of emotional expression and subjective experience. Their experiments revealed that Americans gave higher ratings to external emotional displays than the Japanese and the Japanese gave higher ratings on internal experience of emotional feelings than the Americans. The Japanese assigned the same intensity degree to both the external emotional expressions and the internal feelings. Contrary to former speculations (Matsumoto & Ekman, 1989) on the differences in emotion expression intensities that Japanese suppressed and attenuated their feelings, it was the Americans who exaggerated the external expression of internal emotional experience.

The differences in emotional intensity perception can be accounted for by cultural contexts where different display rules are applied. It has been suggested (Matsumoto, 1991, 2002) that individualistic cultures encourage outward emotional expressions more openly than collectivistic cultures. This may either encourage the Americans to exaggerate the expressions of their internal feelings or to infer less intense of the emotional experiences from emotions that they feel (Matsumoto, 1999). These research works have proved that members of individualistic cultures and members of collectivistic cultures have significant difference in the perception of emotional expression intensity. If theories of the effect of culture on nonverbal communication in face-to-face interactions are applicable to emoticon use in CMC, people of collectivistic cultures should rate emoticons less intense than people of individualistic cultures.

Scholars have pointed out in their research that meanings of emoticons come from their resemblance to facial expressions and are interpretative and highly contextual (Katsuno & Yano, 2002, Rezabek & Cochenour, 1998). Some researchers argue that emoticons functioned like masks, with little written on the faces but much to be read into (Katsuno & Yano, 2002). The interpretation of emoticons' meanings and the reason why emoticons are used are closely associated with the contexts and the well-defined cultural code in which they are embedded (Katsuno & Yano, 2002, Rezabek & Cochenour, 1998). As interpretation and display of facial expression in face-to-face communication are both universal and culturally specific, the meaning and the use of emoticons in computer-mediated interactions may also be universal and culturally specific. Emoticons in CMC may be used to compensate for the lack of nonverbal messages in face-to-face

communication. But the unique characteristics of the CMC may also challenge online paralinguistic cues to function differently from those in face-to-face interactions.

Discussions above have shown that culture has a significant impact on people's behaviors, be it nonverbal communication in face-to-face interactions or emoticons usage in CMC. Users from different cultural backgrounds may or may not share the same meanings of emoticons and/or the motivations to use emoticons.

Theoretical approach: Semantic Differential Scales

Semantic differential scales generated by Osgood and his co-workers (Osgood, May & Miron, 1975) were used in this research to study the perception of the meaning of emoticons among people of different cultural backgrounds.

Osgood claimed that (Osgood, 1958) the semantic meaning of English words was constructed upon three dimensions: evaluation (E), potency (P) and activity (A). He and his co-worker examined the semantic meaning of affective words across cultures in 21 languages. They found that there was pan-cultural similarity in the construction of semantic meaning of words and the EPA dimensions existed in the meaning of words in other cultures and languages too. The meaning of words can be measured by three dimensional semantic scales anchored each with a pair of adjectives of opposite meaning:

Evaluation: Good/bad; nice/awful, sweet/sour;

Potency: powerful/powerless, big/little, strong/weak;

Activity: fast/slow, alive/dead, active/passive.

Many research works (Schneider, 1996; MacKinnon & Keating, 1989; Lundqvist, Esteves & Ohman, 1999; Nathan, Marsella, Horvath & Coolidge, 1999) used the EPA

semantic differential scales to compare perceptions of words, concepts and even pictures in different cultural contexts because as Schneider (1996) concluded:

EPA profiles can be seen as a meta-language that sociologically describes differences of emotions and identities. This capacity makes EPA profiles an ideal media for cross-cultural comparisons, especially when multiple languages are involved. (p. 126)

Semantic Differential Scales have long been applied to measure the meaning of concepts in cross-cultural studies (Schneider, 1996; Nathan, Marsella & Horvath, 1999). Nathan, Marsella and Horvath used the Semantic Differential Scales to analyze the perception of individual, self and group, three important concepts in individualistic/collectivistic cultures in Japanese national (JN), Japanese-Americans (JA) and European-Americans (EA). The research used seven-point bipolar scales anchored by adjective pairs generated by Osgood and his co-workers to test the evaluation, potency and activity dimensions of each concept. The ratings of the Japanese nationals and the European-Americans of each concept corresponded to the characteristics of collectivistic and individualistic cultures that they represent. The Japanese-Americans, as an overlapping cultural group, constructed the concepts of self and individual in the semantic differential scales between the poles of the Japanese and American cultural groups. The semantic construction of the three concepts of individual, self and group was proved to be able to represent the ethnocultural inclination of the three cultural groups towards individualism and collectivism. The results also proved that the individualism and collectivism dichotomy had psychological connotation and could be predicative.

Besides being used to test concepts in words, semantic differential scales are also used to measure the meaning of pictures and schemes such as facial expressions.

Lundqvist, Esteves and Ohman (1999) used semantic differential scales to measure the role of facial features (such as shapes of eyebrows, eyes, mouth and nose) in conveying the emotional facial impression of threatening. Schematic faces made of the four features were designed to represent all the combinations of the facial features. Semantic dimensions of activity, evaluation (negative valence as in this study) and potency were applied to each facial feature scheme. At each end of the scales there were adjective pairs representing each dimension selected from Osgood's works. The results showed that the shape of eyebrows greatly affected all three dimensions whereas mouth and eyes only affected dimensions of Activity and Negative Valence. The V-shaped eyebrows lead to high rating of Activity, Negative Valence and Potency and was the most powerful indicator of emotional impact of a threatening face. The results of this study supported that schematic faces could stimulate emotional response and could be used to represent actual emotional facial expressions.

Successful uses of Semantic Differential Scales to examine perception of concepts among different cultural groups and to measure people's perception of pictures of emotional facial display indicate that it is appropriate to use Semantic Differential Scales to measure the meaning of emoticons among people across cultures.

Purposes

Emoticons are an important part of paralinguistic communication in CMC and have been widely used in Internet communities around the world. Emoticon users have

become as culturally diverse as Internet users and emoticons uses have been shown to be heavily influenced by users' cultural background. Previous researchers have found many aspects of emoticon use such as the effect of emoticons on the interpretation of message meaning and on the inter-relationship of emoticon users and also the effect of emoticon usage in particular contexts (Walther, 2001; Utz, 2000; Thompson & Foulger, 1996). But it is still unknown whether people of different cultural backgrounds agree on the meaning of emoticons and the motivations of emoticon usage. Most research on emoticons tends to focus the discussion in one country or culture and a cross-cultural study on emoticons has yet to be done. Cross-cultural studies of CMC show that the Internet is an efficient medium for task-oriented intercultural communication and can promote intercultural sensitivity but socioemotional content in intercultural CMC has not been studied and emoticons were left out of scene in the cross-cultural CMC studies.

The goal of this research is to find answers for the following question in emoticon use from an intercultural perspective:

RQ: Do people of different cultures agree on the meaning of emoticons?

Although emoticons have been widely used in Internet communities of various cultures, it is still unknown whether users of different cultural backgrounds agree on the meaning of the same emoticons. The meaning of emoticons comes from their resemblance to emotional facial expressions (Katsuno & Yano, 2002). Since scholars have proved that emotional expression and interpretation are both universal and culturally specific, the perception of the meaning of emoticons may be both universal regardless of cultural background and also culturally coded (Ekman & Friesen, 1975; Matsumoto & Ekman, 1989).

Emoticons have been adopted as a time-saving and effective form of visual cues to represent nonverbal expressions in CMC world. Emoticons are also widely used in text-messaging via cell phones and have expanded their territory beyond the computers (Katsuno & Yano, 2002). Although graphic and animated emoticons have been widely adopted to replace ASCII emoticons in many popular Internet programs and web sites, most of the previous researches on emoticon only study ASCII emoticons. Graphic and animated emoticons have been neglected. Studies on emoticons without discussion on graphic and animated emoticons can hardly reflect a complete and up-to-date scenario of emoticon and today's experience of emoticon users. The graphic and animated emoticons are colorful and vivid in presentation and can enhance people's experience of emoticon uses. But it is unknown whether the difference in presentation affects people's perception of the meaning of the ASCII and graphic emoticons with the same connotation. This study will use selected ASCII, graphic and animated emoticons in the test to explore the possible effect of the difference in the form on the perception of meaning and most importantly, to reflect people's real experience with contemporary emoticons.

Knowledge of the fundamental questions about emoticons will improve the understanding of the needs for nonverbal communication and the use of nonverbal cues in the international CMC communities.

Method

Procedures

This study used surveys to find out users' motivations in emoticon use and their perception of the emoticon meanings. A convenience sample of Chinese and American

emoticon users were used in the test. The survey was administered in the following process:

1. After gaining permission from the Human Subject Research Review Board of Rochester Institute of Technology, a survey was designed and then written in PHP (a web page language) form. The web page form of the survey was uploaded to the researcher's homepage on the Internet under the URL <http://www.rit.edu/~yxw1204/survey.php3>.
2. American participants were recruited in an undergraduate communication course at the Communication Department of Rochester Institute of Technology. The researcher gave a brief introduction of the research project to the students in class and distributed to each student a sheet of paper with the introduction of the project and the URL of the survey web page on it. The students were encouraged to go on the Internet and fill out the survey form.
3. At the same time, Chinese students were recruited at advanced English courses from a university in south China. The researcher sent the introduction and the URL as presented in the paper distributed to the American students to the course instructor at the Chinese college. The instructor printed out the information on paper and distributed the paper to the students. The content of the paper distributed to the Chinese students was exactly the same as the content distributed to the American students. The Chinese students were also encouraged to go on the Internet, follow the URL on the paper and take the online survey after class.

4. Two weeks later, as the number of the participants who had taken the survey was low and stopped increasing, the researcher posted messages in English at several English and Chinese online discussion groups related to computer technologies geographically located respectively in US and in China. The Chinese discussion groups were specifically chosen to target university students. The content of the message included the introduction of the project and the URL of the survey web page as appeared on the paper distributed to the Chinese and American students and a request to participate. People could access the survey by clicking the URL provided in the message.
5. All the participants were assured anonymity and confidentiality during the research before the beginning of the survey questions. No information of the respondents' identity was collected and the research could not trace information back to any particular respondents. This assurance of anonymity and confidentiality of information was conveyed to the participants so that survey forms would be filled out honestly to entirety.

The survey results were stored in an online database automatically after each questionnaire was filled out.

Three hypotheses were tested in the research based on literature review and the research questions.

H1: American participants tend to use emoticons to supplement the meaning of verbal messages more than the Chinese participants.

H2. Chinese participants tend to use emoticons more for socializing purposes than the American participants.

As indicated by research works on cultural differences in high-/low-context and collectivistic /individualistic dimensions, members of American culture and Chinese culture differ in nonverbal communication practices. People of high-context cultures are also more likely to use nonverbal cues, relationship and circumstances to help transfer meaning than people of low-context cultures. People of low-context cultures are more likely to communicate meaning in explicit and coded form. As “typed-out textual symbols” (Walther & D’Addario, 2001), emoticons may be “deliberately encoded elements of intentional communication” and function like wording. People of low-context cultures may be more likely to use these encoded textual symbols to help transfer meaning than people of high-context cultures. Similarly, since collectivistic cultures have strong in-group identity and encourage harmonious social relationships among members, people of collectivistic cultures are more likely to add emoticons to elevate the seriousness of plain text and use emoticons to help create harmonious and friendly interpersonal connections in computer-mediated interactions. Americans and Chinese are expected to show these tendencies in emoticon use.

H3: Americans and Chinese participants agree on the meaning of emoticons.

The past experiments have proved that the primary emotions are universal regardless of gender and cultural backgrounds. People of different cultures can recognize emotional expressions and display similar expressions for the same emotions. Since previous research has shown that pictures of emotional expressions made of facial characters can be used to replace emotional facial expressions in Semantic Differential Scales and produce similar results, it can be expected that people agree on the meaning of emoticons

that represent the facial display of the primary emotions (Lundqvist, Esteves & Ohman, 1999).

Design of the survey

Literature review in culture and nonverbal communication has shown that the cultural difference in the high-/low-context and collectivistic/individualistic dimensions is closely associated with difference in emotional expression and nonverbal behaviors (Hall, 1976, Ting-Toomey, 1988, Matsumoto, 1991). Previous researches have indicated that Chinese and American cultures are typical high-context/collectivistic and low-context/individualistic cultures respectively (Hall, 1976; Hofstede, 1980). Based on this conclusion, this survey chooses American and Chinese emoticon users to study their usage of emoticons.

The three most widely used ASCII emoticons: smiley :-), frown :-(and wink ;-) are selected to test whether people agree on the meaning of emoticons (Rezabek & Cochenour, 1998; Walther & D'Addario, 2001). Since there is no statistics on the most widely used graphic emoticons, the graphic emoticons ☺ , ☹ and ☺ (animated) corresponding to the ASCII smiley, frown and wink in the MSN Messenger emoticons are chosen to represent the group of graphic and animated graphic emoticons and to compare with the ASCII emoticons. Graphic and animated emoticons are chosen from the emoticon list of MSN Instant Messenger (Microsoft, 2004). Since MSN Messenger is one of the most popular Internet Instant Chatting Programs in the America and other countries (Randall, 2002). Five other graphic and animated emoticons are randomly picked from the MSN Instant Messenger emoticon list and they are open-mouthed laugh

😄 (corresponding to :-D in ASCII), crying emoticon 😭 (:(in ASCII), angry emoticon 😡 (:-@ or :@ in ASCII), embarrassed emoticon 😳 (:-\$ or :\$ in ASCII) and confused emoticon 😕 (:-S or :s).

Semantic differential scales are used to measure participants' perception of the meaning of these emoticons. Three seven point-scales each anchored with two adjectives of opposite meaning are created for each emoticon to test the evaluation, potency and activity dimensions of its meaning. The adjectives are selected from the highest loading factors in the English language in the Recommended Pan-cultural Scales for Semantic Differential from pan-cultural analysis (Osgood, May & Miron, 1975). Scales from the Hong Kong Cantonese have also been considered since Mandarin, the official Chinese language was not examined in Osgood and his co-workers' researches.

Participants are required to indicate to what degree they think each pair of words described the emoticons by choosing a circle on the scale. The button circle nearest to the word indicates the highest degree, the one in the middle indicates neutral and the farthest one indicates the lowest degree.

Survey questions about motivations to use emoticons are asked to see if there are differences in emoticon usage between the American and the Chinese participants. Motivations identified for kaomoji use in Katsuno and Yano (2002) study are revised to describe possible motivations for emoticon use. For example, motivation to use kaomoji to "make the nuance of sentences clear" (p. 219) and "adding kaomoji to my words helps express my feeling or emotion more clearly" (p.217) are categorized as informational motivations and statements such as "I use emoticons to clarify my meaning" and "I use emoticons to supplement my sentences" are developed as survey statements to test

participants' motivations of emoticon use. Altogether, 10 statements are made for the emoticon use motivations. Each statement is followed by a five-point open scale with 1 as "not true of me", 3 as "neutral" and 5 as "completely true of me". Participants are instructed to indicate their opinion towards the statement by selecting one of the five points on the scale.

Participants

210 online surveys were filled out. The respondents were asked at the beginning of the survey if they had seen emoticons such as :-)) and ☺ before. If they chose yes, they were then asked if they had used emoticons before. This study was only interested in the population who had both seen and used emoticons before since motivations of their usage were examined. Only participants who had both seen and used emoticons before taking the survey were eligible for the research. Those who had not seen or used emoticons before were excluded. Demographic information of the respondents who met the criteria of the sample population was collected. Identification information of the respondents was not collected and participants were assured to remain anonymous during the survey.

191 respondents met the first criteria. Among the sample population, 67 participants were Americans born in the United States and their first language was English. 105 participants were Chinese who were born in China and whose first language was Chinese. The other 19 people were self-reported as from India, Norway, Lithuania, Azerbaijan, Belgium, Croatia, Jamaica, Malaysia, Poland, South Africa, the Netherlands and Vietnam. Since this study is interested in the comparisons of the American and Chinese CMC users, only American and Chinese participants were selected for the final data analysis.

Results

Overview of Data

Participants' demographic information and their experience with emoticons were collected for contexts to interpret the results.

67 Americans and 105 Chinese participants' survey answers met all the criteria and are used for data analysis. Of the 172 American and Chinese participants, 73 are females and 99 are males. The average age of the American participants is 29.67 and the average age of the Chinese participants is 26.97. Except for one American participant who is in high school and five Chinese respondents who have associated degrees, all the other respondents are in college or have at least a college degree. Chinese college students should have been learning English as a foreign language for at least six years when they were admitted into college. These Chinese participants should have acquired a vocabulary of at least 4000 English words and been able to understand English articles with moderate difficulty as indicated in Chinese College English Test Syllabus (Netease, 2004). Previous research showed that there could be discrepancy in the meaning of the original words and their translations in another language and the discrepancy could affect people's judgment and the accuracy of the results (Matsumoto & Ekman, 1989). To avoid this problem, this survey was written in English and was not translated into Chinese. Words used in the semantic differential scales in the survey are highest loading factors in English language in Osgood and his co-worker's cross-cultural research (Osgood, May & Miron, 1975). The words and statements used in the survey are quite simple and can be easily understood by the Chinese respondents. Chinese respondents should be able to

read the entire survey with ease and understand the meaning of each word and statement correctly.

Table 1

Demographic Information of Total Participants

	number	Average age	Male	Female
American	67	29.67	33	34
Chinese	105	26.97	66	39
Total	172	28.02	99	73

All the participants have been using computers for more than one year. Except for two Chinese college students who have used computers for less than two years, all of the other respondents have used computers for more than two years. Their Internet experience corresponds to their computer usage history. Except for two Chinese students who have been using the Internet for more than one year but less than two years, all of the other participants have used the Internet for more than two years. The difference in how long the Chinese and American participants have been using the Internet and computer is insignificant and is not regarded as a variable that would affect the results of the research. Respondents who have seen and used emoticons are chosen as the subjects of the research. The average time the participants have been using emoticons is about 1.85 years. 149 of them (86.63%) have used emoticons for more than two years, 20 participants (11.56%) have used emoticons for more than one year and less than two years and 3 participants (1.73%) have used emoticons for less than one year. The majority of the participants has been using the emoticons for a considerable time and

should be familiar with emoticons. The difference between the Chinese and American participants' time of using emoticons and their familiarity of emoticons is insignificant and negligible.

Table 2

Average Computer Use information of Participants

	More than three hours (percentage)		more than one hour (percentage)		More than 30 minutes (percentage)		Less than 30 minutes (percentage)	
American	37	55.22%	24	35.82%	5	7.46%	1	1.49%
Chinese	57	54.29	37	35.24%	8	7.62%	3	2.86%
Total	94	54.34%	61	35.26%	13	7.51%	4	2.31%

Most of the participants (94 persons, 54.34%) spend more than three hours online each day, 61 participants (35.26%) report that they spend more than one hour and less than three hours online each day, 13 participants (7.51%) spend less than one hour online and only 4 participants (2.31%) spend less than 30 minutes online each day.

Hypothesis Tests

Motivations

Hypothesis 1 and hypothesis 2 are related to the motivations of emoticon use. T-test for independent samples is used to compare the motivations of the Americans and the Chinese participants' emoticon use. The five points of the scale is coded as 0 to 4

respectively. Alpha risk is set at .05. Table 3 is descriptive statistics for emoticon use motivations of the Chinese and American participants.

The results of statistic analysis indicate that the three motivations for using emoticons: entertainment, social interaction and information, are true to some degree for both the Americans and the Chinese. But the two groups differ in their attitudes towards some single statements.

For the three statements of the entertainment motivation, p value is greater than 0.05 ($p > 0.05$) for two statements (“I use emoticons because I just like to use them”; “Emoticons amuse me.”) and there is no significant difference between American’s and Chinese’s attitudes towards these two motivation statements. Both the Chinese and the Americans use emoticons because they like to use them and emoticons are amusing. P-value for the statement “I use emoticons because they are enjoyable” is less than 0.05 ($p < 0.05$). The Chinese respondents are more inclined to use emoticons because it is enjoyable to use them than the American respondents.

Among the four statements of the social interaction, p value is greater than 0.05 ($p > 0.05$) in two statements (“Using emoticons is something to do when chatting with friends” & “I use emoticons so I can talk to other people more easily”). For the other two statements (“I use emoticons because it makes me friendlier” and “Emoticons make me look humorous with people”), p value equals 0.000, which indicates that significant difference exists between the two groups’ attitudes towards the two motivational statements. Chinese participants demonstrate strong inclination to use emoticons because emoticons use makes them friendlier and humorous. Overall, Chinese participants are more likely to use emoticons for social interaction than the Americas. Hypothesis 2 is

supported by the data. For the information motivation, p value for two statements (“I use emoticons so I can communicate more clearly.” and “I use emoticons to supplement my sentences.”) is greater than 0.05 ($p>0.05$) and p value for the other one statement (“I use emoticons to clarify my meaning.”) is less than 0.05 ($p<0.05$). Although both American and Chinese respondents tend to use emoticons to communicate meaning clearly and to supplement the text statement, the American participants rate the statement “I use emoticons to clarify meaning” much higher than the Chinese and appear to be more motivated to use emoticons to clarify meaning. Hypothesis 1 is also supported.

Table 3

Descriptive Statistics for emoticon use motivations

	N	Mean	SD	t-value	p-value	DF
Entertainment						
I use emoticons because I just like to use them.						
American	67	3.34	1.21	1.23	0.219	144
Chinese	105	3.58	1.26			
I use emoticons because they are enjoyable						
American	67	3.15	1.17	3.04	0.003	152
Chinese	105	3.73	1.31			
Emoticons amuse me.						
American	67	3.42	1.28	0.83	0.410	136
Chinese	105	3.58	1.23			
Social Interaction						
I use emoticons because it makes me friendlier.						

	N	Mean	SD	t-value	p-value	DF
American	67	3.93	1.18	0.75	0.454	144
Chinese	105	4.07	1.23			

N=Number, SD=standard deviation, DF=degree of freedom

Perception of meaning

For the third hypothesis that Americans and Chinese agree on the meaning of emoticons, t-test for independent variables is used for data analysis. The seven points of the scales are coded as zero to six. Table 4 presents an overall view of the mean scores and standard deviations for the Americans and Chinese samples' mean rating of the emoticons on the EPA scales. Detailed analysis for each emoticon in the test is presented with graph lines of each group's profile of the perception of meaning in the EPA dimensions. The blue line represents the profile of the American participants' mean ratings and the purple line represents the Chinese participants' mean ratings.

Table 4

Descriptive Statistics for Mean Evaluation, Potency and Activity Ratings for Emoticons

		N	Mean	SD	t-value	p-value	DF
:-)							
E	American	67	0.373	0.599	2.93	0.004	169
	Chinese	105	0.73	1.01			
P	American	67	1.49	1.12	1.68	0.095	162
	Chinese	105	1.82	1.41			
A	American	67	1.63	1.29	0.35	0.724	151

		N	Mean	SD	t-value	p-value	DF
	Chinese	105	1.55	1.43			
:-(
E	American	67	5.687	0.633	3.39	0.001	166
	Chinese	105	5.22	1.17			
P	American	67	4.70	1.15	2.94	0.004	169
	Chinese	105	4.03	1.84			
A	American	67	3.84	1.46	0.78	0.437	162
	Chinese	105	3.64	1.85			
;~)							
E	American	67	1.43	1.21	1.81	0.072	164
	Chinese	105	1.82	1.58			
P	American	67	4.58	1.18	3.69	0.000	154
	Chinese	105	3.86	1.36			
A	American	67	3.52	1.11	1.35	0.180	166
	Chinese	105	3.79	1.50			
~)							
E	American	67	0.433	0.657	2.71	0.007	169
	Chinese	105	0.79	1.07			
P	American	67	1.54	1.18	0.28	0.783	143
	Chinese	105	1.49	1.22			
A	American	67	1.57	1.29	1.77	0.078	132
	Chinese	105	1.22	1.19			

		N	Mean	SD	t-value	p-value	DF
E	American	67	4.55	1.41	0.91	0.364	151
	Chinese	105	4.76	1.57			
P	American	67	3.18	1.74	1.91	0.058	157
	Chinese	105	2.62	2.07			
A	American	67	4.31	1.29	1.80	0.074	163
	Chinese	105	3.90	1.68			
E	American	67	0.433	0.908	1.73	0.085	168
	Chinese	105	0.72	1.29			
P	American	67	1.04	1.27	2.19	0.030	157
	Chinese	105	1.51	1.51			
A	American	67	1.13	1.09	1.18	0.238	158
	Chinese	105	1.35	1.31			
E	American	67	2.04	1.52	0.77	0.441	161
	Chinese	105	2.25	1.90			
P	American	67	4.69	1.20	2.10	0.037	160
	Chinese	105	4.26	1.47			
A	American	67	4.70	1.37	2.71	0.007	163
	Chinese	105	4.05	1.78			
E	American	67	3.48	1.49	3.30	0.001	141

		N	Mean	SD	t-value	p-value	DF
P	Chinese	105	4.25	1.50	1.31	0.193	152
	American	67	2.87	1.38			
A	Chinese	105	3.16	1.55	0.15	0.882	143
	American	67	3.57	1.40			
	Chinese	105	3.60	1.43			

(E)valuation, (P)otency, (A)ctivity.

N=number, SD= standard deviation, DF=degree of freedom

Basic Smiley :-)

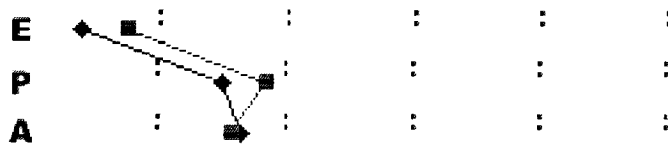


Figure 1. Profiles of the American and Chinese participants' mean ratings of :-)

The Americans and the Chinese agree on the potency ($p > 0.05$) and activity ($p > 0.05$) dimensions of the basic smiley and there is significant difference between the two groups on the perception of basic smiley in the evaluation dimension. Figure 1 presents line graphs of the means ratings. Comparing the two profiles, it can be observed that both the Americans and the Chinese rate the basic ASCII smiley lively and the Americans rated the basic smiley happier, higher than the Chinese.

Basic Frown :-)

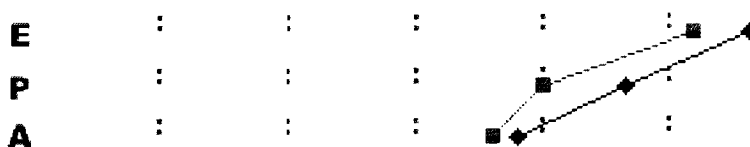


Figure 2. Profiles of the American and Chinese participants' mean ratings of :- (

The Americans and the Chinese disagree on the evaluation ($p < 0.05$) and potency ($p < 0.05$) dimensions of the basic ASCII frown and agree on the activity dimension ($p > 0.05$). The basic frown profiles show that both the Chinese and Americans think the frown apathetic and the American participants perceive the basic frown sadder and lower than the Chinese participants.

Basic Wink ;-)

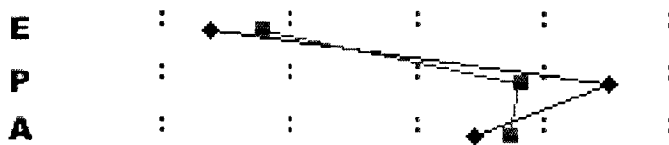


Figure 3. Profiles of the American and Chinese participants' mean ratings of ;- (

The Chinese and the American participants agree on the evaluation ($p > 0.05$) and activity ($p > 0.05$) dimensions of the basic wink and there is significant difference between the groups' perceptions of the wink in the potency dimension ($p < 0.05$). Both the Americans and the Chinese think the wink cunning and emotional but the American participants rate the emoticon more much frivolous than the Chinese sample.

Graphic Smiley 😊

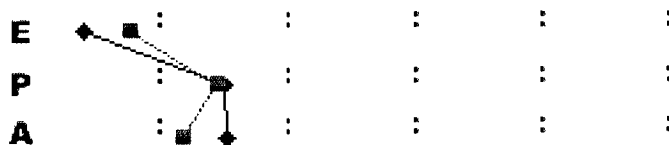


Figure 4. Profiles of the American and Chinese participants' mean ratings of 😊

For the perception of the graphic version of the basic ASCII smiley, the differences in the potency and activity dimensions are not significant (both $p > 0.05$) and there is

significant difference in the evaluation dimension ($p < 0.05$). The American participants perceive the graphic smiley much happier than the Chinese participants. The Chinese think the graphic smiley livelier than the Americans but the difference is negligible. The line graph shows that both groups' profiles of the graphic smiley resonate their ratings of the basic ASCII smiley but both of them change slightly in degrees on the perception of the two emoticons in the EPA dimensions. Both groups think the graphic emoticons a little bit livelier than the ASCII smiley but the change is small and negligible.

Graphic Frown 😞

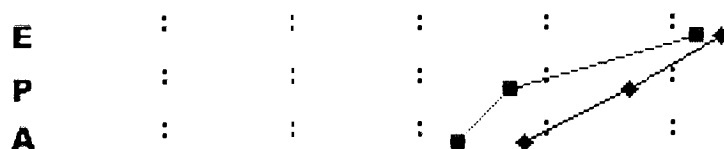


Figure 5. Profiles of the American and Chinese participants' mean ratings of 😞

There is significant difference in the potency dimension ($p < 0.05$) and the difference in evaluation and activity dimension is not significant ($p > 0.05$). Both the Americans and the Chinese think the graphic frown sad. The Americans rate the graphic frown lower and much more apathetic than the Chinese sample but the difference in the potency dimension (high/low) is statistically insignificant. Both groups' profiles of the graphic frown correspond to the profiles of their perception of the basic ASCII frown.

Animated Graphic Wink 😏

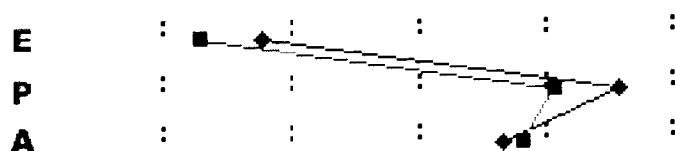


Figure 6. Profiles of the American and Chinese participants' mean ratings of 😏

In the two groups' perception of the animated graphic wink, there is significant difference in the potency dimension ($p < 0.05$) and the difference in the evaluation and activity dimensions is insignificant ($p > 0.05$). The American participants rate the cartoon wink more frivolous than the Chinese participants. Although the two samples' ratings of the EPA dimensions differ slightly to their ratings for the ASCII wink, comparison of the line graphs for the graphic and ASCII emoticons indicates that their overall perception remain the same.

Open-mouthed Smiley 😄



Figure 7. Profiles of the American and Chinese participants' mean ratings of 😄

There is no significant difference in the perception of the open-mouthed smiley in all the EPA dimensions ($p > 0.05$) between the Chinese and the American participants. Both the Americans and the Chinese perceive the open-mouthed graphic smiley as pleasant, wild and active and both groups reach consensus on the meaning of this emoticon.

Animated Crying Emoticon 😭



Figure 8. Profiles of the American and Chinese participants' mean ratings of 😭

There is no significant difference in the Chinese and American participants' perception of the animated crying emoticon in the EPA dimensions ($p > 0.05$). Both the

Chinese and the Americans are very close in their perception of the meaning of the animated crying emoticons in the EPA dimensions.

Angry Emoticon 🤔

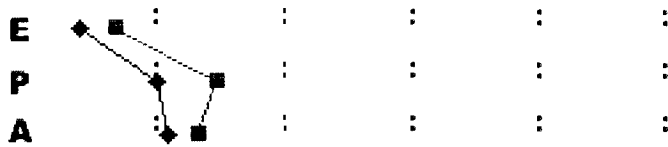


Figure 9. Profiles of the American and Chinese participants' mean ratings of 🤔

There is no significant difference in the American sample and the Chinese respondents' perception of the angry emoticon in the evaluation and activity dimensions ($p>0.05$). Both the Americans and the Chinese perceive the graphic angry emoticon very angry and violent. The difference in the perception of potency dimension is significant ($p<0.05$). Americans rated the emoticon hotter than the Chinese. The American participants also rated the emotion more angry and violent than the Chinese participants but the difference is insignificant statistically.

Embarrassed Smiley 😊



Figure 10. Profiles of the American and Chinese participants' mean ratings of 😊

There is no significant difference in the American and the Chinese' perception of the meaning of the embarrassed emoticon in the evaluation dimension ($p>0.05$). Significant difference exist in the potency and activity dimensions ($p<0.05$). The Americans perceive the embarrassed smiley more tender and timid than the Chinese.

Confused Smiley 😬

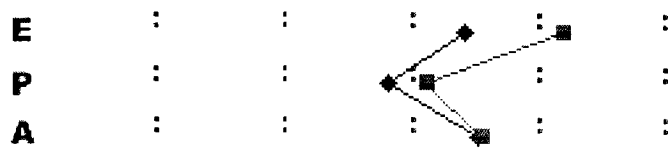


Figure 11. Profiles of the American and Chinese participants' mean ratings of 😬

The difference in the American and Chinese participants' perception of the confused smiley in the evaluation dimension is significant ($p < 0.05$) and the differences in the potency and activity dimensions are insignificant ($p > 0.05$). Participants of both cultures are almost neutral in the potency dimension (delicate/rough) of the meaning and agree on the activity dimension (quick/inert). But the Chinese respondents rate the confused smiley more awful in the potency dimension than the Americans.

The data of the Semantic Differential Scales answer the research question that whether the Americans and Chinese CMC users share meaning of emoticons. American and Chinese participants agree on the meaning of open-mouth smiley and crying smiley and disagree on the meaning of basic ASCII smiley, basic ASCII frown, basic ASCII wink, graphic smiley, graphic frown, animated graphic wink, angry graphic smiley, embarrassed graphic smiley and confused graphic smiley. The third hypothesis that the Americans and the Chinese agree on the meaning of emoticons is partially supported by data.

Discussion

The results from this experiment are interesting for intercultural CMC in many ways. Both the Chinese and American participants claimed that they used emoticons for

entertainment, social interaction and information purposes. Similar to the reasons Japanese emoticon users stated in their interviews on emoticon use, Chinese and American emoticons users indicate that they use emoticons for fun, to supplement the meaning expressed in words and to look friendly and humorous in online interactions. But there are also differences in their motivations of emoticon use, at least in degrees. These differences are important in the application of face-to-face intercultural communication theories in the new environments of CMC. Previous researches in the intercultural communication in the face-to-face context find that people from high-context cultures have strong tendency to use nonverbal cues such as body language, situation, relationship to communication meaning and members of low-context cultures have strong tendency to communicate meaning in explicit codes such as words. Members of collectivistic cultures emphasize harmony in social interactions and are more engaged to promote friendly in-group relationships than members of individualist cultures.

The results of this survey show that American participants were more likely than the Chinese participants to use emoticons for information purposes such as clarifying the meaning of the text and supplementing the meaning expressed in words, which supports the differences between the American and the Chinese communication styles in high-/low-context dimension. People of high-context cultures are more likely than people of low-context cultures to leave a message ambiguous without adding extra information to clarify or supplement the meaning of messages expressed in words (Tim-Toomey, 1988). Empirical research (Katsuno & Yano, 2002) on emoticon usage motivations also suggests that people of high-context cultures rely on context and internal information such as social distance and interrelationships between communicators in stead of linguistic cues

such as emoticons to help transfer meaning in CMC. These reasons can also explain why Chinese participants indicated that they were less likely to use emoticons for information purposes.

Chinese participants indicated that they were more likely to use emoticons for social interactions than the American participants to compensate for the lack of nonverbal cues and to facilitate friendly interactions in CMC. This phenomenon supports the emphasis on harmonious in-group relationships in collectivistic cultures and the cultural differences between the Chinese and the Americans in collectivistic/ individualistic dimension.

Universality in perception of emotions across cultures is partially supported by data collected in this study. The American and the Chinese respondents disagree on the meaning of most emoticons on the EPA dimensions and share the meaning of only two emoticons. However, that does not mean if an American uses :-) or a graphic smiley in a letter to a Chinese emoticon user, the receiver cannot understand what the American sender or the emoticon means at all. The disagreement often happens in the degree and not in the direction of the scales, i. e., the graph lines of the American and the Chinese mean ratings of the same emoticon in EPA scales usually share a similar pattern in general and the directions of the two lines are always the same but the two groups' mean ratings for each dimension of the emoticons are always different. For example, for the ASCII frown in the survey, both the Americans and the Chinese think the emoticon extremely sad, very low and somewhat apathetic and the profiles of the two groups' mean ratings share the same pattern and direction. But the Americans' mean ratings of the emoticon in the EPA dimensions are higher than the Chinese's and the Americans and Chinese disagree on the intensity in the perception of the emoticon in these dimensions.

Emoticons can be used as paralinguistic cues in computer-mediated intercultural communication between people of collectivistic and individualistic cultures. Users across cultures can understand the overall meanings of the same emoticons but their perception of the emoticons' meanings may be different in intensity and the intended effect of the emoticons may not be conveyed to fullness.

There are also some other interesting findings in the perception of the meaning of emoticons. First, for the two emoticons of high intensity (open-mouthed smiley and animated graphic crying smiley) used in the survey, the American participants and the Chinese participants reach consensus and share the meaning of the two emoticons in the EPA dimensions. The results correspond to the conclusion in Matsumoto and Ekman's (1989) experiments that people of different cultural backgrounds can identify intense emotional facial expressions and agree on the relative intenseness of these emotional expressions. Second, for the rest of the emoticons, the Americans participants constantly assign higher degree of intensity in EPA scales than the Chinese participants. This tendency of Americans to rate the meaning of emoticons, the online symbols of emotions, more intense than the Chinese corresponds to the findings of previous research on the judgment of emotional intensity of facial displays among Americans and Japanese participants (Matsumoto & Ekman, 1989; Matsumoto, 1991, 2002). Japanese participants in face-to-face study rated the emotional facial expressions less intense than the American participants and the scholars believed that the difference in intensity ratings could be associated with the difference of the Japanese and American cultures in collectivistic/individualistic dimension. The fact that American emoticons users perceived the meaning of most emoticons tested in this study as more intense than the

Chinese users proves that difference of individualistic and collectivistic cultures in the perception of the intensity of emotional expressions in face-to-face communication is also true in CMC.

Conclusions

The Internet has become an important international medium. The rapidly increased interactions among people all over the world via the Internet make it very important to study the CMC with an intercultural perspective. The Internet is a powerful new medium to promote the intercultural interactions among people of different cultures and also a new field for intercultural communicators to explore.

This study on the meaning and use of emoticons proves that cultural differences in high-/low-context and individualism/collectivism dimensions that have affected people's use of communication styles also have an impact on people's emoticon use in online interactions. The cultural universality and differences in the perception of emotional expressions are also effective in CMC. However, these findings are only limited to emoticons, a small category of paralinguistic cues used in CMC. Since many Internet users do not use emoticons and use of emoticons is mostly restricted to informal and personal Internet interactions, the findings of this study cannot be applied to intercultural CMC in general. This study does not test for the level of context involved in communication in the Chinese and American cultures and take the Chinese and American cultures as representatives of high-/low-context cultures based on previous research. But most previous research works were carried out well before the Internet was widely used in these countries. The Internet can help promote users' cross-cultural sensitivity and

expose users to various different cultures and communication practices. Internet users may alter their perception of their own culture and other cultures through intercultural interactions on the Internet. They may adopt typical communication behaviors of another culture and abandon the corresponding practices in his own culture. Perceptions and behaviors that are typical to one cultural group and are always used to distinguish cultures may not hold true for Internet users. Internet also has its unique culture and cyber culture may affect users' online behaviors when they adapt to the cyber culture of their Internet communities. English is widely used in online communities and it is possible that cyber cultures are dominated by low-context cultures that use the English language. This may affect people's use of context in online communication. For example, Chinese users may use emoticons to compensate for the lack of nonverbal cues used in high-context cultures. Since most of the participants in the survey have used the Internet for more than two years and spend a considerable time on the Internet every day, their online behaviors may have been affected by the cyber culture or foreign cultures thorough intercultural interactions on the Internet.

Future work should be done to explore how cultural differences in various existing dimensions such as power distance, uncertainty avoidance, masculinity, etc. affect the use of both verbal and paralinguistic messages in CMC and on people' communication style in the computer-mediated interactions. Knowledge on the influence of culture on CMC will help to make the Internet a better medium for international communication and to promote intercultural communication to a new level.

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Appendix 1 Approval of Human Research Review Board

R·I·T

Rochester Institute of Technology

NTID Institutional Review Board for the
Protection of Human Subjects in Research
52 Lomb Memorial Drive
Rochester, New York 14623-5604
Phone: 585-475-5343
Fax: 585-475-77850
Email: ghyde@mail.rit.edu

Form C
IRB Decision Form

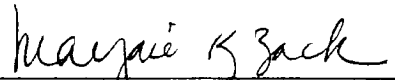
TO: Yujiao Wang
FROM: RIT Institutional Review Board
DATE: November 7, 2003
RE: **Decision of the Institutional Review Board**

Project Title: *Cultural Differences in Emoticon Uses*

The Institutional Review Board (IRB) has taken the following action on your project named above.

- ☐ Exempt
- ☒ Approved as Type I. No Informed Consent is required.
- ☐ Deferred. Do not seek informed consent or involve human subjects until approved by Board. Please submit the following additional information so Board can act on your request:
- ☐ Disapproved or suspended. You are free to resubmit with revisions, and to request a hearing with the Board.

Now that your project is approved, you may proceed as you described in the Form A. **Note that this approval is only for a maximum of 12 months; you may conduct research on human subjects only between the date of this letter and September, 2004.** You must promptly report to the IRB any proposed modifications, unanticipated risks, or actual injury to human subjects. The IRB will send you a Form F approximately two months before the end of your 12-month human research project. If your project will extend more than 12 months, your project must receive continuing review by the IRB – please contact me for information that must be presented to the IRB for continuing approval to conduct human subjects research at RIT.



Marjorie K. Zack
Institutional Review Board Administrator
(On behalf of Richard Doolittle, IRB Chair)

cc: IRB Members

Appendix 2 Questionnaire

Hello, welcome to my emoticon survey! My name is Yujiao Wang. I am a graduate student at the communication department of Rochester Institute of Technology. My graduate thesis is to explore the cultural differences in people's motivations of emoticon uses and to find out whether emoticon

users agree on the meaning of emoticons.

Do you use emoticons, such as :-)? If yes, you are invited to take this survey. It will take about 15 minutes to fill out the form. Participants are kept anonymous throughout the survey and all the answers will be kept confidential. Thank you and enjoy. :-)

1. In which year were you born?

2. What's your gender?

Female ☐ | Male ☐

3. Please indicate your country of birth.

United States ☐ | China ☐ | Or other

4. If you are an American, what is your ethnic background?

Asian American ☐ | African American ☐ | Caucasian ☐ | Hispanic ☐ | Native American ☐ | Or other

5. What is the highest academic degree you hold?

High school diploma ☐ | associated degree ☐ | Bachelor ☐ | Master ☐ | PhD ☐ | Or other

6. How long have you been using a computer?

More than two years ☐ | more than one year ☐ | less than a year ☐

7. How long have you been using the Internet?

More than two years ☐ | more than one year ☐ | less than a year ☐

8. Have you seen emoticons, for example :) or :-)?

Yes ☐ | No ☐

9. Have you used emoticons?

Yes ☐ | No ☐

10. How long have you been using emoticons?

More than two years ☐ | more than one year ☐ | less than a year ☐






11. How much time do you spend on the Internet every day?

More than three hours ☐ | Less than three hours ☐ | Less than an hour ☐ | Less than 30 minutes ☐ |

12. Please indicate your attitude toward each of the statement on a 1 to 5 point scale, with "1" as "not at all true of me" and "5" as "completely true of me".

I use emoticons because I just like to use them. 1 ☐ 2 ☐ 3 ☐ 4 ☐
5 ☐






I use emoticons because they are enjoyable.

1  2  3  4 
5 






Emoticons amuse me.

1 2 3 4
5






I use emoticons because it makes me friendlier.

1  2  3  4 
5 






Using emoticons is something to do when chatting with friends.

1  2  3  4 
5 






Emoticons make me look humorous with people.

1  2  3  4 
5 






I use emoticons so I can talk to other people more easily.

1  2  3  4 
5 






I use emoticons so I can communicate more clearly.

1  2  3  4 
5 






I use emoticons to clarify my meaning.

1  2  3  4 
5 

I use emoticons to supplement my sentences.


1  2  3  4 
5 






I use emoticons to express my feelings.




1  2  3  4 
5 

Please indicate how you think the following words describe each emoticon. The button nearest to the word indicates the highest degree, the one in the middle indicates neutral and the farthest one indicates the lowest degree.

13. :-)

Happy        Sad

High        Low

Lively        Apathetic

14. :- (

Happy  Sad
High  Low

Lively ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Apathetic

15. ;-)

Cunning ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ simple-minded

Serious ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Frivolous

Rational ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Emotional

16. :-)

Happy ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Sad

High ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Low

Lively ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Apathetic

17. :-)

Happy ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Sad

High ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Low

Lively ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Apathetic

18. :-)

Cunning ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ simple-minded

Serious ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Frivolous

Rational ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Emotional

19. :-)

Pleasant ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Unpleasant

Wild ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Tame

Active ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Dull

20. :-)

Pleasant ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ bitter

Strong ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Weak

Cheerful ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Lonely

21. :-)

Angry ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Pleased

Hot ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Cold

Violent ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Calm

22. :-)

Sweet ☐ ☐ ☐ ☐ ☐ ☐ ☐ Sour

Tough ☐ ☐ ☐ ☐ ☐ ☐ ☐ Tender

Courageous ☐ ☐ ☐ ☐ ☐ ☐ ☐ Timid

23 😊

Nice ☐ ☐ ☐ ☐ ☐ ☐ ☐ Awful

Delicate ☐ ☐ ☐ ☐ ☐ ☐ ☐ Rough

Quick ☐ ☐ ☐ ☐ ☐ ☐ ☐ Inert

Thank you for taking time to complete this survey. If you are interested in the results, you may come back a month later or please contact me at yxw1204@rit.edu.