The thesis submitted in partial fulfilment of the requirements for the degree of Master of Arts in Advanced Studies in Linguistics: Linguistics in a Comparative Perspective by

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Abstract

This study is built around the axes of emotions, gender, and computer-mediated communication. It is traditionally believed and supported by a number of studies that women are more emotionally expressive in the traditional domain of communication— in real life, than men are. Moreover, there are certain emotions that are stereotypically linked to both genders. The purpose of this work is to find out whether females are also more emotionally expressive in online discourse and whether those stereotypically marked emotions remain true for both genders here as well. Upon examination of verbal, visual and auditory affect identified in the corpora of naturally occurring data from Facebook private communication, it became clear that the hypothesis is supported only partially, as men applied more verbal affect than did women. The results of the study are supported by statistical data.
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Introduction

The dominant perception of women being the more emotionally expressive of the genders (Kring & Gordon, 1998) is supported by a number of study results (Kring & Gordon, 1998; Ashmore & Del Boca, 1979; Johnson & Shulman, 1988; Brody & Hall, 2000). Moreover, there are certain emotions that are stereotypically linked to men and women from childhood. However, now we live in digitalized times when e-socialization - the computer-mediated communication (CMC) is vast spread. Could this change in the medium of communication affect the emotional expressiveness of both genders in any way? The new medium does imply the possible change in the way one expresses himself emotionally, as there are different means of expressing oneself in the virtual world in comparison with the traditional world. For instance, besides the fact that the written texts come to replace the oral speech, also the extensive use of punctuation marks, additional letters, use of capital letters, laughter markers and emoticons come to replace the vocal and visual cues one provides along his speech during the traditional way of communication.

In the current work we aim to find out whether this change of the communication medium has modified the status of women being the more emotionally expressive of the genders and whether the emotions attributed to them are still of typical use in CMC. We investigate the emotional expressivity of men and women in private Facebook communication from two perspectives - linguistic (verbal communication of emotions) and paralinguistic (visual and vocal communication of emotions). For the analysis of verbal affect we employed J.R. Martin’s (2005) Appraisal framework to help us distinguish and classify emotion words/phrases in the discourse. The identification of visual (emoticons) and vocal (prosodic devices) affect has been done based on the variety of emotional expression markers found in the corpora.

In the first part of our work we look through the studied literature for the present research, considering CMC and the connection of gender and emotional expressiveness. In the end of the chapter the hypothesis and research questions are stated. The second part of the work is devoted to the research done on the corpora. We overview the methodology and introduce the results and the discussion. Finally, the conclusion puts a final note to the work.
Chapter 1

Computer-Mediated Communication

When looking for a definition of computer-mediated communication (hereafter CMC), we find that CMC is any communication between people, which is conducted through a computer technology (Thurlow, Lengel, & Tomic, 2004). Susan Herring as well defines CMC as “communication that takes place between human beings via the instrumentality of computers” (Herring, 1996). Even though the first electronic digital computers came to life during the period of World War 2, when measuring the age of CMC, we go back to 1960s, when the first exchange of prototype emails took place. However, CMC became a subject of interest for linguists in 1990s when it became widespread amongst humanity as a medium of social interchange (Thurlow, Lengel, & Tomic, 2004).

How does CMC occur? As stated above, it is a form of communication between people that is done through the computer, naturally implying on the fact that people communicating via computers are far from each other, otherwise, a face-to-face communication would take place. The computers used by these people can be connected with each other through the Internet. Linguist David Crystal (2001) defines the internet as an “association of computer networks” which allows sending messages from one computer to another. Thus, to conduct a CMC, the following variables are necessary: human beings, computers, and the Internet.

As the traditional face-to-face communication takes place in a certain setting (in the real world), the internet-mediated communication takes place in another reality, as we refer to it – in online reality. The latter is a separate-from-the-world setting, which does not exist and one cannot see or feel it outside a computer device. As a face-to-face communication is conducted in a certain place, e.g. at home, in the street, in a café, or any other place, CMC, too, occurs in a certain space in online domain. These “certain places” are called “Internet situations” by David Crystal (2001). The linguist creatively demonstrates the essence of the online world by making it a clear interpretation of the real world, up to the point of referring Internet users as “netizens” and the language used online as Netspeak. He distinguishes between five broad internet situations, stating that with the development of technology the emergence of new situational variables is possible. The situations distinguished by Crystal are:
• Electronic mail (email)
• Synchronous chat
• Asynchronous chat
• Virtual worlds
• World Wide Web (www)

Similarly, Thurlow, Lengel, and Tomic (2004), name these internet situations as “Internet technologies” and present a more detailed classification:

• emails, listservs, and mailing lists
• newsgroups, bulletin boards, and blogs
• internet relay chats and instant messaging
• metaworlds and visual chat
• personal homepages and webcams

The use and popularity of Internet situations/technologies have not registered a major change up to now. All of the above are still popular, especially the synchronous and asynchronous chats (as a result of the rise of social media). Naomi S. Baron (2003) states two parameters for describing the CMC that takes place in these Internet situations - the synchronicity and the number of participants. The e-discourse that we examined for the current work is conducted in an Internet situation known to possess features of both synchronicity and asynchronicity and be one-to-one and multiple-participant- Instant Messenger (IM).

Originally IM is a synchronous and one-to-one type of interchange. However, as Naomi S. Baron (2010) states, even though IM is “designed to work synchronously, it is often used asynchronously”. Moreover, it is not only a one-to-one medium of interchange, but it provides the option of adding more participants to the e-conversation, if necessary. This dual nature of IM is one of its interesting aspects, which makes it unique compared to the other types of chats. The reasons Facebook IM was chosen as a research target are that its use is quite widespread among people nowadays, it is easier to be followed in terms of structure, is a less formal medium which allows a more "relaxed" and emotionally sincere communication between people. Another important reason is that the linguistic
research conducted over Facebook discourse so far, mostly concerns the statuses, posts, and comments which are publicly available to be seen. The aspect of publicity may affect the way people express themselves during the communication. However, the private communication varies from the statuses, posts and comments as it is meant for one’s interlocutor only. Moreover, there is a lack of research here and we believe this work is a contribution to the field.

**Written or Spoken Language?**

CMC is a subject of interest for linguists from the aspect of its impact on language. David Crystal (2001) calls the language used on the internet Netspeak, thus drawing a line between the language applied in the real world and the one in online reality. The issue of computer-mediated discourse (CMD) concerns the written or spoken nature of the applied language in it. Whether it is spoken or written, linguists so far have no final answer to the question.

Naomi Baron (2010) brings forward two points of view. At first, she recalls her previous findings, stating CMC to be a “mixed modality,” possessing characteristics of both spoken and written language. According to her it is similar to spoken language as it is “largely unedited,” is characterized by the use of first and second pronouns, present tense and contractions, it has a lower level of formality and sometimes could even be rude. Meanwhile, she enlists the parameters of CMC, which make it resemble writing, stating that people who communicate with each other are physically in different places, they “commonly employ a broad range of lexical choices and complex syntax.” The medium of CMC is also more long-lasting than speech. She as well states that, in fact, being similar to written or spoken language depends on the mode of CMC. Baron regards the asynchronous type of communication, like emails, to be closer to written, while the synchronous type of communication, like instant messaging, to be closer to spoken language.

Secondly, she shares David Crystal’s (2001) view, who finds CMC to be closer to written language than spoken. Crystal bases his perspective on a research, in which he analyzes various modes of CMC, identifying written/spoken parameters of each and concludes that in overall sum of the parameters of writing or speaking, the parameters of writing outrun those of speaking. According to
Crystal “Netspeak is better seen as a written language which has been pulled some way in the direction of speech than as spoken language which has been written down” (2001:47).

Susan Herring (2015) regards this issue from an interesting objective, stating CMC to be neither written nor spoken discourse. She claims it to be a medium somewhere in between, justifying her point by the following: CMD that takes place between people is, as a rule, faster than traditional writing, but is obviously slower than speaking. Due to CMD, a simultaneous multiple-participant communication can take place in ways that are very difficult or even impossible to achieve in the format of traditional oral communication. Moreover, CMD allows communication to "unseen and unknown audience meanwhile "carrying the nature of direct exchange." CMD also allows people to edit messages before and sometimes even after sending them.

Even though linguists’ views on the written or spoken nature of computer-mediated discourse comply with or contradict one another, it is still an ongoing research topic for linguistics and new hypotheses are possible.

**Gender and Emotional Expressiveness**

Throughout decades there has been conducted a great amount of research on both gender¹ and expression of emotions. To be emotionally expressive means to demonstrate verbal and nonverbal expressions that are somehow related to emotions (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995). Long ago the world admitted and still does, that women are more emotionally expressive than men. This view has been supported by a number of studies (Roter, Hall, & Aoki, 2002; Burke, Weir, & Harrison, 1976; Vogel, Wester, Heesacker, &Madon, 2003; Ashmore & Del Boca, 1979; Johnson & Shulman, 1988; Brody & Hall, 2000, 2008). Johnson & Shulman (1988) found that in addition to women being the more emotionally expressive of the genders, they also tend to express socially acceptable feelings more than men and “self-oriented, less desirable feelings” less than men. However, interestingly women experience the feelings of both categories more “intensely” than men.

¹ Gender and sex must be distinguished, as sex refers to the demographical features, while gender to the psychological characteristics concerned with maleness and femaleness (Kring & Gordon, 1998). In the present research gender and sex are put on identical level, as all of the participants who contributed to the corpora are heterosexuals.
do. Roter, Hall, & Aoki (2002) find, that female physicians in comparison with male physicians involve patients in more emotion talk. Burke, Weir and Harrison (1976) study the marital interactions and demonstrate that wives are more likely to share their (tense) feelings with their husbands than vice versa. Vogel, Wester, Heesacker, & Madon, (2003) examined a couple on a date and observed that the gender differences are especially noticeable at higher levels of stress and discomfort involved in the interaction; This is when men express “less emotions, more restricted affect and more withdrawal”.

In addition to women being seen as more emotionally expressive than men, there are also certain emotions that are stereotypically linked to both genders. Birnbaum, Nosanchuk and Croll (1980), state that these stereotypes based on gender and expression of emotions become noticeable in people yet as preschoolers.

Weinberg, Tronick, Cohn, Olson (1999) agree with the view and state that differences in emotional expressivity according to gender become noticeable at children yet when they are six months old. In their study on gender differences in emotional expressivity and self-regulation during early infancy the authors experiment on moms and their six-months old infants in Tronick’s face-to-face still-face paradigm to assess “gender differences in infant and maternal emotional expressivity and regulation.” The results claim that male infants are more socioemotionally expressive: they are more inclined to keep contact with their moms, to cry, to express negative emotions or joy or to ‘vocalise using neutral or positive vocalizations’. However, as they state, this is just the general tendency since exceptions/overlaps, of course, occurred when a female infant would be negatively determined or anything else. Osofsky & O’Connell (1977) state that male newborns give quicker reactions to the external stimuli than females do.

Hittelman & Dickes (1979) also find differences in emotional expressivity in infants of different sexes, but they contradict to the above discussed literature and state that, for example, female newborns express the tendency to maintain eye contact and give emotional reactions to the surrounding more than male newborns do. According to Call (1978) female newborns smile more

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2 Tronick’s face-to-face still-face paradigm is about testing the infant’s reaction with responsive emotions to those given by it and not reacting to them at all/ignoring , looking at him with a still face.
than male newborns do, and the latter is more inclined to a negative expression of emotions (as crying or being irritated).

However, the emotional expressivity of newborns of up to the age of one-year old is more or less relative and not stable. There are even studies claiming that there are no differences in emotional expressivity of children of up to nine months old (Lewis, 1972; Cohn & Tronick, 1988).

The patterns of expression of emotions change by age. For instance, Chaplin & al (2005) state, that at the age of four to six, when the differences in expression of emotions according to gender become obvious and the pattern of expression of emotions is more stable, female children begin to express more sadness and anxiety than males do and what’s more, they smile, laugh, and use gestures more than males do. The study also states, that boys’ expression of these emotions decrease during the two-year period. Shortly put, girls become more emotionally expressive than boys, as opposed of children of six months old.

L. R. Brody, & J. A. Hall (2008) find, that when it comes to expressing emotions, the ‘gender-stereotypic’ factor activates, since, for instance, emotions like anger, contempt and happiness would be more “accurately” expressed by males and fear and sadness and anxiety by females. There is a need to mention, the authors believe, that no matter how consistent these emotion patterns may be according to genders, the cultural factor still plays a core role in this. The general emotions, as are happiness or sadness may still be similarly perceived by different cultures, however there are many other cases, when the culture plays its role. For instance, in Japanese culture women illustrate/deal with the emotions contempt or anger (note, as mentioned above these are emotions typical of men) in much better way than men do.

Different studies attribute different emotions to women. For instance, Allen & Haccoun (1976) similarly find the expression of fear, sadness and also anger to be typical to women, while Wagner et al. (1993) state it to be the disgust. Barr & Kleck (1995) believe happiness and smiling are very characteristic of women.
When it comes to the communication between different genders, Rime´ et al. (1991) find that women are more likely to talk about their feelings and emotions with both genders, while men tend to share their feelings and emotions with women (typically their partners).

Martin & White (2005) interestingly notice that in “stereotypically gendered communities,” the feelings of in/security are somehow associated with ‘mothering’ and the feelings of dis/satisfaction are linked to ‘fathering’ and mentions the following emotions as representations of the two broad categories: **In/security**-mothering: restless, twitching, shaking, start, cry out, faint, uneasy, anxious, freaked out, startled, jolted, staggered, declare, assert, proclaim, delegate, commit, entrust, together, confident, assured, comfortable with, trust. **Dis/satisfaction**-fathering: fidget, yawn, tune out, scold, castigate, flat, jaded, stale, cross, bored with, angry, stick of, furious, fed up with, attentive, busy, industrious, pat on the back, compliment, reward, involved absorbed, engrossed, satisfied, impressed, charmed, pleased, thrilled.

Hall, 1984 and La France hecht & Levy Paluck (2003) conclude in their quantitative study that women are usually more emotionally communicative with their faces and hands and are more active applicants of smiles, laughter and nods than men. However, Coats and Feldman (1996) find that men are better and clearer expressors of anger compared to women. Becker et al.’s (2007) as well demonstrate that indeed, **happiness** is more characteristic of women’s facial displays while anger is typical to men’s.

Studies on gender-dependent vocalization of emotions are few. Rodero E. (2011) studies the influence of intonation in creating emotions and states that intonation plays a core role in instigating emotions in the interlocutor. Bonebright, T.L., Thompson, J.L. & Leger, D.W. (1996) examine gender stereotypes in the “expression and perception of vocal affect” and demonstrate that the judges would better recognize the vocalizations of happiness among females while anger and fear among males, meaning that males and females are vocally better expressors of the respective emotions.

The emotional expressivity of men and women has been tested in the online domain as well, however less studies are devoted to the topic and the majority of them cover the visual expression of emotions through emoticons. In a research conducted by R. Parkins (2012) on paralinguistic features in
emotional expression, the author studied Australians’ emotional expressiveness in the status updates, wall posts, comments and tweets on Facebook and Twitter. She identifies six paralinguistic features—extensive use of punctuation, full stops and capitals, additional letters, emoticons, laughter, and considers the use of those as means of expression of emotions in online discourse by males and females. The results of the study show that in every category of the six features females outrun males by the frequency of the use of paralinguistic features (Chart 1). Moreover, the author finds that female-to-female communication is marked with high usage of positive emotions which, according to her may be connected with women’s concerns and tendency of creating a positive image around them.

Alecia Wolf (2000) studies the differences in emoticon use by both genders in newsgroups. She suggests that women are more active in emoticon usage than men are. However, she as well notices, that men apply more emoticons than women, for instance, in constructing sarcasm. The author views “the pattern of change that develops for both genders when moving from a predominantly same-gender newsgroup to a mixed-gender newsgroup” as the most interesting finding of her study. As the author notes, both men and women become more active in emoticon use when in mixed-gender newsgroups. Whereas Savicki (1996) finds that women are more emotionally expressive (and predominantly positive) in same-sex Internet discussion groups.

Walther and D’Addario (2001) analyzes the affective power of the message and the emoticon inserted in the message in the positivity/negativity domain. He interestingly notices, that when the emoticon has a positive nuance while the message negative, the polarity of the message would be dominant in the overall perception of the mood and meaning of the message.

In an article on gender differences in the use of graphic accents Witmer and Katzman (1997) state that women use significantly more graphic accents in their CMC, more challenging language and write more inflammatory messages than men do.

The way society perceives women is important to women themselves. Marcia St. Pierre, clinical counselor, Northern Alberta, views emoticons as message softeners (Bicklell, K., 2014) and believes that the reason women use more emoticons than do men is that they are taught from a young age that
they need to be polite, nice and socially pleasant. As a result, women apply emoticons to make their point/message clear and meanwhile appear soft and nice, as their image is important to them. She says: “Sadly, women continue to be taught from a young age that they must be demure and polite. That women must be pleasant is socially ingrained in our psyches and has a bearing on our communication. Women use these softeners to get their point across, while still maintaining that they are pleasant—never the bitch.” In addition, she compares: “You owe me $50,” to “You owe me $50 😊.”

Summing up, a great amount of research on face-to-face communication demonstrated that women are emotionally more expressive (note, that we speak of emotional expressiveness but not experience). Almost all of them attributed happy, sad and fearful emotions to women in verbal, visual and vocal expression, while anger to men. The studies on CMC generally covered the paralinguistic expression of emotions and highlighted women’s dominant and mainly positive expressiveness in it and the tendency of visually displaying emotions in a mixed-gender communication.

The present research regards men and women’s emotional expressiveness in CMC through the three channels of communicating emotions-verbal, visual and vocal.

**AFFECT**

To identify the verbal affect in the studied corpora, we worked with AFFECT, as it is the sub-system of Appraisal framework that is concerned with the expression of emotions (Martin & White, 2005). According to the linguists, AFFECT is expressed either as a quality, process or a comment. The latter means that the emotion words/phrases found in the texts denote quality, express a process, or are a comment:

*quality*

E.g. (Martin & White, 2005):

- describes a person- a sad captain
- attributes to a person- the captain was sad
- describes the manner of processes- the captain left sadly
As nominalization of AFFECT is also possible, we may come across nouns as are joy, grief, etc.. Understanding the above-mentioned linguistic realizations of AFFECT is important, as the emotion words/phrases in the examined corpus have partly been identified based on their linguistic form. Other than the linguistic form, they have also been selected based on the content - whether the words/phrases contain notions of emotions in them or not. The choice of the content has been made relying on Martin & White (2005) classification. The linguists distinguish between realis and irrealis AFFECT:

1. Irrealis AFFECT: dis/inclination: “feelings that relate to future states, which are yet unrealized, rather than present existing ones,” (Martin & White, 2005).
   e.g. The captain feared to leave

2. Realis AFFECT: happiness/security/satisfaction: whether the expressed feelings are happy or unhappy, secure or insecure, satisfying or dissatisfying (Martin & White, 2005):
   e.g. The captain was sad/happy- un/happiness
       The captain felt anxious/confident- in/security
       The captain felt fed up/absorbed-dis/satisfaction

Throughout the classification of the content the positivity/negativity thread is noticeable, as Martin & White (2005) bring forward the polarities of the words:
   e.g. The captain was happy- positive AFFECT
       The captain was sad. –negative AFFECT
In the current research, the analysis of AFFECT has been conducted on a more detailed level, which allowed us to specifically determine the type of the emotion words/phrases. Within the category of un/happiness, we identified words of misery (e.g. sad, cry, miserable) / cheer (e.g. laugh, happy, fun) and antipathy (e.g. hate, dislike) / affection (e.g. love, hug). The category of dis/satisfaction suggests words/phrases of ennui (e.g. bored, yawn) / interest (e.g. excited, enthusiastically) and pleasure (e.g. pleased, satisfied) / displeasure (e.g. angry, disturb). Within the category of in/security, we distinguished between quiet (e.g. confident, assured) / disquiet (e.g. anxious, shaking) and trust (e.g. comfortable with, trust) / distrust (e.g. surprised, astonished). Dis/inclination covers the words/phrases of fear (e.g. fearful, shudder, scared) and desire (e.g. miss, hope, long for).

**Emoticons and Prosodic Markers**

The medium of CMC where our analyzed e-discourse is conducted is deprived of auditory and visual functions. To refill this gap of paralinguistic emotional expression markers, the interlocutors apply some techniques, more specifically, they use emoticons to give visual cues and a number of other emotional expression markers (e.g. realizations of laughter) to provide auditory hints. In the current study emoticons and the rest of emotional expression markers are seen as typographic realizations of affect, as they convey emotions.

The contribution of emoticons and prosodic devices to CMC is huge as they come to replace the so much necessary visual and auditory cues/body language that are missing in CMD. Emoticons are iconic markers of emotions (happy, sad, confused, etc.) that are formed with the help of keyboard characters and are applied in electronic communication with the intention of conveying the writer’s feelings. Rezabek and Cochenour (1998:201) state that emoticons are "visual cues formed from ordinary typographical symbols that when read sideways represent feeling or emotions."

When entering the typographical symbols that form the code of the emoticon, it automatically turns into the emotion face or body gesture it is meant to represent (Figure 1). In the current study we identified the following emoticons: smile, frown, grin, tongue, confused, devil, cry, wink, hug, sad. The prosodic markers that fulfill the auditory function of communication vary. In the analyzed corpora, we identified the following types of emotional expression markers.
In the present study we regard the employment of each visual and auditory technique by men and women separately.

**Hypothesis and Research Questions**

The above-discussed literature that covered the verbal and nonverbal expression of emotions by men and women in the traditional domain of communication, stated that generally women are the more emotionally expressive of the genders and attributed particular emotions to men and women. Taking into account the change of communication medium, we hypothesize that in online discourse as well women are more emotionally expressive than men and not only in the paralinguistic way of expressing emotions (as the studied literature on CMC focused) but also through the verbal channel. Moreover, we aim to find out whether the emotions which are stereotypically linked to both genders, are true for CMC as well. On our way to supporting the hypothesis from linguistic angle we will answer the following questions:

1. At first, aiming to understand which verbal parts of communication we can view as emotional markers, we call forward the following research question: **how to distinguish and classify verbal affect in CMC?**

2. To understand whether women are more inclined to express themselves emotionally through the application of emotion words/phrases (verbal affect), we want to find out: **do women use more verbal affect in CMC than men do?**
3. To get a more accurate picture of men and women’s application of verbal affect, we will address the following question: which types of verbal affect do men and women frequently use in CMC?

4. The observation of the use of verbal affect in different gender-pair combinations will allow us to measure men and women’s inclination to use emotion words/phrases in e-communication with a certain gender interlocutor: how is the use of verbal affect distributed among m/m, f/f and m/f discourse units?

We have grouped the paralinguistic means of expression of emotions into emoticons (visual affect) and prosodic devices (auditory affect). The examination of emoticons suggests the following research questions:

5. Emoticons, being emotion markers are responsible for visual expression of emotions in online communication, as the respective means of expression that are present in the traditional way of communication are absent in online domain. We aim to find out: how are emoticons used to convey emotions?

6. To see if women are more inclined to apply visual tools to express themselves emotionally in their communication we want to find out: do women use more emoticons in CMC than men do?

7. To identify the emotions that men and women mostly tend to express through emoticons we address the following research question: which are the most frequently used emoticons by men and women?

8. To measure men and women’s emotional expressiveness through prosodic devices in different gender-pair electronic discourse we aim to find out: how is the use of emoticons distributed among m/m, f/f and m/f discourse units?

The investigation of prosodic devices proposes to tackle the following questions:
9. To understand the way prosodic devices play the role of emotional markers, the following question is suggested: **how are prosodic devices applied to express feelings and emotions?**

10. To find out which gender is more emotionally expressive through the application of prosodic means we seek to find out: **Do women use more prosodic devices than men do?**

11. To identify the most used prosodic devices by men and women we tackle the following question: **Which are the most frequently used prosodic markers by men and women?**

12. To measure men and women’s emotional expressiveness through prosodic devices in different gender-pair electronic discourse we aim to find out: **how is the use of prosodic means distributed among m/m, f/f and m/f discourse units?**
Chapter 2

Methodology

Setting and Participants

We collected a corpus of online discourse units from Facebook social website users. In the current research, the online discourse units are pieces of Instant messaging exchange between two people privately conducted on the Facebook social website. The private exchanges have been provided to us personally by the one-side participants in the online discourse and with the consent of the second party. The author herself is one of the participants, but that fact does not affect the results of the research in any way, as the data provided by her was selected from her earlier online communication when the topic of the current work was not decided yet. The total number of the participants in the collected online discourse is 18, nine of which are males and nine are females. All the participants are English speakers, though 9 out of the 18 are native or bilingual speakers, and 9 are English as a second language (ESL) speakers. They belong to the following age groups:

• 6 participants - 50-55 years old
• 10 participants - 20-25 years old
• 2 participants - 16-19 years old

The corpus consists of 73 units of online discourse conducted between 18 pairs. The pair types are as follows:

• Male to male (m/m) - 6 pairs
• Female to female (f/f) - 6 pairs
• Male to female (m/f) - 6 pairs

The 73 units of online discourse have been distributed between the eighteen pairs in the following way:

• m/m - 20 units of online discourse
• f/f - 20 units of online discourse
• m/f - 33 units of online discourse
When choosing target participants, no criteria have been set for the age limit, native language, cultural background or any other factor. We designed the study in a multicultural domain aiming to move it to narrower domains later, setting criteria on the native language, age, nationality and possibly education. Even though this may be considered a limitation, as the choice of a narrower socio-demographic group would generate more precise results, however, the current research will be important for further comparative analysis.

The online discourse units were copy-pasted to a Word file from the Facebook accounts of the one-side participants personally, and the Word file was sent to us. The data provided to us include names of the participants, the date and time of the transmission of messages and the transcriptions of emoticons attached to the messages (note, that when copy-pasted from Facebook, the emoticon characters are replaced with respective name tags). The presence of the date and time of the transmissions, as well as the openings and closings of the messages, allowed us to break the e-discourse into several units of e-conversations. Later the data was separately analyzed for lexical realizations of affect, emoticons, and other emotional expression markers.

**The Annotation Tool**

To annotate our corpus of instant messaging exchanges we used the UAM Corpus Tool, which is an environment for annotation of text corpora. The latter has a built-in annotation scheme designed for appraisal systems which we have edited and adapted to our needs. The tool has been designed by linguist Mick O’Donnell. With the help of the framework, we were able to annotate the corpus for affect, emoticons, and other prosodic devices. UAM as well helps to generate statistical data on the studied texts and compare different text units together.

**Results and Discussion**

Results of the research show that our hypothesis is supported only partially. To precisely state that in our studied corpora women are more emotionally expressive than men is relative. The study demonstrates that emotional expressivity of people is directly proportional to the way they choose to express themselves. Thus, when considering the linguistic perspective, men outrun women in
emotional expressiveness online. As to the paralinguistic means of expression of emotions, women leave men behind as they are more inclined to express themselves emotionally with the help of visual and prosodic devices. Further, we will have an insight into the two perspectives separately.

**Linguistic Approach**

**Verbal Affect**

Aiming to understand which linguistic parts of communication we can view as emotional expression markers (RQ 1: How to distinguish and classify verbal affect in CMC?) we consider the Appraisal framework. In Appraisal, AFFECT is the tool that is responsible for conveying emotions. As we identified in our above-presented review (Martin & White, 2005), the sub-categories of un/happiness, dis/satisfaction, in/security and dis/inclination group respective emotions together and help us to understand what type of emotion does the word/phrase convey. To have a better picture of this, we present an example:

A: it was fun seeing you guys

B: We also enjoyed spending time with you and Fran - and

Becky and Nate. Thank you for including us in their "Bon Voyage" party.

A: you're family

B: you're making my eyes leak! /cry emoticon/ I love you

and Fran just a whole mess! and your whole family

A: we love you too

B:*hug* and goodnight

A: eww, and good night

just imitating Nate /grin emoticon/

B: sound like Sarah!

A: or Sarah

This is a fragment from an online discourse in our corpora. The following verbal affects (emotion words/phrases) can be separated here: fun, enjoyed, you’re making my eyes leak, love, hug. We have labelled them according to the analysis of AFFECT:
1. **fun** - unhappiness, misery/cheer, positive, inscribed
2. **enjoyed** - dis/satisfaction, dis/pleasure, positive, inscribed
3. **you’re making my eyes leak** - unhappiness, antipathy/affection, ambiguous, invoked
4. **love** - unhappiness, antipathy/affection, positive, inscribed
5. **hug** - unhappiness, antipathy/affection, positive, inscribed

In the analysis, we see that the words we highlighted as affect in the fragment of online discourse, bear certain emotive notions in them. For instance, the word **fun** belongs to the category of unhappiness, which means the type of emotion that it bears is a happy or unhappy emotion. We further classify it as a misery/cheer word. Then we attach the positivity label to it, which means it belongs to the subcategories of happiness and cheer from the ones above. At last, we characterize it as inscribed, meaning the word explicitly expresses the happiness and cheer behind it.

We classified the word **enjoyed** as dis/satisfaction, which means the type of emotion it bears is either satisfying or dissatisfying. It is further classified as a dis/pleasure word, i.e. the emotion it implies is either pleasing or displeasing. It is also a positive word, i.e. it belongs to the subcategories of satisfaction and pleasure. Finally, it is an inscribed word: it clearly expresses satisfaction or pleasure.

Another example of affect here is the phrase **you are making my eyes leak**. It is a phrase bearing the emotion of unhappiness, more specifically, it expresses antipathy/affection. The issue of polarity is complicated: we have labeled it ambiguous because the touching emotion expressed by the phrase can be either positive or negative for the person expressing it. Taking into account the sarcastic notions the phrase holds, we are more inclined to consider it positive, as the discourse is conducted between two friends and one of them is obviously touched by the words of his interlocutor and tries to tease him back. Also, it is viewed as invoked, because the emotion behind it is not explicitly expressed as in the cases of fun and enjoyed, but is conveyed through a phrase that implies feelings of antipathy or affection.

The analyses of the words **love** and **hug** are identical. They are both categorized as words of unhappiness and antipathy/affection. The two of them also have a positive polarity, which means they express emotions of happiness and affection. They are as well categorized as inscribed, i.e. they explicitly reflect affection. However, the word **hug** causes curiosity: it is obvious from the context
that the participant tried to depict a hug emoticon, but supposedly, unable to find the respective emoticon he chose to write a hug and embraced it between stars. This sets it on the border of being a verbal or visual (emoticon) affect and allows us to regard it either way.

Summing up, this is how the framework of AFFECT is applied to deductively convey and categorize emotions: we classify the emotive words/phrases according to general categories of AFFECT, then narrow those down to subcategories, that more specifically identify the emotions the words bear. Then we identify the polarity - the positivity, negativity or ambiguity of emotions. Finally, we decide whether the emotions are explicitly expressed through the words or they are implied.

**Do women use more verbal affect in CMC than men do? (RQ2).** To some extent surprisingly, our analysis showed that men employ more emotion words/phrases in comparison with women. The answer to this research question partially denies the hypothesis. The results illustrate the frequency of the use of verbal affect in CMC (Chart 2, Table 1) showing that women applied 277 (43.79 %) emotion words/phrases in their discourse, while men 315 (55.42%).

In the studied corpora we encountered two affect units that we struggled with in regard to identifying them as verbal affect: *wow* and *thank you*. *Wow* can be applied as an interjection, a noun or a verb. Throughout the corpora it has been applied as an interjection which made us hesitate in recognizing it as verbal affect, as it does not fit in Martin’s (2005) classification of AFFECT much, and also pushed us to think about demonstrating it as a prosodic device. However, the contexts *wow* was applied in and the ways it was used, determined us to perceive it as a comment (see, p. 9) and identify it as a verbal affect.

The struggle with *thank you* was in a different sphere, as it *can* be classified as verbal affect. However, the issue here concerned its use. It does naturally express the feeling of gratitude, but we felt its use was “abused” out of politeness manners, as most of the time the interlocutors seemed to have applied it for the sake of formality. Interestingly, the phrase was most applied by women, which comply with the previously discussed views of women’s concern about their social image (R. Parkins, 2012; Bicklell, K., 2014). Thus, the application of *thank you* amounted to rather a big number (n=83) on the overall view of the corpora and unduly exceeded the other representations of
verbal affect, in the case when those do have value to the research. Thus, when considering the further results on the types of verbal affect we preferred to “ignore” the expressions of thankfulness realized through the word/expression thanks/thank you. However, there is a need to mention that even in the case of ignoring the thanks/thank you, men still hold the dominance in the frequency of verbal affect use.

Looking into the types of applied verbal affect (RQ 3: which types of verbal affect do men and women frequently use in CMC?) we see, that in almost every category men outrun women (Chart 3). The only category where women slightly exceed men is the category of dis/inclination. As a matter of fact, this is the category which covers the words and phrases used for the emotions of fear and desire and it complies with the above-discussed views of fear being a characteristic emotion of women (L. R. Brody, & J. A. Hall, 2008; Allen & Haccoun, 1976). The results show that the emotions of un/happiness are observed in men-conducted discourse most of the time (n=106). The latter is followed by the emotions of dis/inclination (n=73) in the second place, by the emotions of in/security (n=62) in the third place and dis/satisfaction (n=40) in the fourth place. In the case of women-conducted discourse the emotions of dis/inclination are observed most (n=75). They are followed by the emotions of un/happiness (n=70) in the second place, then by the emotions of in/security (n=59) in the third place and by the emotions of dis/satisfaction (n=40) in the fourth place (the list of most used verbal affect by both genders and by men and women separately, are respectively displayed in Charts 4, 5 and 6).

As mentioned above our results agree with the emotions of dis/inclination being typical to women, but when it comes to the emotions of happiness and sadness (un/happiness) men are found to be more frequent applicants of verbal affect representing those emotions than women. In this regard we do not share the views of Barr & Kleck (1995), L. R. Brody, & J. A. Hall, (2008), Allen & Haccoun (1976). However, when regarding the use of un/happiness verbal affect by women in general, they are seen as rather frequent users of those, as after emotions of dis/inclination, emotions of un/happiness are the second type characteristic of them. Our results also partially comply with Martin & White’s (2005) views. We found that men, compared to women, are indeed more frequent users of verbal affect being classified as dis/satisfaction, as Martin & White (2005) link the emotions of this category with ‘fathering’. Even though our results display that men outrun women in the use of in/security verbal affect, we could somehow still share the linguists’ view of this category as well
(they connect it with ‘mothering’), since the difference we found between male and female use is very small.

We applied T-test to find out whether the differences between the male and female verbal affect usage are statistically significant or not (Table 2). Results showed that there is difference between the means. The p value is smaller than 0.5 which is a moderately strong evidence that the null hypothesis does not hold (t(6)= 0.73928, p<0.5). This means that the differences between the verbal affect use by men and women are statistically significant.

As we discussed in the above-presented literature, some studies found that men and women’s emotional expressiveness in regard with verbal affect changes in different pair-type communications (RQ 4: How is the use of verbal affect distributed among m/m, f/f and m/f discourse units?). Specifically, Rime` et al. (1991) found women to be equally emotionally expressive with both genders while men tend to demonstrate their emotions with women (typically their partners). As to CMC, Savicki (1996) found women to be more verbally expressive in same-sex Internet discussion groups. Our findings somehow contradict to these views as we found (thanks/thank you included) that women are more emotionally expressive in m/f communication (n=160) than in same-sex discourse (n=116). When it comes to men, we could tell that they are almost equally expressive in both m/m (n=158) and m/f (n=157) communication. These observations are presented in Chart 7. On the whole, both men and women registered a rather high frequency of use of verbal affect in mixed-gender communication. Could we say that in online communication people feel more comfortable expressing emotions verbally when interacting with the opposite sex rather than the same sex? Perhaps to some extent yes.

**Paralinguistic Approach**

**Visual Affect: Emoticons**

As providers of visual cues, emoticons are of core importance to CMC. We analyzed the use of emoticons in our study and received a similar picture compared to Róisín Parkins’ (2012) research. Our data as well showed that women are more active users of emoticons than men are (RQ 6: do women use more emoticons in CMC than men do?), (Chart 8, Table 3). Results demonstrate that
118 (74.21%) emoticons have been applied by women to express themselves emotionally and only 37 (25.79%) have been employed by men. Our findings comply with a number of studies both on traditional domain and CMC that we discussed above (specifically, Wolf, 2012; R. Parkins, 2012; Savick, 1996; Katzman, 1997 in CMC, and Becker et al., 2007; LaFrance et al., 2003; Coats & Feldman, 1996; Barr & Kleck, 1995; Hall, 1984 in traditional face-to-face communication).

When it comes to the identification of emoticons used in the e-communication (RQ 7: which are the most frequently used emoticons by men and women?), the analysis of our data shows (Chart 9) that both men and women hold similar balance in emoticon use. Smile is the most used emoticon both by men (n=20, 48.78%) and women (n=43, 36.44%). In the second place men are inclined to use the grin emoticon (n=14, 34.15%) while women the wink (n=27, 22.88%). Other emoticons that have high frequency of usage by women are the grin (n=20, 16.95%), sad (n=10, 8.47%), frown (n=9, 7.63%), and tongue emoticons (n=6, 5.08%). Men, besides the smile and grin emoticons, have also applied frown (n=2, 4.88%) and wink emoticons (n=2, 4.88%). All the remaining emoticons have a very low or no usage (0.00%-2.44%). As three of the top used emoticons by men and women coincide (smile, grin, wink) we dare to conclude that both genders’ choice of emoticons does not vary much and is generally similar.

Results that we received do agree with the views discussed above. Specifically, our results agree with R. Parkins (2012) as her study demonstrated that women used at least twice as more emoticons than men. We do also share the views of Hall (1984), LaFrance et al. (2003, Barr & Kleck (1995) and Becker et al. (2007) who find that expressions of happiness through laughter and smiling are more typical to women (here-smile and grin emoticons). No emoticon was applied that would describe anger, which as Coats & Feldman (1996) find are characteristic of men. Also, the use of sad emoticon that registered a high employment by women while zero by men, agrees with some of the above stated views concerning the emotion of sadness being stereotypically characteristic to females (specifically, Chaplin & al., 2005; Brody & Hall, 2008).

We applied T-test to find out whether the differences between the male and female emoticon usage are statistically significant (Table 4). The results showed that there is difference between the means. The p value is smaller than 0.5 which is a moderately strong evidence that the null hypothesis does
not hold \( (t(18)= 1.5419, p<0.5) \). This means that the differences between the emoticon use by men and women are statistically significant.

As we discussed in the above-presented literature, Wolf (2012) found that men and women’s emotional expressiveness in regard with visual affect changes in different-pair communications. More specifically, both genders become more active users of emoticons in mixed-gender groups. Whereas Savicki (1996) found that women are more emotionally expressive in same-sex discourse. The results that we received (RQ 8: how is the use of emoticons distributed among m/m, f/f and m/f discourse units?) agree with Wolf’s (2000) view as we observed that men and women apply more emoticons to convey emotions in mixed-gender interchange (men-30, women-61) rather than in same-sex communication (men-11, women-57). However, women’s emotional expressiveness is relatively on the same level both in mixed-gender communication and in same-gender one, as the results indicate that the difference is considerably small. This could determine us to conclude that women do have similar emotional expressiveness in both groups.

On the whole, how are emoticons used to convey emotions (RQ5)? In the studied corpora we distinguished between ten emoticons: smile, grin, frown, wink, tongue, confused, devil, sad, cry, hug. Below we discuss their use by men and women.

**Smile**

*Smile* is the most used emoticon by both genders. The emoticon is rather flexible and fits in different situations. Marcia St. Pierre (Bickell, K., 2014) regards them as softeners that attribute positivity nuance to the message. As presented below, both genders used *smile* emoticon to show their excitement, happiness, express comfort, and to tell a farewell. However, men also used it to express fun and affection, while women used the emoticon to greet and to express the experienced pleasure.

**By men**

1. Excitement:

- *bary ord Vartan, will we see you tomorrow?*
- *Yes sir.*
- *Super! /smile emoticon/*
2. Happiness

-Oh wow, yojr house is the int. House of students! Lol
-yes, we have a lot of fun /smile emoticon/

3. Comfort

-No no, my speed.
-oh, no need to do that /smile emoticon/

4. A farewell smile

-Hi Kristine! We will be there even if it is snowing with a tornado and an earthquake! Even if we have to come with a dog sled! /grin emoticon/ What day will you be flying in, and what Airline and flight number. Mrs. Chattin is sitting here with me, and we are both so excited! we can't wait to see you again! Take care /smile emoticon/

5. Fun

-Kristna, you will like this - I just got on the only subway in Armenia for the first time with five other people - and I was the only one that an old man motioned for to sit down in an empty seat. /smile emoticon/
-hahahaha.. that's funny!! so are you having a good time in armenia?

6. Affection

-lol yes! he is waiting
-That is so touching /smile emoticon/ I really think of him and the other friend a lot, I don't know their names though

By women

1. Greeting smile

-Good evening! /smile emoticon/ how are you doing?

-Good evening Hasmik! I am fine, and you?

2. Pleasure
- I'm sooooooo glad you know I spent the New year in Paris right on Champs Elysee it was sooooo nice /smile emoticon/

- Really! Wow! That is great Hasmik! How did you do that?

  3. Happiness

  - Hey Mr. Chattin! I finally got my ticket! /smile emoticon/ I'm sorry that it took so long, but the first reservation i made was canceled after weeks...

  4. Excitement

  - Hey Mr. Chattin! how are you? still a few days left and i ll be back! i can't wait to finally see you! /smile emoticon/ well but there is still something i need your help for.

  5. Farewell

  - Hey! I'm so sorry i just saw that you wrote me before! It would be could if you'd visit me before that! Can't wait to see you! i'm so excited! i'll have a room for you done! Love you too! /smile emoticon/

  6. Comfort

  - Aidan Walck - I'm embarresed to say, but I forget his middle name. I know he is named after his father's graddfather
  - that is alright /smile emoticon/ sometimes names are hard to remember when you have, so many to try and think of I will be back on in a minute have to do a quick update

Grin

Men applied grin emoticon exclusively in cases when they wanted to express fun. In the case of women, we encountered two uses of the emoticon throughout the corpora- when they wanted to express fun and excitement.

By men

- I tried making sushi this weekend

I seriously fucked it up /grin emoticon/ It was falling apart

Didn't look good at all, think I used the wrong rice

By women

  1. Fun
-Haha /grin emoticon/ Well, it was your first time I guess. You can actually use every rice for sushi. You just have to make it sticky so it doesn't fall apart.
-meh i'll just buy it from across the street

2. Excitement
-We had a quiet evening at home, Fran went to bed at 10PM, the girls and I stayed up to watch the ball drop in NYC on TV. And now you have Christmas in three days, right?
-yeahaaah we are planning to celebrate christmas with an Armenian friend here /grin emoticon/

Wink
Women generally used the wink emoticon to convey agreement and to say goodbye, while the only two cases men applied it, was when they aimed to say goodbye.

By men
1. Farewell
   -ok, tomorrow is fine too
     -Ok, ill keep you posted /wink emoticon/
   -ok Hasmik, take care, bye /wink emoticon/

By women
1. Agreement
   -Bierhuis at 10 pm
   -Ok, maybe I will come for a beer /wink emoticon/

2. Farewell
   -you're welcome! I'm going now...see you tomorrow!Bye!
   -Okay, see you! /wink emoticon/
Sad emoticon was applied in ten cases by women, while men had zero application of it. This may comply with the dominant view of sadness being typical to women (Chaplin & al., 2005; Brody & Hall, 2008). However, women employed sad emoticon not only to convey sadness but also to express such negatively related emotions as are apology and regret.

By women

1. Sadness
   - How is your Dad's back, is he getting any better?
   - ooo he is still in hospital /sad emoticon/

2. Apology
   - If not, we can arrange something before you leave. I hope this does not interfere with your plans for tomorrow, and it is entirely my fault /sad emoticon/ I should have paid more attention to your first message.

3. Regret
   - It’s a pity you didn’t come! /sad emoticon/ Really wanted to see you again before I leave.

Frown emoticon

Men applied the frown emoticon to express regret and dissatisfaction, while women applied it only to express dissatisfaction.

By men

1. Regret
   - yea, Laura told me that you were not coming. was quite a good party though
   - fuck /frown emoticon/ Ah well, too late now Plus I feel very rested

2. Dissatisfaction
   - It was falling apart Didn't look good at all, think I used the wrong rice /frown emoticon/

By women
1. Dissatisfaction

-Hi! when are you leaving? I wrote to Annabell and she is not in Gent again. She's in Syria and will be back beginning of next month and I will be gone already So, don’t know what to do. She also still has my letter and in this letter is my go pass that I wanted to sell before I leave. No, I cannot do that. So, I will lose money again /frown emoticon/

Tongue

The tongue emoticon had two general uses. The only time it was used by men, it aimed to arouse jealousy in the interlocutor, even though its application here was rather close to teasing. Women, however employed it for teasing.

By men

1. To arouse jealousy

-You should come We’re having drinks /tongue emoticon/
-where and when?

By women

1. To tease

-meh i’ll just buy it from across the street fuck it
-Hahaha you give up fast /tongue emoticon/

The rest of the emoticons found throughout the corpora had very low (n=1) or no use both by men and women. The only case that was found interesting was the application of emoticon cry.

Cry

The only case men applied the cry emoticon is presented below. Taking into account the context of the message, which, as we illustrated during the analysis of verbal affect, appears to be sarcastic, we believe the emoticon was applied to tease, as it is less likely the writer would really cry when communicating. However, the only application by women conveyed sadness, as the writer feels sad about not having snow in the winter.
By men
-you're making my eyes leak! /cry emoticon/ I love you and Fran just a whole mess! and your whole family!

By women
-and it's stiiiiill like spring in Gent noooo snow
it's the first winter in my life without snow /cry emoticon/

Auditory Affect
Besides the verbal and visual affect, we also analyzed the auditory affect in the studied corpora. Results of the analysis showed (Chart 11, Table 5) that women used significantly more auditory affect in their online communication than men did, as 249 (87.99%) emotional expression markers were applied by women and only 34 (12.01%), (RQ 10: Do women use more prosodic devices to express feelings and emotions than men do?).

As we presented above, the auditory affect is realized through the application of additional letters, extensive full stops and other punctuation marks, capitalized text and laughter. Two questions that struck us here, were which are the most frequently used emotional markers by men and women (RQ 11) and how are these prosodic devices applied in CMC? (RQ 9:). The results show that the highest use of emotional expression markers by women go to the full stops (123) the category of additional letters (65) following it. Laughter is in the third place as it has been applied 29 times and punctuation is in the fourth with total use of 27 times. The last place goes to the use of capitals as they have been used by women only 5 times. When it comes to men, there is a slight difference in the general view. Men used laughter most –19 times, then full stops 13 times. Punctuation and capitals share the third place with 1 application only and additional letters registered zero usage.

The results lead us to believe that women outrun men in the application of emotional expression markers, as women were dominant in every category. However, are these differences statistically significant? We applied T-test (Table 6) and the results showed that there is difference between the means. The p value is smaller than 0.5 which is a moderately strong evidence that the null hypothesis is
does not hold ($t(8)= 2.0442, p<0.5$). This means that the differences between the verbal affect use by men and women are statistically significant. The use of these markers are discussed below.

**Extensive use of full stops**

Full stops are initially used for grammatical purposes. However, in CMC they may be applied as emotional markers. When studying the full stops and their usage as emotional markers in the corpus, we carefully chose those which included two or more full stops, as in some cases two full stops could merely be a typing error. As observed in Chart 12 only 136 (48.06%) out of 276 emotional markers are full stops. The majority of full stops-123 in total (90.44%), are applied by women and only 13 (9.56%) belong to men. The purposes of the full stop usage vary:

**by women**

E.g.: *Hi, I am good. The trip was really good and crazy hahaa....... How was your trip to Italy? The key was in the bag, I hope you just took it then*

Here the full stops are put for unspoken words, meaning that there is more to say, but the writer is not going into the details to explain why “the trip was really good and crazy”.

In the examples cited below the writers are trying to separate their ideas from one another with the help of full stops instead of following the traditional rules of punctuation. As a matter of fact, the full stops have been mostly applied for this exact purpose throughout the studied corpora.

E.g.: 1. *Hi! well i got stuck in amsterdam cause my flight was canceled.. but i was lucky and got the next one 4 hours later.. now im home and just want to go to bed!*

2. *I think the cheapest way to go to Paris and also the easiest, is to fly to paris.. I ones took a bus to Paris and it took a long time and its also very hard and i think its almost the same or even worst to drive there yourself.. i think the best way for you is to finish your trip with paris and fly back home from there.. most flight make a stop in paris anyways.. and its not even expensive. it would cost you and Fran about 100 Euros only.. the train is even more expenisiv and so is a car.. i think u should*
go to cologne and fly to paris with Svea.. i am going to fly there myself and we'll meet there.. i am probably going to take my best friend with me cause she really wants to see Paris too /grin emoticon/

In the below-presented example, the writer is using full stops to take a pause in-between the utterances.

E.g.: Hi! I tried to call you before, but I didn't find you... Anyway, I'm not going out now, because I have to get up early tomorrow. Talking about Sunday, would you like to go there on Sunday? I'm planning to go with other guys... let me know if you want to join us! Anyway, I'll call you tomorrow! Bye, see you!

In the following example, the writer used a series of full stops as an indication of the topic shift from one to another.

E.g.: ok, thank you! I didn't buy all the gift, because I thought that I'll have enough time to buy something else at the airport tomorrow... If you are at home now may I come in 20/30 minutes? Please let me know!

By men

The purposes of application of full stops by men do not vary from those of women but coincide. Men as well use full stops for unspoken words. As can be seen from the examples below, in the first one the writer expresses “their” affection towards the interlocutor and is excited to see her the following summer. He uses the full stops to indicate that there is more to say or express, but he (“they”) prefers to keep silent instead. In the second example, the writer is enlisting things he needs to take care of and uses full stops as an indication of unspoken words as his occupancy is a lot and he does not wish to continue writing about that.

E.g.: 1. How are you and Marcell and your family? Are you still working?

   We love you and can't wait to see you next summer...

   2. trying to convert my print-shop into a shoe shop relocating a lot of type, move the press, make room for the shoe equipment we bought and wire it while trying to repair shoes and make shoes ten pairs of new shoes on my bench waiting for attention and waiting and...

   . . you get the idea
In the following example, the use of full stops could perhaps be interpreted in several ways. For instance, they could stand for unspoken words, as the writer is referring to his business in life (he is in college) and uses full stops to indicate that there is a lot about college as studying implies full-time occupancy. Another interpretation could be that the writer is simply taking a pause to ask about the whereabouts of his interlocutor. At last, it could indicate a topic shift as the writer stops telling about himself and turns his focus to his interlocutor.

E.g.: Hahaha, yes Brazilians really do take soccer seriously.

i'm doing well, studying a lot now that i'm in college... what about you, how have you been lately?

As to the most widespread use of full stops—separation of ideas from one another, we identified just one example used by men, as men in contrast to women turned out to be more precise both in their lexical and paralinguistic realizations:

E.g.: I did sit in once or twice w/ 5 D's when I was a kid... and Joey and Dennis and I had a rock band '68 - '70... I played a lot of polkas in a wedding band that I was in '85 - '95

Dr. Dennis play lead guitar now in my classic rock band. check out the JAHIL FB page

Extensive use of punctuation marks

Just like full stops, the extensive use of punctuation marks throughout the corpora is not meant for grammatical purposes either. Two and more punctuation marks are grouped together to play the role of an intensifier— to show the degree of intensity of the written text. As in the case of full stops, here as well women outrun men by the amount of used punctuation marks (Chart 13), as women applied 27 (96.43%) while men only 1 (3.57%):

By women

E.g.: -maybe 5 or 6 I got firewood this morning, it is in the van

-great!! thank u soooo much!

In the above example, one of the interlocutors applies two exclamation marks together to show how happy and grateful she is about the fact that the other one got firewood for her.

In the below-presented example, the writer again uses double exclamation marks to underline the fun nature of the story told by his interlocutor.
E.g.: Kristna, you will like this - I just got on the only subway in Armenia for the first time with five other people - and I was the only one that an old man motioned for to sit down in an empty seat. 

/smile emoticon/

-hahahaha. that’s funny!! so are you having a good time in armenia?

In the following example, we have two cases of extensive punctuation marker use. In the first one, the writer uses triple question marks to show the degree of her curiosity and desire to learn about the trip. Then the writer uses double exclamation marks stating that her interlocutor needs to let her know what happened during the trip implying that she is excited and cannot wait to hear the story. 

E.g.:-Hi, I am good. The trip was really good and crazy hahaa....... How was your trip to Italy? The key was in the bag, I hope you just took it then

-Crazy?? /grin emoticon/ Let me know what happened!! My trip was good,too,thanks!

By men

In the example presented below- the only example of extensive punctuation marker usage by men, we encounter a case that has nothing to do with its role as an intensifier. The writer uses triple question marks as a replacement of some information that is unknown to him: “Brenda is charge nurse at ???,” meaning that he does not possess or has forgotten the information about Brenda’s workplace.

E.g.: - Wow! How is Roy and Brenda?

-Brenda is charge nurse at ???, Roy's business, being construction, is not booming we saw George and Annamae last week for the first time in maybe 8 years and they filled s in a bit

Capitalized text

The use of capitalized text has not been applied by our participants much, as we got only 5 (83.33%) cases used by women and 1 (16.67%) case by men (Chart 13). The purposes of its use vary, but it is mainly used to emphasize certain information in the text. As during the e-communication, the interlocutors are deprived of auditory cues, capitals are used to show that a word or a phrase is emphasized and is told in a certain manner.

By men
The role of capitalized text in the example below is a contextual emphasis, as mentioned above. The writer has capitalized the “THAT” to refer to the “overachieving” nature of Brenda and imply that there is more to the story of “overachieving” that the interlocutors are both familiar with.

E.g.: -Did they ever mend relationship?
-they called brenda their ‘overachiever”, to which I responded ”I wonder where she got THAT from?”

By women

In the following example, the capitalized text is used for the same purpose as above. The writer’s ‘YOU ARE RIGHT” expression is capitalized to put emphasis on the fact that she agrees with the writer, and the words would be articulated with a special intonation in a face-to-face communication.

E.g.: -Correct? It also has a question mark in it. I think I can sound out the words, but do not always recognize what I should
-YOU ARE RIGHT remember that whenever you refer the action to yourself like..whenever you want to...

Additional letters

In the use of additional letters within the same word, women outrun men, as we got 65 (100%) examples of female usage while we did not encounter a single one applied by men in the entire corpora (Chart 13). Additional letters, just like the capitals are applied within e-communication as an audio effect to mark the intonation. They would mostly be used to express such emotions as are happiness, amazement, disappointment or sadness.

E.g.: do you happen to be here yet? cause I want to beeeeeeereeeeg you for resheduling our hangout I just got home.otherwise I'd write you earlier the problem is that my boyfriend is taking me to introduce to his family tomorrow can u imagine!

In the above example, the writer has used additional “e”-s in the word “beg” thus intensifying its meaning and trying to explain how much she needs to reschedule the upcoming meeting. If spoken in a face-to-face communication, the word would most probably be articulated in the same manner.
In the following example, the writer used additional “o”-s in the word “so”, thus showing the degree of her tiredness and putting a special emphasis on its degree.

*E.g.*: -I hope it really is! do you think we could decide on some other day?  
-Talk tomorrow I'm going to sleep :))) Good night  
-Yes but tomorrow please I'm soooo tired

**Laughter**

Laughter is an inseparable part of our daily face-to-face communication and of course, we cannot ignore its expression in online domain as well. There are different means of expressing it, however, the most used ones are the lol, haha and hehe. The choice of laughing manner is free as there are no contextual differences or restrictions. The laughter can as well have various degrees of expression: for instance, the amount of “o”-s in “lol” indicate the degree of the laughter, (the harder one laughs, the more “o”-s are used). The latter also refers to the haha and hehe: depending on the degree of laughter the number of “ha”-s and “he”-s grow. As seen from Chart 12, the difference between male and female laughter marker usage is big enough to state that women apply more laughter markers than men do, as we encountered 29 (60.42%) cases for women and 19 (39.58%) for men throughout the corpora (Chart 13). However, the rest of laughter expressions are realized through grin emoticons (see emoticons). There are no other uses of laughter than its original purpose- reaction to the funny messages of one’s interlocutor.

**By men**

*E.g.* 1 -Hi Caio! Wow, you Brazilians really take your soccer seriously! How are you?  
-Hahahaha, yes Brazilians really do take soccer seriously.

*E.g.* 2 -agreed but the food was so good  
-I already possess too little "no thank you" as it is!  
-lol

**By women**

*E.g.* 1. -Hi! Did you already get up? I'm going to the centre to buy some Christams gift, would you join me? Let me know! (I didn't call you because I wouldn't like to get you up!)  
*wake you up*
-Hehe that's really kind of you, I was sleeping indeed. Hope you bought all the gifts. So, if you still need the money, just come by and I'll give you. :) E.g. 2. -Kristna, you will like this - I just got on the only subway in Armenia for the first time with five other people - and I was the only one that an old man motioned for to sit down in an empty seat. /smile emoticon/

-hahahaha.. that's funny!! so are you having a good time in armenia?

When it comes to the distribution of auditory devices among different-gender pairs (RQ 11: how is the use of prosodic means distributed among m/m, f/f and m/f discourse units?) Our findings show that women are more expressive in m/f communication (n=171) than in the same-sex discourse (n=78). However, in the case of men, they were found to have applied more prosodic devices in the same-sex communication (n=26), rather than in a mixed-gender one (n=8). These observations are presented in Chart 13.

On the whole, considering men and women’s emotional expressiveness in CMC from three perspectives, we found out that women are more prone to express themselves paralinguistically while men linguistically. Moreover, in regard with the application of verbal affect women are more emotionally expressive in mixed-gender groups rather than same-gender, while men in both. In the case of visual affect, we received the opposite picture, as women were inclined to demonstrate emotions in both groups, while men in mixed ones. The analysis of auditory affect showed that women applied more prosodic markers in mixed-gender groups, whereas men in same-gender groups. The differences of affect usage by both genders were found to be statistically significant. In agreement with the discussed literature, we conclude that the expression of emotions happiness, sadness and fear are typical to women in CMC as well, while we did not come across any cases of anger demonstration by men.
Conclusion

The present research aimed to contribute to the studies of emotional expressiveness of men and women in computer-mediated discourse. As presented above, research has always shown that women are more emotionally expressive than men in the traditional way of communication. Moreover, there are also certain emotions that are stereotypically linked with both genders. However, the concern that CMC as a new medium of communication may affect these gender-stereotypic perceptions due to the different format of interchange it provides has led us to conduct research on the issue.

The study examined corpora of 73 e-discourse units conducted among 18 participants in male-to-male, female-to-female and male-to-female pair types. We hypothesized that CMC does not change the traditional view of women being the more emotionally expressive of the genders and the emotions that both genders are stereotypically linked with are true in this domain as well. We approached the investigation of the corpora from linguistic and paralinguistic perspectives, analyzing the verbal, visual and auditory affect applied in the online exchange.

We found out that the hypothesis was supported partially, as in the current study women are more emotionally expressive in CMC with regard to paralinguistic expression of emotions, while men took the lead in the linguistic approach. We also observed that in CMC the feelings of un/happiness and dis/inclination are more characteristic of women in the case of verbal affect, and that women tend to express themselves emotionally in a mixed-gender discourse rather than same-gender, while men felt comfortable expressing themselves emotionally in both groups. Visually (emoticons) and vocally (prosodic devices) women generally tend to express happiness. They were found to demonstrate their emotions through emoticons almost equally in mixed-gender and same-gender communication, while men expressed their emotions better in mixed-gender exchange. As to the prosodic devices, women prefer to use more prosodic markers in mixed-gender discourse, while men in same-gender interchange. The choice of the participants for the research might be considered a limitation, however it sets a basis for a further research topic, as the results may appear to be different upon examination of a specific socio-demographic group.
Appendix 1: Tables, Charts and Figures

Tables

Table 1. Percentage of verbal affect usage by men and women

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td>53.21%</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>46.79%</td>
</tr>
</tbody>
</table>

Table 2. T-test results for verbal affect usage

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>t-value</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td>70.25</td>
<td>27.50</td>
<td>0.73928</td>
<td>6</td>
<td>0.487641</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>57</td>
<td>22.99</td>
<td></td>
<td></td>
<td>(p&lt;0.5)</td>
</tr>
</tbody>
</table>

Table 3. Percentage of visual affect usage by men and women

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td>25.79%</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>74.21%</td>
</tr>
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Table 4. T-test results for visual affect usage

<table>
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<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>t-value</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td>4.10</td>
<td>6.98</td>
<td>1.5419</td>
<td>18</td>
<td>0.1405 (p&lt;0.5)</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>11.80</td>
<td>14.16</td>
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<td></td>
<td></td>
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</table>

Table 5. Percentage of auditory affect usage by men and women

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<th></th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men</strong></td>
<td>12.01%</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>87.99%</td>
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</table>
Table 6. T-test results for auditory affect usage

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>t-value</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
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<tr>
<td>Men</td>
<td>6.80</td>
<td>8.67</td>
<td>2.0442</td>
<td>8</td>
<td>0.0752 (p&lt;0.5)</td>
</tr>
<tr>
<td>Women</td>
<td>49.80</td>
<td>46.23</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Charts

Chart 1

Use of verbal affect by men and women in 73 units of computer-mediated discourse

Types of verbal affect employed by men and women in the corpora
The verbal affect used in CMC

Chart 5

Most used verbal affect by men

0 5 10 15 20 25 30 35
Frequency of use

love nice to... wow hope

dis/satisfaction in/security unhappiness unhappiness dis/inclination
Chart 6

**Most used verbal affect by women**

<table>
<thead>
<tr>
<th>Verbal Affect</th>
<th>Frequency of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>sorry</td>
<td>20</td>
</tr>
<tr>
<td>enjoy, excited, great to...</td>
<td>2</td>
</tr>
<tr>
<td>sure</td>
<td>20</td>
</tr>
<tr>
<td>hope</td>
<td>19</td>
</tr>
</tbody>
</table>

- **Dis/satisfaction**
- **In/security**
- **Un/happiness**
- **Dis/inclination**

Chart 7

**Female-initiated and male-initiated applications of verbal affect in f/f, m/m and m/f discourse units**

<table>
<thead>
<tr>
<th>Verbal Affect</th>
<th>Frequency of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>f/f</td>
<td>116</td>
</tr>
<tr>
<td>f initiated m/f</td>
<td>160</td>
</tr>
<tr>
<td>m/m</td>
<td>158</td>
</tr>
<tr>
<td>m initiated m/f</td>
<td>157</td>
</tr>
</tbody>
</table>

- **f/f**
- **f initiated m/f**
- **m/m**
- **m initiated m/f**
Chart 8

Use of emoticons by men and women in 73 units of computer-mediated discourse

Chart 9

Emoticons used by men and women in CMC

<table>
<thead>
<tr>
<th>Emoticon</th>
<th>Frequency of use (men)</th>
<th>Frequency of use (women)</th>
</tr>
</thead>
<tbody>
<tr>
<td>smile</td>
<td>20</td>
<td>43</td>
</tr>
<tr>
<td>frown</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>grin</td>
<td>14</td>
<td>20</td>
</tr>
<tr>
<td>tongue</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>devil</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>confused</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>cry</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>wink</td>
<td>2</td>
<td>27</td>
</tr>
<tr>
<td>hug</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>sad</td>
<td>0</td>
<td>10</td>
</tr>
</tbody>
</table>

43
Chart 10

Female-initiated and male-initiated applications of visual affect in f/f, m/m and m/f discourse units

<table>
<thead>
<tr>
<th>Emoticons</th>
<th>Frequency of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>f/f</td>
<td>57</td>
</tr>
<tr>
<td>f initiated m/f</td>
<td>61</td>
</tr>
<tr>
<td>m/m</td>
<td>11</td>
</tr>
<tr>
<td>m initiated m/f</td>
<td>30</td>
</tr>
</tbody>
</table>

Chart 11

Use of auditory affect by men and women in 73 units of computer-mediated discourse

<table>
<thead>
<tr>
<th>Prosodic features</th>
<th>Frequency of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>34</td>
</tr>
<tr>
<td>Women</td>
<td>249</td>
</tr>
</tbody>
</table>
Chart 12

Prosodic devices applied as auditory affect

Chart 13

Female-initiated and male-initiated applications of auditory affect in f/f, m/m and m/f discourse units
**Figures**

Figure 1

Appendix 2: A Sample of Annotated Discourse Unit

Below is a sample from the annotated corpora in XML format, as it was not possible to export the annotated data from the UAM corpus tool in any other format. In the case of request the author can provide the annotation of the entire corpora.

<?xml version="1.0" encoding="UTF-8"?>
<document><header><textfile>1/1.txt</textfile><lang>english</lang></header><body>1. 8/4, 10:13pm Bruce Graham followed your trip on facebook looked like you had a great time! Gain any weight? • 8/4, 10:13pm Bill Chattin it was super, I love Germany • 8/4, 10:14pm Bruce Graham That's the problem with accepting hospitality - it's so fattening! • 8/4, 10:14pm Bill Chattin agreed but the food was so good • 8/4, 10:16pm Bruce Graham I already possess too little "no thank you" as it is! • 8/4, 10:16pm Bill Chattin the treasure is still there! • 8/4, 10:18pm Bill Chattin cool, he never went back to find it? • 8/4, 10:18pm Bruce Graham no he says he bet the treasure is still there! • 8/4, 10:18pm Bill Chattin cool, he never went back to find it? • 8/4, 10:18pm Bruce Graham one of his first memories is of running across a railroad bridge holding his mother's hand as the stars fell all around him • 8/4, 10:20pm Bill
Chattin stars?  

- 8/4, 10:20pm  
  Bruce Graham  
  Tracers from airplane machine guns

- 8/4, 10:21pm  
  Bill Chattin  
  <segment state="active" features="attitude;affect;in/security;dis/trust;negative-attitude;male" id="7">wow</segment>, that is intense

- 8/4, 10:21pm  
  Bruce Graham  
  Two of his uncles and his grandfather were murdered for standing against Hitler. His father knew how to survive: he joined the SS.

- 8/4, 10:22pm  
  Bill Chattin  
  but that is not the Germans of today.

- 8/4, 10:22pm  
  Bruce Graham  
  understood. He knows it, too. They escaped the 'iron curtain' in the 50s and that's another interesting story!

- 8/4, 10:24pm  
  Bill Chattin  
  <segment state="active" features="attitude;affect;in/security;dis/trust;negative-attitude;male" id="8">wow</segment>, out of the pan, into the fire

- 8/4, 10:24pm  
  Bruce Graham  
  left everything in order to get to the US. He joined the US army once he got here.

- 8/4, 10:25pm  
  Bill Chattin  
  <segment state="active" features="attitude;affect;dis/inclination;positive-attitude;male" id="9">hope</segment> he had a good life here.

- 8/4, 10:25pm  
  Bruce Graham  
  told me of joining the choir while stationed in Greenlane - not because he <segment state="active" features="attitude;affect;dis/satisfaction;dis/pleasure;ambiguous;male" id="10">enjoyed</segment> singing, but because it got him out of "soldering".

- 8/4, 10:27pm  
  Bill Chattin  
  cool

- 8/4, 10:28pm  
  Bruce Graham  
  Wants me to ghost-write his biography in my spare time.

- 8/4, 10:28pm  
  Bill Chattin  
  you got much of that? spare time?

- 8/4, 10:29pm  
  Bruce Graham  
  a lot less now that we're shoeing abain again, that is.

- 8/4, 10:29pm  
  Bill Chattin  
  that's what I thought.

- 8/4, 10:30pm  
  Bruce Graham  
  yep

- 8/4, 10:30pm  
  Bill Chattin  
  that is good though.

- 8/4, 10:30pm  
  Bruce Graham  
  trying to convert my print-shop into
a shoe shop relocating a lot of type, move the press, make room for the shoe equipment we bought and wire it while trying to repair shoes and make shoes ten pairs of new shoes on my bench waiting for attention and waiting and you get the idea • 8/4, 10:32pm Bill Chattin cool • 8/4, 10:33pm Bruce Graham Tom/Ted’s son Chris tore his knee guts a few weeks ago while at WOL • 8/4, 10:34pm Bill Chattin • 8/4, 10:35pm Bill Chattin how old? • 8/4, 10:36pm Bruce Graham 22 • 8/4, 10:36pm Bill Chattin man, that is tough • 8/4, 10:36pm Bruce Graham needs to be able to be 3 best man for his brother in 3 1/2 weeks Curtis is getting married in SC. 20 years old • 8/4, 10:37pm Bill Chattin cool • 8/4, 10:37pm Bruce Graham 1 1/2 years left in USMC • 8/4, 10:37pm Bill Chattin • 8/4, 10:38pm Bruce Graham Travelling with Mom and Dad and staying at Wycliff JAARS, if you know what that is • 8/4, 10:38pm Bill Chattin no • 8/4, 10:38pm Bruce Graham Mom and Dad have spent a lot of time volunteering there something to do with Wycliff Bible Translators and aviation • 8/4, 10:39pm Bill Chattin ok • 8/4, 10:40pm Bruce Graham they have apartments for hire on the cheap, so all 4 of us will stay from Thu through Sun. Want to give us a ride to the airport? • 8/4, 10:40pm Bill Chattin what day? • 8/4, 10:41pm Bruce Graham Thu before Labor Day Matt and Andrea moved to Texas • 8/4, 10:41pm Bill Chattin we might be able to, what time and airport? • 8/4, 10:42pm Bruce Graham Manchester, NH • 8/4,
10:42pm Bill Chattin oh • 8/4, 10:42pm Bruce Graham Wondered how long it'd be before you got that I was teasing /<segment state="active" features="attitude;emoticons;grin;positive-attitude;male" id="16">grin emoticon</segment>/
   • 8/4, 10:43pm Bill Chattin I was thinking you were coming down here somehow, I feel so
   <segment state="active" features="attitude;affect;in/security;dis/trust;ambiguous;male " id="17">silly</segment>
   • 8/4, 10:43pm Bruce Graham and well you should!
   • 8/4, 10:44pm Bruce Graham Matt called from Texas two nights ago updating us on their difficulties their 5th wheel camper had all kinds of problems - including leaking roof, no electricity, blocked septic line, broken refer, Matt listed these repairs to me and said in teh middle of the list "Tavis has a donkey", then kept right on listing things /<segment state="active" features="attitude;emoticons;grin;positive-attitude;male" id="18">grin emoticon</segment>/
   • 8/4, 10:47pm Bill Chattin ?
   • 8/4, 10:47pm Bruce Graham turns out, Tavis found and made friends with a miniature donkey that literally followed him home
   • 8/4, 10:47pm Bill Chattin <segment state="active" features="attitude;prosodic-features;laughter;positive-attitude;male" id="19">lol</segment>
   • 8/4, 10:47pm Bruce Graham domestic, must have gotten loose
   • 8/4, 10:48pm Bill Chattin ok
   • 8/4, 10:48pm Bruce Graham Matt posted a pic on facebook of the wto that was captioned "A Pair of Smart asses"
   • 8/4, 10:48pm Bruce Graham Both had work, but Matt’s didn’t last Andrea still works, though know of anyone in Texas that needs a computer mechanic?
   • 8/4, 10:49pm Bill Chattin don’t know anyone in Texas
   • 8/4, 10:50pm Bruce Graham You do now!
   • 8/4, 10:50pm Bill Chattin that’s true
   • 8/4, 10:50pm Bruce Graham eyes are gaining weight gonna finish up and go to bed if I may be excused?
   • 8/4, 10:52pm Bill Chattin it was <segment state="active" features="attitude;affect;dis/satisfaction;dis/pleasure;positive-attitude;male" id="20">nice talking to you</segment>, though our earlier topic <segment state="active" features="attitude;affect;un/happiness;misery/cheer;negative-attitude;male " id="21">sadden</segment>s me much, say hi to Penny for me, <segment state="active" features="attitude;affect;un/happiness;antipathy/affection;positive-attitude;male ">
id="22">love</segment> you · 8/4, 10:52pm Bruce Graham <segment state="active" features="attitude;affect;un/happiness;antipathy/affection;positive - attitude;male" id="23">love</segment> you, too! · 8/4, 10:52pm Bill Chattin bye · 8/4, 10:52pm Bruce Graham Contact Janet, if you think of it · 8/4, 10:53pm Bill Chattin I may · 8/4, 10:53pm Bruce Graham see ya · 8/4, 10:53pm Bill Chattin see ya </body>
Bibliography


   http://socrates.berkeley.edu/~akring/Kring%20&%20Gordon.pdf
   http://www.jstor.org/stable/23083965?seq=1#page_scan_tab_contents
   http://www.jstor.org/stable/1128650?seq=1#page_scan_tab_contents


http://dx.doi.org/10.1089/10949310050191809