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The use of emotional markers as visual cues in online emotional discourse

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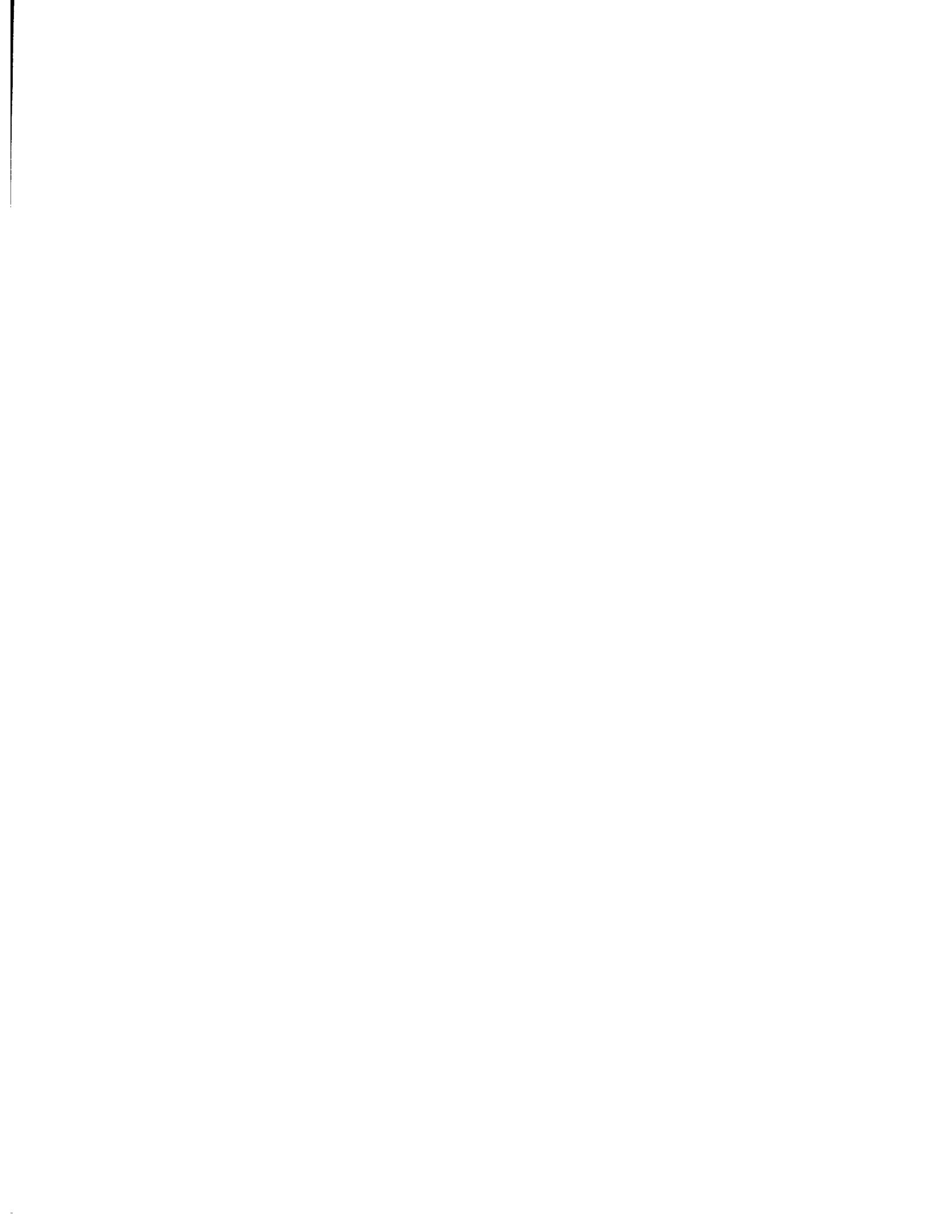
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THE USE OF
EMOTIONAL MARKERS AS VISUAL CUES
IN ONLINE EMOTIONAL DISCOURSE

A thesis
Presented to
The Faculty of the Department of
Communication Studies
San Jose State University

In partial fulfillment
of the Requirements for the Degree of
Master of Arts

By
Janet Baker
August 2002

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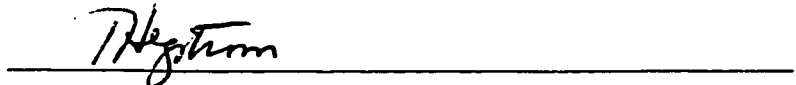
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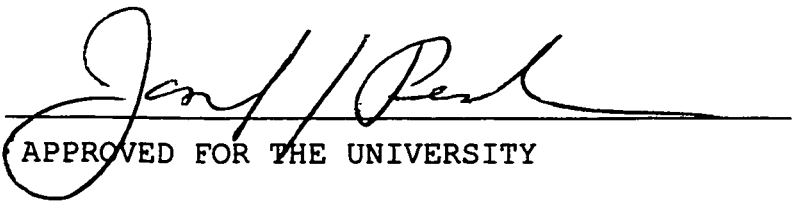
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Abstract

Online Emotional Discourse: The Use of Emotional Markers as Visual Cues in Computer-Mediated Communication

By Janet Baker

This study focuses on the textualization of emotion and the seeming relatedness of gender and the amount of emotion utilized in online discussion forums on the Internet. The sample of 600 messages was drawn from six selected websites chosen for their gender composition with two sites being male-oriented, two female-oriented, and two mixed gender. The messages were coded for four types of emotional markers (positive emoticons, negative emoticons, emphasis cues, and expletive cues), gender of the author, and word count. A number of research questions were asked regarding: (1) which gender had a higher frequency of use of emotional markers, (2) the functions or purpose of the markers, and (3) the environment in which these markers were used. The results focused on three areas: (1) the data does not support the general question that women use more emotional markers than men when factoring in the length of the message, (2) the study had a high level of messages

where gender was indeterminate, and (3) the message environment itself serves as a context invoking a rhetorical situation.

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Chapter I - Introduction

It was once said that "societies have always been shaped more by the nature of the media by which [we] communicate than by the content of the communication" (McLuhan 1964, p.8). This statement, uttered before the age of the Internet, remains valid today. But, the content can no longer be ignored as a byproduct of the media, "the world has changed considerably in the last 35 years since Marshall McLuhan (1964) claimed in *Understanding Media* that 'the medium is the message,' examinations of orality and literacy have confirmed that language changes when communication media shift" (Lee, 1996, p. 276). In this case, the medium is cyberspace and the message reflects a hybrid of text and orality.

This hybrid combines aspects of orality, such as visual cues, with text to form an online discourse in computer-mediated communication (CMC). Researchers study the use of visual cues to understand strategies for communicating emotion online through written discourse and emotional markers, including punctuation expressions known as emoticons. The visual representation of emotional markers has nonverbal aspects that give them various textual and visual uses (Lee, 1996). Psychologists examine

a wide array of areas including the social psychological content (Kiesler, Siegel and McGuire, 1984) and the emotional quality of messages (Lea, 1991). In the area of visual literacy, researchers study the frequency of emoticons, graphical smiley faces, as visual cues as well as the interpretation of the various symbols (Rezabek, Cochenour, 1995).

The growing use of computer-mediated communication (CMC) has drawn the attention of researchers in many fields, including linguistics, psychology, communication studies, and visual literacy, as to how online discourse affects language and gender relationships. The effects of online communication and the relationship between gender and language in CMC are examined in all the above disciplines (Herring, 1994; Witmer, Katzman, 1997; Savicki, Lingenfelter and Kelley, 1996). Linguists note that men and women exhibit some of the same culturally learned gender styles in this text-based medium (Herring, 2000) as in other forms of communication. Do the same gender styles of face-to-face interactions translate to the Net, or is CMC an open forum where men and women communicate on the same level? Previous studies have suggested that CMC both hinders (Herring, 1994) and enhances (Herschel, 1994)

communication for both genders by creating a new environment where gender is not a key factor. As with almost all modes of communication, there are few extremes but many possible combinations in the middle.

Research on the use of emotional markers in online transactions has just begun. Scholars are beginning to investigate information about their frequency, variety, and usage patterns. Early researchers suggest that the use of emoticons is a personal decision for the computer user (Rezabek and Cochenour, 1995). Moreover, researchers note a "love/hate" relationship with emoticons. Where one user will scatter emoticons throughout the text of a message, another user will shun them saying they are annoying and irrelevant. Emoticons in messages can also be used as a possible gender marker in electronic discourse. In early studies found that women tended to use these graphical accents more than men (Witmer and Katzman, 1997). However, the sample of women users in this study was low so it is difficult to say if this theory will hold true in future studies.

As noted, previous studies have examined the use of emoticons as visual cues but there is not enough evidence to support a definite conclusion. This study will

investigate the use of emotional markers as visual and textual cues in text-based online discourse along these dimensions (1) which gender has a higher frequency of use, (2) the functions or purpose of the markers, and (3) the environment in which these markers are used. The online environment could potentially have an impact on the use of emotional markers. There are numbers of websites, bulletin boards, and chat rooms in which people post messages. Some of these attract only female users and some only attract male users, but many attract both sexes. Does the gender mix of the website play a role in the use of emotional markers?

A variety of environments will be used in this study: female-dominated, male-dominated, and mixed gender websites to answer this question more thoroughly. Before one can better understand the use of emotional markers in CMC, it is necessary to look at the context in which emotion is conveyed in online messages.

Chapter II - Review of Literature

The literature on the use of emotional markers can be divided into three areas 1) socioemotional discourse, 2) gender styles in online communication, and 3) the use of cues in interpersonal relationships.

Socioemotional Discourse

Research into the social psychological aspects of messages reveal the textualization of emotions such as humor, anger, happiness, and excitement shapes the tenor of an online message. Typical face-to-face communication contains much socioemotional content including nonverbal cues. CMC relies on converting these nonverbal cues into text that conveys the emotion of the message sender. Socioemotional discourse changes the Internet from an information system to a lively interactive medium where social meaning is developed. Not only does the Internet facilitate information transfer, it inspires people to share interests and develop relationships. This poses the question of how CMC alters face-to-face human communication.

Advancements in technology that change human communication began long before the Internet age. When the telephone was first introduced, people and society adapted to a new social structure where communicating with loved one across country became commonplace. The telephone, like other technologies, is not simply a mechanical device, but also a system of social relationships and practices (Rakow, 1992). Just as the telephone affects lines of communication so does computer-mediated communication. Where telephones broke down the distance barrier, CMC breaks down the time barrier. A phone call can be placed across continents in a matter of seconds but time differences remain present. With the Internet, a user may post a message in the evening and receive a response the next morning without face-to-face interaction. Messages can be sent, retrieved and responded to at any time of the day and night. Researchers seek to understand how these implications of CMC affect interpersonal relationships.

Some researchers believe that computer-mediated communication lacks the natural richness and interaction of interpersonal communication than face-to-face interaction (Rice and Love, 1987). Because of the medium type, CMC users exhibit fewer natural communication behaviors.

Although this may be true, many users develop socioemotional content online to enhance, develop and differentiate their messages. Others researchers have found that although the initial impression building in CMC is slower than FTF, associations can be developed online and can be as deep and meaningful as traditional relationships (Walther, 1993). CMC may have clear advantages over the typically socioemotionally rich content of face-to-face communication, and users may be able to adapt to the Internet's narrow bandwidth (Rice and Love, 1987). There are many examples of humor, frustration and, most commonly seen, anger, known as flaming, in online discourse. These emotions are reviewed in turn.

Few researchers have studied humor online. Although jokes are widely distributed on the Internet, real humor discourse is harder to find. Many CMC scholars argue that the lack of visual and auditory information in computer-mediated talk strips cues to status, appearance, identity and gender. Baym (1995) examines the topic as to how humorous performance can be used to create group solidarity, group identity, and individual identity within the CMC environment. She concludes that humor is the transforming social structure of the community. An

individual can create his or her own voice through humor leading to recognition among group members and eventually an "enhanced power to shape group consensus" (p. 20).

Humorous text helps establish an online persona to create an individual voice.

Humor is an embedded socioemotional aspect of people's character. It is a "specially marked, artful way of speaking that sets up or represents a special interpretive frame within which the act of speaking is to be understood" (Bauman and Briggs, 1990, p. 61). Many nonverbal cues exist in relating face-to-face humor, such as a wink, gesture, posture, and facial expression. The absence of non-verbal and other material cues to identity enables participants of online discourse to use and create new ways to express their humor. The above-mentioned nonverbal cues are expressed visually leading to a richer textual exchange. Humorous narrative provides another way to express emotion online. Through the use of narrative, the author creates a playful atmosphere, invoking other participants in the online conversation to respond. Humorous narrative can be satirical, comical, pointed or lighthearted. In any form, humor invokes a mode that pulls people into the conversation and opens the venue for playful discussion. It

also opens up wordplay that leads to individual interpretation and a friendly social context despite the impersonal elements of the medium.

More commonly seen than the use of humor online is the use of argumentative discourse, or flaming. This frequent breach of netiquette involves messages that precipitate attacks directed toward someone due to a position taken in a message posted to a group often in a personally derogatory manner (Mabry, 1997). The apparent acceptance of argumentative discourse in CMC contrasts with face-to-face communication where standard rules of society and etiquette would call these same people rude and insulting. As always, there are exceptions. Some discussion groups and bulletin boards abhor flaming. Users who post flaming remarks will receive several responses to abstain from flaming or risk further reprimands from the user community. While others use flaming as a game to invoke emotional responses and escalate the intensity of the dialogue.

Extreme socioemotional content may occur precisely because of the lack of social control that nonverbal cues provide. According to Rice and Love (1987), 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). Through the study of socioemotional discourse, researchers will better understand the affects that computer-mediated communication can have on interpersonal relationships. The use of emotional language does not take the place of non-verbal cues in face-to-face interaction, but it does create a bridge between computer users to help them connect to each other to form relationships.

Gender Styles

Gender styles provide another unique component to computer-mediated, over face-to-face, communication in online emotional discourse. Scholars in many fields have scrutinized the verbal communication styles of men and women. Lakoff (1973) noted that feminine language contains higher social warmth than masculine language. Tannen (1990) indicates that women's communication tends to be more supportive and rapport-building, while men typically are more report giving and informative. While Tannen's research has been questioned for its intellectual rigor, she makes a strong point as to the tenor of each gender's communicative

styles. CMC studies on gender styles do not report the same findings. One reason could be lack of female participants in online discussions. However, online gender styles represent a relatively new area of study so firm conclusions remain difficult to find.

Recent CMC researchers studied the affects of CMC on gender style and composition (Herring, 1994; Savicki, Lingenfelter, and Kelley, 1996; Witmer and Katzman, 1997). The researchers went into the studies believing that the gender composition in CMC would be similar to that of face-to-face. However, the research at this time seems to be inconclusive. In a study containing over 3000 messages on 27 online discussion groups, Savicki, et al (1996) investigated group gender composition and the seeming relatedness between gender roles and group process functions. Along with other suppositions, the authors hypothesized that the larger the proportion of men in discussion groups, the more the members would use argumentative, coarse or abusive language. The authors also hypothesized men would far outnumber women as participants in the online discussion groups. Their results supported the latter hypothesis, with 73% of the subjects being male and 75% of the messages authored by men. The first

hypothesis was not supported by the results; larger numbers of men do not result in a corollary increase in challenging, argumentative, coarse or abusive words.

In another study, using the same dataset as Savicki, et al (1996), Witmer and Katzman (1997) hypothesized that women use more graphic accents than men in their computer-mediated discourse, that men use more challenging language than women in computer-mediated discourse, and that men flame more often than women in computer-mediated communication. The first hypothesis partially supports the data. Neither gender extensively used emoticons, with only 13% of the total sample using one or more emoticons in their messages. However, the computer users who did primarily use emoticons were women. The data did not support the second and third hypotheses.

What is interesting to note in the above two studies, particularly that of Witmer and Katzman (1997), is that the researchers actually found that women tend to challenge and flame more than the men in their sampled group. The authors offer possible explanations that: 1) women might feel more at ease in the relatively anonymous electronic environment, 2) women who engage in CMC may already be involved in male-dominated endeavors such as high-tech organizations and

academia, and 3) women in the data set may not represent women in general nor their places in the male-dominated power structure. These studies fail to demonstrate whether or not the same gender styles hold true in computer-mediated as they do in face-to-face communication. The use of visual cues as emotional markers in CMC play an important role in the social linguistic qualities of online discourse.

Cues and Emoticons

Forming relationships online, or just having a conversation in a chat room, is much different than developing a face-to-face relationship. When meeting someone for the first time, one may notice many visual cues before even saying a word. An impression can be developed simply based on a person's greeting, stance, or outward appearance. These nonverbal cues offer insight into a person's character. Once an individual has developed a friendship or romantic involvement, nonverbal communication continues to play a huge role in the relationship. Participants in social interaction orient themselves by attempting to understand "what's going on." Cues denote the

characteristics, roles and relationships of those who are participating and the manner of their behavior (Jacobson, 1996). Walther and Tidwell (1999) define interpersonal communication, referring to face-to-face, as "communication strategies that are based on the individuating knowledge a source has about a target - not the sociological/social group or cultural assumptions we hold about others, but what we hold about people whose personalities and attitudes we really have gotten to know" (p. 323). Because of the lack of these nonverbal cues in CMC, visual cues are used in CMC to enhance the content of a message.

Text-based interaction, such as computer-mediated communication, lacks the nonverbal social cues used to interpret visual statements. Culnan and Markus (1987) dubbed this phenomenon as the "cues-filtered-out" approach. They identified a core assumption that substituting technology-mediated for face-to-face communication will result in predictable changes in intrapersonal and interpersonal variables. Therefore, if CMC alters impression development, communication should be different than in other settings (Walther, 1993). So how do we form impressions and develop relationships online without the use of nonverbal cues? As in most forms of communication,

humans find ways to develop relationships, show emotion, and form impressions. In CMC, linguistic and nonverbal cues have developed into visual cues. For example, many online writers may use capital letters in order to convey an emphasis. This draws the readers's attention to the statement and provides the author a way to supplement text with a strong visual statement. In addition to capital letters, many people use punctuation marks to emphasize a thought or convey an emotion. For example, using several exclamation marks at the end of a sentence can denote extreme joy or happiness. On the other hand, several asterisks, punctuation marks and symbols joined together, i.e. **@#!!#*!! , could take place of an obscenity and express displeasure, anger, or frustration.

Another CMC visual cue is called an emoticon. An emoticon is an artistic visual cue formed through the use of typographical symbols that when read sideways represent feelings or emotions (Rezabek and Cochenour, 1995). Because they are read sideways, emoticons contribute an element of play even before the reader decodes the symbols (Lee, 1996). These are typically represented as smiley or sad faces. Rezabek and Cochenour (1995) examined the utility of emoticons as visual cues from the perspective of

traditional communication models and presented research on the frequency of emoticon use in CMC. The authors supposed that multiple factors may influence the use of emoticons, such as 1) level of communication formality, 2) cohesion of the communication group, 3) age, 4) gender, 5) difficulty of icon reproduction, 6) commonality of meaning, and 7) personal preference.

The use of online textual messages offers a way to convey emotion in what appears to many as an impersonal and stark medium. These graphical accents can add expressiveness, emotion and aesthetics to written discourse. Do these smiley faces at the end of messages provide the reader with an insight into the author, or are they just annoying little punctuation marks that you have to strain your neck to read? Do people that use emoticons also use emotional language in their messages? And, do men and women use emoticons in the same way, and with the same frequency?

The empirical research on emoticons and visual cues is inconclusive. Witmer and Katzman (1997) hypothesized that women use more graphical accents than men do in their computer-mediated discourse. The authors coded over 3,000 messages and found that their hypothesis was partially

supported by the data. Neither gender extensively used emoticons, with only 13% of the total sample. However, the computer users who did primarily use emoticons were women. Ideally, more research on visual cues, including emoticons, will determine why they are being used and for what purposes.

Through the review of socioemotional discourse, gender styles and cues and emoticons in online discussions, the question remains: does a pattern of emotional expression appear? The absence of nonverbal cues in CMC makes it necessary for computer users to enhance their textual interaction with graphical accents to convey emotions usually interpreted visually in face-to-face encounters. Emotional markers enhance the richness of the sender's message in a textual format that offers a degree of expression usually reserved for non-verbal cues in interpersonal relationships.

Chapter III - Research Questions and Procedures

The next section will review the research questions, data collection, data analysis and results of this study.

Research Questions

As noted in previous studies in both interpersonal communication, and more recently, computer-mediated communication, there are differences in the way men and women express emotion. Witmer and Katzman (1997) hypothesized the gender stereotypes held true for online communication. However, this may not be the case. The current research points to differences, yet these studies fail to provide enough evidence to state that face-to-face and computer-mediated communication hold the same stereotypes. The data set used for this study was primarily composed of male-oriented online discussion groups that may have had a bearing on the results. The same data set was used in the Savicki et al. (1996) study.

Since these studies were conducted the percentage of women on the Web has grown significantly. The Savicki study cited male online usage to be 95% when the study was conducted in 1996. Witmer and Katzman's sample in 1997 was

84% male. According to eMarketer, an online marketing research company, women users now account for 49% of the active adult user population. Another study conducted by the Pew Internet & American Life Project, a research center focusing on the social impact of the Internet, suggests that gender parity on the Internet occurred in May of 2000 with women users now equaling men users. eMarketer also notes that by the year 2003, women will actually surpass men, accounting for 51% of total online users. Based on these figures, the previously noted studies appear skewed toward male users, which could have affected the final results.

Today, many websites are designed solely for women. Therefore researchers should attempt to represent women in the correct population proportion while discerning if the gender composition of discussion groups affects the amount of emotional markers used. This will be discussed in further detail later in this paper. With this latest information in mind, the author posed the following research questions.

R ₁ :	Is there a difference between men and women in the frequency of messages containing emotional markers?
R _{1A} :	Is there a difference between men and women in the frequency of messages containing positive emoticons?
R _{1B} :	Is there a difference between men and women in the frequency of messages containing negative emoticons?
R _{1C} :	Is there a difference between men and women in the frequency of messages containing emphasis cues?
R _{1D} :	Is there a difference between men and women in the frequency of messages containing expletive cues?

Emotional markers are defined as textual and punctuational accents that helps contextualize the written word by framing the message into four types of cues: positive emoticons, negative emoticons, emphasis cues and expletive cues. Emoticons were previously defined in this paper. They are subdivided as positive emoticons and negative emoticons in order to record positive and negative emotions expressed. Emphasis cues represent emotional markers used to express a positive emotion, such as happiness or excitement, in the form of capital letters or the use of more than one exclamation mark at the end of a sentence. Expletive cues represent emotional markers used to convey negative emotions consisting of use of capital

letters or a string of punctuation marks to replace profanity. The use of capital letters was tracked for both emphasis and expletive cues because any word, negative or positive, can be capitalized to show an emotion.

R ₂ :	Is there a mean difference between men and women per 100 words of text in the use of emotional markers?
R _{2A} :	Is there a mean difference between men and women per 100 words of text in the use of positive emoticons?
R _{2B} :	Is there a mean difference between men and women per 100 words of text in the use of negative emoticons?
R _{2C} :	Is there a mean difference between men and women per 100 words of text in the use of emphasis cues?
R _{2D} :	Is there a mean difference between men and women per 100 words of text in the use of expletive cues?

For this study, the author first determined who uses emotional markers and then investigated why they were being used. The above research question and sub questions were designed to understand which emotion is expressed more frequently, i.e., happiness, anger, excitement. As messages have different word counts, a common message length of 100 words of text was needed to determine frequency accurately. Also, was there a relationship between the function of the

marker and the user? For example, did women use more emphasis cues and men use more expletive cues, or visa versa. To maintain parity, 100 words of text were used as a baseline measurement as all messages are different lengths.

R ₃ :	Are the four designated sites in fact dominated by males or females?
R ₄ :	Is there a difference in the frequency of messages containing emotional markers in different message environments (male-oriented, female-oriented, mixed gender)?

Research questions R₃ and R₄ focused on the message environment. Male users have dominated most of the previous studies in this area. The websites in this study include sites that appear to be male dominated, female dominated and mixed gender users. This is expanded upon in the next section. Many people who post messages on bulletin boards or participate in chat rooms feel comfortable visiting specific websites that appeal to their interests or hobbies. These sites may be designed for women, cater to men, or reflect non-gender specific areas of interest. For this reason, the following questions were necessary.

R ₅ :	Is there a mean difference, per 100 words of text, in the use of each of the four marker types across the three message environments?
R _{5A} :	Is there a mean difference between the use of positive emoticons per 100 words of text across the three message environments?
R _{5B} :	Is there a mean difference between the use of negative emoticons per 100 words of text across the three message environments?
R _{5C} :	Is there a mean difference between the use of emphasis cues per 100 words of text across the three message environments?
R _{5D} :	Is there a mean difference between the use of expletive cues per 100 words of text across the three message environments?
R ₆ :	Is there a difference in frequency of messages containing emotional markers between the two sites within each message environment?
R ₇ :	Is there a mean difference in emotional markers between the two sites of each message environment per 100 words of text?

The role the environment has on the user in the area of expressing emotion through the use of emotional markers is unclear. The above sub questions determined if men or women use more emotional markers when the primary audience is members of the same sex or if the gender mix of the environment has no role on the use of emotional markers.

Method

For this study, portions of the ProjectH codebook were used to conduct a content analysis of the data collected. ProjectH (Rafaeli and Sudweeks, 1993a) is an international computer-supported collaboration designed as a quantitative methodology to investigate computer-mediated communication.¹ ProjectH has been used in several quantitative studies (Mabry, 1997; Rafaeli, McLaughlin, and Sudweeks, 1997; Sudweeks and Allbritton, 1996; Witmer and Katzman, 1997) and has been the focus of several studies (Allbritton, 1996; Rafaeli, Sudweeks, Mabry and Konstan, 1997). For the purposes of this study, the content scale GENDER1: is the writer male or female, and the content scale GENDER2: how does the writer identify her/his own gender, categories were combined into one content scale, GENDER. This is the most difficult scale to code, as many users do not identify their gender. If it was not possible to code the gender, the message was coded as "unknown."

The content scales (see Table 1) used from the ProjectH codebook are GENDER, EMOTICON, and EMODEVICE. The content scale EMOTICON was divided into two separate scales, POS EMOTICON and NEG EMOTICON. The content scale

EMODEVICE was divided into two separate scales, EMPHASIS and EXPLETIVE, to correspond to the categories developed in R₁.

Table 1 - Codebook

Content Scale	Definition	Example	Code
POS EMOTICON	Does the BODY OF THE MESSAGE contain icons to express a positive emotion; also include 'stage directions' which are used for the same purpose	i.e. :-) (for complete list see table 2)	1 - No 2 - One only 3 - More than one
NEG EMOTICON	Does the BODY OF THE MESSAGE contain icons to express a negative emotion; also include 'stage directions' which are used for the same purpose	i.e. :-((for complete list see table 2)	1 - No 2 - One only 3 - More than one
EMPHASIS	Does the BODY OF THE MESSAGE contain punctuation devices or capitalization to express a positive emotion (there needs to be an irregular use of the punctuation/capitalization to convey a feeling or emotion.)	i.e. CAPS !!	1 - No 2 - One only 3 - More than one
EXPLETIVE	Does the BODY OF THE MESSAGE contain punctuation devices or capitalization to express a negative emotion (there needs to be an irregular use of the punctuation/capitalization to convey a feeling or emotion.)	i.e. CAPS, !#^%\$&!!!!	1 - No 2 - One only 3 - More than one
GENDER	Is the writer female or male? (Can also identify by use of clues, identifying pronouns, words, comments)	i.e. 'being a female', 'from a male point of view', 'when I was pregnant, 'my wife thinks...'	0 - can't tell 1 - female 2 - male

Source: ProjectH codebook

Data Collection

Data for this study was randomly collected from six World Wide Web sites. Of these sites, two were female-oriented, two were male-oriented, and two were gender-neutral. Data was collected from bulletin boards within these chosen websites.

The female-oriented sites were iVillage.com and women.com. The bulletin board used from iVillage.com was a breast cancer support group. Users posting to this board were either diagnosed with breast cancer or have questions regarding breast cancer. The bulletin board used from women.com was a general discussion group. The users posting messages to this board could choose any topic for discussion. Most messages consisted of politics or current social issues.

The male-oriented sites were WebMD.com and Raiders.com. The bulletin board used from WebMD.com was focused on prostate cancer. Users posting to this board were usually seeking information regarding a recent diagnosis on prostate cancer or questions relating to symptoms after receiving treatment for the cancer. The Raiders.com bulletin board was a fan-based site designed

for general discussion regarding the NFL Oakland Raiders football team. Most discussions related to recent news about the team including trades, team members, fans and the coaching staff.

The mixed-gender sites chosen were discussion groups about the television show Survivor on Yahoo.com and NASCAR.com. Yahoo.com is a search engine designed as a starting point for searches and information on the Web. Yahoo.com also contains many bulletin boards and chat rooms, one of which is the Survivor bulletin board. Messages posted to this website were related to the most recent episode of the television show and theories about the contestants. The bulletin board used for NASCAR.com was focused on current races within the circuit and drivers.

From the six mentioned sites, 100 messages were collected from each bulletin board for a total of 600 messages. The messages were randomly selected over a seven-week time period. In several of the sites, single users were prominent in posting messages. During the data collection, messages from single users were limited to no more than four messages to ensure a cross-mix of users. All messages were included in the final study.

Intercoder reliability for these scales were determined by having two independent people code the messages. Prior to coding the messages in the research dataset, each coder completed a pretest dataset to develop an acceptable standard. If the two coders did not reach a satisfactory level of agreement, a third coder was enlisted to ensure reliability. The testing of the research questions is described in the next section of this paper.

Data Analysis

The primary analytic strategy of this study was to determine who uses emotional markers, in what frequency, and the environments in which they are used. To determine this, the statistical analysis was evaluated per research question. R₁ and its subordinate research questions used 2 x 2 chi squares to determine the difference in use between gender and whether the four types of emotional markers (positive emoticons, negative emoticons, emphasis cues, and expletive cues) were used in the message analyzed. A one-way ANOVA with post hoc analysis was used for R₂ and its subordinate research questions. The Scheffe method of multiple comparisons was used as the post hoc method

because the sample sizes were unequal (Glass and Stanley, 1970). For R₃, a 4 X 2 chi square was used to determine if the site is in fact dominated by that particular sex. Omitting the messages of indeterminate gender, the percentage of messages that were determined to be sent by either male or female was calculated for each site. R₄ used a 2 x 3 chi square analysis. A one-way ANOVA with post hoc analysis was used for sub research questions of R₅. The Tukey method of multiple comparisons was used for the post hoc analysis because the sample sizes were equal (Glass and Stanley, 1970). For research question R₆, three 2 x 4 chi square analyses were used, one for each pair of message environments. For R₇, three independent t-tests were used, one for each message environment.

Chapter IV - Results

As shown in Table 2, of the 600 messages coded, gender was only determined in 45.5% of the messages using the gender markers defined in the codebook. Within this 45.5 %, women used more gender markers accounting for 60.4%. Within the total 600 messages, men accounted for 18.0% of the total and women 27.5%, with the remaining 54.5% being of indeterminate gender.

Table 2 - frequency and percentage of individuals and messages in gender categories (R₁ overall)

Gender	N	Percent
Male	108	18.0%
Female	165	27.5%
Unknown	327	54.5%
Total	600	100.0%

Gender and Frequency of Emotional Markers

Research question R₁ addressed the difference between men and women in the frequency of messages containing emotional markers. Of the 273 messages where gender was determined, a statistically significant difference

($X^2 = 4.10$, $df = 1$, $p = .04$) between men and women in their use of emotional markers. Twice as many women used at least one emotional marker more than men. (See Table 3)

Table 3 - frequency and percentage of total emotional marker usage

Gender	Total Emotional Markers	Percentage	N
Male	22	20.4%	108
Female	52	31.5%	165
Total	74	27.1%	273

The sub questions looked at each type of emotional marker (positive emoticon, negative emoticon, emphasis cue and expletive cue). In the frequency of messages containing positive emoticons, no statistical significance ($X^2 = .19$, $df = 1$, $p = .67$) between men and women R_{1A} was found.

Table 4 - frequency and percentage of positive emoticon usage

Gender	Positive Emoticons	Percentage	N
Male	7	6.5%	108
Female	13	7.9%	165
Total	20	7.3%	273

No negative emoticons were found in the study. Since neither sex used this type of emotional marker, R_{1B} must be answered in the negative.

Table 5 - frequency and percentage of negative emoticon usage

Gender	Negative Emoticons	Percentage	N
Male	0	0%	108
Female	0	0%	165
Total	0	0%	273

In the frequency of messages containing emphasis cues, R_{1C}, a statistically significant difference ($X^2 = 6.20$, $df = 1$, $p = .01$) was found between the two genders. Within the respondents, 11.1% of men and 23.0% of women used emphasis cues.

Table 6 - frequency and percentage of emphasis cue usage

Gender	Emphasis Cues	Percentage	N
Male	12	11.1%	108
Female	38	23.0%	165
Total	50	18.3%	273

There was no statistically significant difference ($X^2 = 83$, $df = 1$, $p = 3.64$) between men and women in the use of expletive cues, R_{1D}.

Table 7 - frequency and percentage of expletive cue usage

Gender	Expletive Cues	Percentage	N
Male	6	5.6%	108
Female	14	8.5%	165
Total	20	7.3%	273

Gender and Mean Difference of Emotional Markers

In comparing the three gender categories, an analysis of variance for R_2 found a statistically significant difference.

Table 8 - mean difference between men and women per 100 words of text with messages containing emotional markers

Gender	N	Mean	Standard Deviation
Male	108	.49	1.32
Female	165	.82	1.74
Indeterminate gender	327	1.38	3.05

Table 9 - analysis of variance for R_2

	Sum of Squares	df	Mean Square	F	Sig.
Between groups	77.22	2	38.61	6.18	.002
Within groups	3727.46	597	6.24		
Total	3804.67	599			

The resultant Scheffe post hoc analysis indicates there is no significant mean difference between men and women ($p = .57$) in the use of emotional markers. However, a statistically significant difference was found between men and indeterminate gender ($p < .01$). This will be analyzed

further in the discussion section. When comparing the mean difference of positive emoticons, R_{2A} , no statistically significant difference was found.

Table 10 - mean difference between men and women per 100 words of text with messages containing positive emoticons

Gender	N	Mean	Standard Deviation
Male	108	.20	.94
Female	165	.24	1.27
Indeterminate gender	327	.25	1.09

Table 11 - analysis of variance for R_{2A}

	Sum of Squares	df	Mean Square	F	Sig.
Between groups	.26	2	.13	.10	.90
Within groups	751.18	597	1.26		
Total	751.44	599			

When comparing the mean difference of negative emoticons, R_{2B} , no statistically significant difference was found.

Table 12 - mean difference between men and women per 100 words of text with messages containing negative emoticons

Gender	N	Mean	Standard Deviation
Male	108	.00	.00
Female	165	.00	.00
Indeterminate gender	327	.02	1.09

Table 13 - analysis of variance for R_{2B}

	Sum of Squares	df	Mean Square	F	Sig.
Between groups	.04	2	.02	1.36	.26
Within groups	9.12	597	.02		
Total	9.16	599			

When comparing the mean difference of emphasis cues, an analysis of variance for R_{2c} found a statistically significant difference.

Table 14 - mean difference between men and women per 100 words of text with messages containing emphasis cues

Gender	N	Mean	Standard Deviation
Male	108	.18	.58
Female	165	.46	1.1
Indeterminate gender	327	.73	2.4

Table 15 - analysis of variance for R_{2c}

	Sum of Squares	df	Mean Square	F	Sig.
Between groups	26.85	2	13.43	3.89	.02
Within groups	2064.90	597	3.46		
Total	2091.75	599			

The resultant Scheffe post hoc analysis indicates there is no significant mean difference between men and women ($p = .48$) in the use of emotional markers. However, a statistically significant difference was found between men and indeterminate gender ($p = .03$).

When comparing the mean difference of expletive cues, an analysis of variance for R_{2D} found a statistically significant difference.

Table 16 - mean difference between men and women per 100 words of text with messages containing expletive cues

Gender	N	Mean	Standard Deviation
Male	108	.12	.73
Female	165	.12	.46
Indeterminate gender	327	.38	1.54

Table 17 - analysis of variance for R_{2D}

	Sum of Squares	df	Mean Square	F	Sig.
Between groups	9.92	2	4.96	3.42	.03
Within groups	864.30	597	1.45		
Total	874.21	599			

The resultant Scheffe post hoc analysis indicates there is no significant mean difference between men and women ($p = 1.00$) in the use of emotional markers. However, a nearly statistically significant difference was found between men and indeterminate gender ($p = .08$).

Gender Dominance

In general, gender dominance was as predicted. Of the subjects that could be identified, there were clearly more men at the male-oriented sites and more women at the female-oriented sites. Research question R₃ looked at the four sites chosen as male and female oriented to determine if they were predominantly one gender. The three by four Chi-square analysis revealed a statistically significant difference ($X^2 = 317.18$, $df = 6$, $p < .01$) among the three gender categories in the four different sites.

Of the four sites, only two showed gender dominance.

Websites 3 and 4 were the male-oriented sites. Males comprised 66.0% of users in Website 3 and 21.0% in Website 4. Females comprised 89.0% of users in Website 1 and 41.0% in Website 2. Although Websites 2 and 4 were not predominantly either male or female, unidentified users were 54.0% and 78.0% respectively accounting for the majority of users (see Table 18.)

Table 18 - Website gender identification

Website	Male		Female		Indeterminate	
	Freq	%	Freq	%	Freq	%
1	0	0%	89	89.0%	11	11.0%
2	5	5.0%	41	41.0%	54	54.0%
3	66	66.0%	10	10.0%	24	24.0%
4	21	21%	1	1.0%	78	78.0%

Websites and Frequency of Emotional Markers

A statistically significant difference ($X^2 = 18.545$, $df = 2$, $p < .01$) was determined in R_4 when comparing the frequency of messages containing emotional markers in different message environments. Male-oriented sites had a relative frequency of 19.5% of messages containing emotional markers compared to 34.0% within female-oriented sites. Mixed gender sites showed the highest percentage of messages with emotional markers with relative frequency of 38.5%.

Table 19 - frequency and percentage of messages containing emotional markers in the three message environments

Message Environment	Total Emotional Markers	Frequency	N
Male-oriented	39	19.5%	200
Female-oriented	68	34.0%	200
Mixed gender	77	38.5%	200
Total	184	30/7%	600

Websites and Mean Difference of Emotional Markers

In comparing emotional marker use per 100 words of text among the three message environment groups, R_5 , a statistically significant difference was found ($p < .01$).

Table 20 - mean difference per 100 words of text of emotional markers across message environments

Message Environment	N	Mean	Standard Deviation
Male-oriented	200	.60	1.87
Female-oriented	200	.95	2.23
Mixed gender	200	1.64	3.18

Table 21 - analysis of variance for R_5

	Sum of Squares	df	Mean Square	F	Sig.
Between groups	110.06	2	55.03	8.89	.00
Within groups	3694.61	597	6.19		
Total	3804.67	599			

The Tukey post hoc analysis shows a statistically significant difference between the mixed gender sites and the male-oriented sites ($p < .01$). In addition, the post hoc analysis shows a statistically significant difference when comparing the mixed gender sites with the female-oriented sites ($p = .02$). There is no statistically

significant difference ($p = .34$) when comparing the male-oriented and female-oriented sites. R_{5A} compares the mean difference of positive emoticons per 100 words of text in the same message environments. The variance of analysis shows a statistically significant difference ($p < .01$).

Table 22 - mean difference per 100 words of text of positive emoticons across message environments

Message Environment	N	Mean	Standard Deviation
Male-oriented	200	.02	.19
Female-oriented	200	.14	1.03
Mixed gender	200	.55	1.12

Table 23 - analysis of variance for R_{5A}

	Sum of Squares	df	Mean Square	F	Sig.
Between groups	31.48	2	15.74	13.05	.00
Within groups	719.96	597	1.21		
Total	751.44	599			

The Tukey post hoc analysis shows that the difference was not between male and female-oriented sites ($p = .52$). Instead the differences were found between the mixed gender sites and the male-oriented sites ($p < .01$) and between the mixed gender and female-oriented sites ($p < .01$).

When comparing the mean difference of negative emoticons per 100 words of text in the same message environments, R_{5B} , the analysis of variance shows no statistically significant difference ($p = .70$).

Table 24 - mean difference per 100 words of text of negative emoticons across message environments

Message Environment	N	Mean	Standard Deviation
Male-oriented	200	.01	.15
Female-oriented	200	.13	.05
Mixed gender	200	.01	.15

Table 25 - analysis of variance for R_{5B}

	Sum of Squares	df	Mean Square	F	Sig.
Between groups	.01	2	.06	.36	.70
Within groups	9.15	597	.02		
Total	9.16	599			

When comparing the mean difference of emphasis cues per 100 words of text in the same message environments, R_{sc} , the analysis of variance shows no statistically significant difference ($p = .26$).

Table 26 - mean difference per 100 words of text of emphasis cues across message environments

Message Environment	N	Mean	Standard Deviation
Male-oriented	200	.39	1.54
Female-oriented	200	.68	1.87
Mixed gender	200	.60	2.14

Table 27 - analysis of variance for R_{sc}

	Sum of Squares	df	Mean Square	F	Sig.
Between groups	9.45	2	4.73	1.35	.26
Within groups	2082.29	597	3.49		
Total	2091.75	599			

When comparing the mean difference of expletive cues per 100 words of text in the same message environments, R_{SD} , the analysis of variance shows statistically significant difference ($p = .01$).

Table 28 - mean difference per 100 words of text of emphasis cues across message environments

Message Environment	N	Mean	Standard Deviation
Male-oriented	200	.19	1.01
Female-oriented	200	.13	.60
Mixed gender	200	.47	1.71

Table 29 - analysis of variance for R_{SD}

	Sum of Squares	df	Mean Square	F	Sig.
Between groups	12,99	2	6.50	4.50	.01
Within groups	861.22	597	1.44		
Total	874.21	599			

The Tukey post hoc analysis shows a statistically significant difference when comparing mixed gender sites with male-oriented sites ($p = .05$) and statistically significant difference when comparing mixed gender sites with female-oriented sites ($p = .01$).

Comparing Sites within each Message Environment

R₆ compared the frequency of messages containing emotional markers between the two sites within each message environment. The two female-oriented did not show any statistically significance difference ($x^2 = .09$, $df = 1$, $p = .77$). The mixed gender sites also did not show any statistically significance difference ($x^2 = 1.04$, $df = 1$, $p = .31$). However, the male-oriented sites did show a statistically significance difference ($x^2 = 23.22$, $df = 1$, $p < .01$).

Table 30 - frequency of emotional markers between the two female-oriented message environments

Website	Emotional Markers	Percentage	N
1	33	33.0%	100
2	35	35.0%	100
Total	68	34.0%	200

Table 31 - frequency of emotional markers between the two male-oriented message environments

Website	Emotional Markers	Percentage	N
3	6	6.0%	100
4	33	33.0%	100
Total	39	19.5%	200

Table 32 - frequency of emotional markers between the two mixed gender message environments

Website	Emotional Markers	Percentage	N
5	35	35.0%	100
6	42	42.0%	100
Total	77	38.5%	200

Results similar to those for R₆ were obtained for R₇. Both questions compared emotional markers between the two sites with each message environment. R₇ compared the mean differences per 100 words of text and found similar results. The independent t-tests showed no significance within the female-oriented sites and the mixed gender sites. The male-oriented sites were different in their use of emotional markers ($t = 4.21, df = 198, p < .01$).

Table 33 - mean difference of emotional markers between the two female-oriented message environments

Website	N	Mean	Standard Deviation
1	100	.99	2.38
2	100	.91	2.08

Table 34 - mean difference of emotional markers between the two male-oriented message environments

Website	N	Mean	Standard Deviation
3	100	.07	.31
4	100	1.14	2.52

Table 35 - mean difference of emotional markers between the two mixed gender message environments

Website	N	Mean	Standard Deviation
5	100	1.41	2.73
6	100	1.86	3.57

The following section discusses implications of these results and offers areas for future study.

Chapter V - Discussion

There were three specific areas of this study that deserve further discussion. The first is the use of emotional markers. The data does not support the general question that women use more emotional markers than men when factoring in the length of the message. Second, the study had a high level of messages where gender was indeterminate. Possible reasons are discussed. Third, the message environment itself serves as a context invoking a rhetorical situation. Limitations to this study are discussed throughout the section. Finally, recommendations for future research are discussed.

Emotional Markers

When analyzing R_1 , women did use emotional markers more than men, with a two to one difference. However, when the same question was asked in R_2 but analyzed the total mean difference instead of frequency no significance was found between men and women. Therefore, when comparing the same amount of text, 100 words, men and women used the same amount of emotional markers when comparing the total usage of emotional markers.

However, all types of emotional markers did not show the same amount of significance. Of the four types of emotional markers, emphasis cues showed the greatest difference with women using twice as many emphasis cues than men. This finding may have had an impact on the total use of emotional markers in R₁. Emphasis cues represent emotional markers denoting general positive emotions such as happiness and excitement. The most frequent type of emotional cue used was multiple exclamation marks at the end of a sentence. Examples of which include, "That was great!!" or "I'm so happy for you!!!" This supports previous research that women use more supportive or rapport-building language than men and maintain similar patterns as face-to-face communication (Tannen, 1990).

Emotional marker usage was not the same across the six websites studies. The website environment affected the emotionality of the site significantly. When comparing the message environment and emotional markers, the mixed gender sites showed the highest frequency use of emotional markers using twice as many markers as the male-oriented sites and slightly higher than the female-oriented sites. When specifically looking at two of the websites as examples it

is clear to see that the message environment has an impact on the amount of emotion used contextually.

Two medical websites were chosen for the study, one male-oriented and the other female-oriented. The male-oriented site was a discussion group on WebMD.com with the topic being prostate cancer. The purpose of the site was mainly medical with most men asking questions related to treatment, symptoms and side effects of the cancer. The female-oriented site was on iVillage.com related to breast cancer. This was used as a support group for women who were recently diagnosed, undergoing treatment or survivors of breast cancer. Both websites were of a medical nature but were opposite in terms of message content. The women in the breast cancer discussion group used the most emotional markers of all six sites examined in this study. In addition, they also used the most gender markers with 89% identified as women. There seems to be interrelatedness between gender identification and emotional markers within this particular message environment. The language was supportive and encouraging, which is the design of the website. In contrast, the prostate cancer website was strictly informational and therefore showed few emotional markers. The majority of messages did include gender

markers, mainly in the form of users providing their names, so gender identification was not an issue. This website supports previous research that men tend to be more reporting and informative.

Whereas the two medical websites support previous research on gender language patterns, there is not conclusive data that the majority of men and women follow these norms. The website environment seems to have a large role in the language patterns of the users. For example, the second male-oriented site was related to football. The men on this site used many more emotional markers than the medical site in the form of emphasis and expletive cues. This is due to the emotional nature of football and football fans. So it would follow that this site would have an increased use of emotional markers.

The football related male-oriented website mirrors previously held views on men's interpersonal relationships. One such style is the alternate paths model. This model suggests that societal constraints hinder men's comfort in expressing emotions verbally thus limiting their emotional conversations. It further argues that men do express emotion just in ways different from women (Wood, 1994). The football site could offer men a safe environment to express

emotion. Sporting events are known for their emotionally charged environments. It would therefore be reasonable to assume that websites relating to sports would also contain more emotional content than websites in other areas.

This is supported further with the example of the second female-oriented site that mainly covered politics or current social issues. The issues were generally less emotionally charged and therefore fewer emotional markers were present. The research points to the message environment having a significant impact on the amount of emotional markers.

Gender Identification

The second area that stands out is gender identification. Why was gender identified in less than half of the messages? The previous studies relating to gender identification (Savicki, Lingenfelter and Kelley, 1996; Rafaeli et al., 1994; Witmer, Katzman, 1997) all used the same dataset, the ProjectH codebook. The authors of the codebook believed gender was difficult to code as many users online names are nongender specific and the language within the messages did not contain many gender markers.

Even with the difficulty of gender coding, of the 3,000 messages in the ProjectH codebook, gender could be determined in 86.6% of cases. In this study, the majority of messages (54.5%) were coded as unknown because of the lack of gender markers. There are two possible reasons for the low number of gender markers: website selection and female users.

The first possible reason for the low number of gender markers may lie in the inherent qualities of the websites. The users may not have felt the need to reveal their gender. For example, one of the mixed gender sites was Nascar.com. Although, one may think that this would be predominantly male. Nascar has one of the largest female following of all sports. The official website of the races and drivers would therefore attract both men and women to post messages. However, this site had one of the lowest frequencies of gender markers. The users may not have felt the need to identify themselves since gender does not affect their status on the website. As discussed earlier, the football website had a higher frequency of emotional markers yet gender identification remains low, only 21% were identified as male. Again, the users may not have felt the need to identify their gender possibly because it was

assumed they were male or it was of no consequence. This could be a limitation of the study because gender identification was a key component in the comparison of emotional markers.

Another possible reason gender coding was more difficult is that this study included many more female users than in the previous studies that used the ProjectH codebook (Rafaeli and Sudweeks, 1993a). Of these, 83.6% were male and 16.4% were female. Within this study, gender was determined in far fewer messages, only 45.5%. As noted in the results section, women accounted for 60.4% within the messages that were gender determinable. This is much higher than the ProjectH study where women only accounted for 13.8% of the total. This study is much closer to the actual percentage of women users on the Internet, which is 49%. The design of this study to include gender specific websites led to a closer representation of male and female users. But with such a large number of messages not coded for gender, it is unclear if this result is reliable. Indeed anonymity may be a confounding variable in this study. Moreover, the message environment may have as much a determining factor on emotional marker usage as gender.

Message Environment

This leads us to the next area of discussion which is the website selection itself. Of the six websites, only two had a majority of messages coded for gender: one male-oriented and one female-oriented site. The mixed-gender sites had less than one-fourth of their messages coded for gender, the lowest number of all the sites. However, they had the highest frequency of emotional markers. The question must be asked as to what effect the message environment has on the users and the content of their messages.

This researcher believes that the websites are acting as the "context" in which the users create not just messages but a rhetorical discourse. So rather than focus on the user, rhetor, or the message, rhetoric, let us look at the website as a rhetorical situation. Bitzer coined this phrase in 1968 as a way of looking at the natural context of a message and the rhetor. It is, therefore, necessary to look not at the person or the message but the situation that shapes them both. Bitzer suggested that the "situation controls the rhetorical response in the same sense that the question controls the answer and the problem

controls the solution" (p. 5). In this study, the website controls the message.

Rhetorical Situation

This idea of the website as a rhetorical situation can be applied to all of the websites chosen for this study. The first research question focused on the possible difference of emotional marker usage between men and women. It was noted earlier in the study that men generally used fewer emotional markers than women. When looking at the male-oriented websites, as noted previously in this section, there was a statistical significance in the amount of emotional markers used as well as gender markers. The message environment acted as a context as to whether it was necessary to identify gender or use emotional language in the message. As discussed earlier, the emotionally charged atmosphere of football was the context in which the users posted messages to the website leading to a higher frequency of emotional markers. The mixed-gender sites established a context that anonymity was a norm because of the low amount of gender markers in the text. The website as a rhetorical situation adds a depth to the user and

messages in creating a discourse that has a greater meaning than the previously viewed flat context within CMC. This relates back to McLuhan in that the Internet, as a medium, affects discourse not by the content but by the website as a conduit for shaping the way we communicate.

Future Research

As with most research, this study opens more doors than it closes. Future research in the area of online emotion may include 1) the effect of the message environment on emotional discourse 2) emotional discourse in male-oriented websites and 3) the website as a rhetorical situation. The amount of messages coded for gender should also be reexamined.

First, the impact of the message environment on the level of contextual emotionality offers interesting promise. The two health care sites in this study showed the difference between report and rapport style of communication. Even though the topics were similar the amount of emotional markers used were statistically significant. Future research could compare several sites

with similar subject matter to determine what influence the message environment has on the emotional content.

Second, the male-oriented sites displayed wide degrees of emotional content. The men in the football site displayed more emotion than the men on the informational health website. Future research should examine male-oriented sites to determine the degree of emotion based on the environment topic. For example, will all sports related websites show a high degree of emotional content?

Third, the author poses the idea that websites are a rhetorical situation. While the statistical evidence of this study is very compelling, a general qualitative appeal in this area of the rhetorical situation would provide depth that this research cannot reveal. This can be further developed by examining websites using Bitzer's three constituents of a rhetorical situation: exigence, audience and constraints. Exigence asks what we seek from this discourse or what needs to be done. The audience suggests that the participants within the situation influence the rhetorical discourse. Constraints are the walls that create the limits of the rhetorical situation. This multiparadigmatic approach using participant research,

such as an ethnography, will further advance study in this area.

Finally, the proportion of messages coded for gender was relatively low. Gender was determined in less than half of the messages in this study. Messages were chosen at random and no more than two messages per user were used. Future studies may include longer strings of messages that capture conversations or several messages from a single user to improve upon the reliability of the data.

Conclusion

This study expands the research of CMC to include previously held communication theories apply within this relatively new field of communication studies. Wood's discussion of the male alternate path model and Bitzer's rhetorical situation are both well-developed theories in human communication. Applying these theories to this research builds upon the field of computer-mediated communication.

This thesis revealed the expression of emotion in online discourse offers a fascinating site for research. The rules of online etiquette have not evolved to the standards guiding social acceptability in interpersonal relationships. As the use of emotional markers expands in computer-mediated communication, a norm will develop as to what is the social etiquette for acceptable online discourse. Just as there are standards for expressing opposing views or disagreeing with opinions of others in face-to-face interactions, CMC will naturally develop its own standards for online discussions.

The expression of these emotions in the written content of CMC makes for an exciting advancement in the study of communication. An even more exciting area of study

is the context of these messages. It is not enough to study just the typed words. The website creates a rhetorical situation that encompasses the message, sender and environment in which these words are composed. Those who surf the Internet enjoy certain websites in which to participate and post messages. Why are they drawn to that website? What makes them feel comfortable about joining conversations with other members of the website? These are the questions that challenge communication researchers to expand the scope of knowledge in this field of computer-mediated communication.

Notes

¹ProjectH is a collaboration of researchers from several dozen universities, representing numerous academic disciplines. The original study lasted two years (1992 - 1994) where members developed a quantitative study of electronic discussions. Numerous researchers have used the codebook and database for research and ProjectH itself has been analyzed extensively. Information on ProjectH can be found at <http://www.arch.usyd.edu.au/~fay/projecth.html>.

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