

Male or female, does it matter? The variation of emoticon use on Tunisians' Facebook conversations

Sabrina Chbichib
University of Sfax
Tunisia
sabrina.chbichib@yahoo.fr

ملخص:

عرفت الاتصالات عبر الكمبيوتر ارتفاعاً هائلاً لم يعد تشكيل حياة الناس فحسب، بل أعاد تشكيل لغتهم أيضاً. في أيامها الأولى، كان يُنظر إلى الاتصالات عبر الكمبيوتر على أنها وسيلة غير شخصية، وفعالة فقط في التواصل الموجه نحو المهام ولكنها غير كافية في المحادثات الاجتماعية والعاطفية، لأنها تفتقر إلى الإشارات غير اللفظية. مقابل تطوير الاتصالات عبر الكمبيوتر وضرورة المعلومات غير اللفظية في فعالية التواصل، قدمت منظومة الاتصالات الحديثة نسختها الخاصة من الإشارات غير اللفظية؛ ومن هنا نشأت الرموز التعبيرية التي تُستخدم بشكل أساسي لتعويض تعبيرات الوجه في المحادثات وجهاً لوجه ومساعدة مستخدمي الاتصالات عبر الكمبيوتر على التعبير عن مشاعرهم بطريقة سريعة ومختصرة. نظراً للاستخدام الواسع لمواقع شبكات التواصل الاجتماعي وتطوير الوسائط المتعددة، فقد جذب استخدام الرموز اهتمام العديد من الباحثين في اللغة. يتبنى البحث الحالي منهج تحليل الخطاب بواسطة الكمبيوتر لاستخدام الرموز التعبيرية. تبحث هذه الدراسة في دور الجنس كعامل اجتماعي مساهم في تباين الإشارات غير اللفظية، مع التركيز على استخدام الرموز التعبيرية في المحادثات الانية للتونسيين على فيس بوك. مقابل الادعاء التخميني بأن الذكور والإناث العرب يختلفون في اختياراتهم اللغوية، يكشف التحليل أن دور الجنس كان غير واضح فيما يتعلق باستخدام الرموز التعبيرية. وعليه، فإن الاعتبارات الجنسية تتلاشى في الخطاب الإلكتروني التونسي العربي

Abstract

Computer-Mediated Communication (CMC) has witnessed a meteoric rise that not only reshaped people's lives but also their language. In its early days, CMC was seen as an impersonal medium, effective in task-oriented communication but inadequate in socio-emotional conversations, because it lacks nonverbal cues. Against the development of CMC and the necessity of nonverbal information in communicative effectiveness, CMC offered its own version of nonverbal cues; hence the inception of emoticons that are mainly used to compensate facial expressions in face-to-face conversations and help CMC users to express their emotions in a fast brief way. Regarding the widespread use of social network sites and the development of CMC mediums, the use of emoticons has drawn the interests of many researchers. The current research adopts a Computer-Mediated Discourse Analysis approach to emoticon use. The study examines the role of gender as a social factor involved in nonverbal cues variation, focusing on the use of emoticons. Against the speculative claim that Arabic males and females differ in their linguistic choices, the analysis reveals that the role of gender was blurred in relation to emoticon use. Accordingly, gender considerations fade away in the Arabic Tunisian e-discourse.

Keywords: CMC, Emoticons, Gender, Variation Language

1 Introduction

Computer-mediated communication (CMC) has altered the way people get in touch with each other. This phenomenon has increased in a dramatic way over the last few years. CMC technology is useful as a new communication tool that offers a wide range of communicative affordances that facilitate real-time and latent exchanges. This communicative medium is empowered by particularly with the rise of social network sites (SNSs). Communication technology has altered the way people get in touch with each other and readjusted the definition of many notions such as friendship, privacy, intimacy, emotions, and many others.

The Internet not only shapes our lives but also our language (Paolillo, 2006). The linguistic characteristics of CMC have been the subject of study since the inception of the Internet. In fact, any communication is a combination of verbal and non-verbal information that helps the construction of the meaning of any message together with other functional elements such as structure, grammar and an important element which is context. Not very different, an online communication needs those elements but with different patterns, context characteristics, and social functions.

At the beginning, many scholars maintained that CMC lacks non-verbal information but at present, an electronic nonverbal-language is widely used to express non-verbal cues in CMC, hence the CMC own version of non-verbal displays, namely 'emoticons' (Derks, Fischer, and Bos, 2007). "Emoticons can be considered a creative and visually salient way to add expression to an otherwise strictly text-based form" (ibid). In face-to-face communication, facial expressions help the construction of the overall meaning, and sometimes, they are used to check the believability of the verbal message. Emoticons are used very often, especially in synchronous chat devices such as IM, blogs, listserv, etc. This means that people online feel the need to express their emotions, mood, and state of mind using emoticons rather than written-based text probably because they are lured by the speed response principle in CMC.

But like any other language, the paralinguage happens to vary along different factors. In fact, the study of language variation is central to the study of language use. It is impossible to study the language forms used in computer-mediated discourse without tackling the issue of language variability. Most of this variation is highly systematic (Labov, 1968). It depends on a number of factors such as the user's demographics, his/her communicative purpose, the context of language use, and his/her relation with the interactants.

A major social variable that can be taken into consideration when adopting a sociolinguistic approach to CMC is gender. The debate was about whether males and females adopt the same linguistic behaviour online. The study of the difference between the linguistic and stylistic choices of males and females in face-to-face interaction is grounded in sociolinguistic research. From its early emergence, CMC was seen as the counterpart to Face to Face interaction. So, many linguists tend to compare between both of them. Huffaker and Calvert (2005), based on the research results obtained by Herring (1999) and Tannen (1991), assumed that males and females communication patterns always differ such as the tendency of males to be more direct than females and the tendency of females to show much interest in online politeness than males. But, gendered language use, in CMC contexts, is not very different from that in face-to-face interactions and includes similar features (Herring, 2001). The authors came to the conclusion that there are no changes in the virtual world in comparison to authentic settings.

More recently, research interest has shifted from male-female linguistic differences online to the importance of gender signalling online. Many SNSs enforced gender information and it has become compulsory in order to obtain a profile online. Auchard (2008, p. 1) cited the example of Facebook which "press[ed] members to declare whether they are male or female, seeking to end the grammatical device that leads the site to use certain defaulted gender neutral pronouns hence the reference to

individual users as ‘they’ or ‘themselves’” (ibid, 1). But, the problem has become deeper when SNSs such as Facebook has become popular worldwide. Auchard maintained that grammatical errors that Facebook made when personalizing pronouns in messages seem to be problematic because of the different pronominal systems between languages. The translation of the pronouns is difficult particularly with non-English languages. So, information about gender is inevitable in order to take place in such communal SNS (ibid).

But, it seems that gender information statement generated a little controversy. Stutzman (2010) organized some interviews with a number of facebookers; he found that a considerable number of the samples did not feel comfortable by such declaration. Some of them decided to leave the site because they did not want to fill into a gender classification. This gender classification seemed to be of high importance for Facebook bureau of council. Facebook Product Manager, Naomi Gleit, said that: “If a user comes on more than once and is willing to give Facebook a very basic piece of information—their gender- that seems to be the strongest predictor of whether they will stay on the site” (Stutzman, 2010, para.3). Here, Stutzman proposed the question of what are the critical differences between individuals who share gender and those who do not and the reasons behind such behaviour (ibid, para. 4). Such a question can be the starting point for a new trend in gendered research in CMC.

Research approaches on gender scholars have tried to shed light on the issue of gender within different theoretical frameworks. With changes in society, different approaches emerged as a different perspective to gender. These theoretical frameworks can be essentially classified into two categories: Essentialism and Social Constructivism. Gender essentialism is a concept used to examine the attribution of fixed, intrinsic, innate qualities to women and men (Heyman and Giles, 2006). In feminist theory, gender essentialism is the attribution of a fixed essence to women (Grosz, 1995). Women’s essence is universal and is identified with those characteristics viewed as being specifically feminine (ibid). These ideas of femininity are usually related to biology and often concern psychological characteristics such as being emotional, empathetic, and non-competitive in comparison with males, etc. (ibid).

Social constructivism in gender, however, is a theory in feminism and sociology. It is the manifestation of cultural origins and gender perception and expression in the context of interpersonal and group social interaction (West and Zimmerman, 1987). The social construction of gender specifies that “gender roles are an achieved ”status” in a social environment, which implicitly and explicitly categorize people and therefore motivate social behaviours” (ibid, 127). The contemporary constructionist perspective, as proposed by Fenstermaker is regarding gender as an activity (“doing”) of utilizing normative prescriptions and beliefs about sex categories based on situational variables. These “gender activities” constitute sets of behaviour, such as being masculine or feminine (Fenstermaker and West, 2013). The perception as masculine or feminine is not guaranteed to match the expression’s typical or intended nature. Hence, gender can be understood as external to the individual, consisting of a series of on-going judgements and evaluations by others, as well as of others (ibid).

In this study, an essentialist perspective of gender is used to deal with the variation of emotional exchange through emoticons on Tunisians’ instant Facebook conversations. This piece of research will try to identify the role of gender as a social factor that stand behind the variation of emoticon use on Tunisians’ Facebook IM conversations. Therefore, the research question for this study focus on the variation of stylistic choices in relation to the expression of nonverbal cues and on the determination of gender communication differences through emoticon use.

The remainder of this research paper is organized as follows: In the second part, the literature review, some previous works about CMC and the gender debate are reviewed. Part three expands on the methodological details and the architecture of this research topic, including a description of the tools of data collection and statistical packages that will be used in the analysis of the data. In the fourth part,

an analysis of the collected data from the research methods is done using different statistical packages and varied descriptive and multi-variant tests. The obtained data will be interpreted in relation to the research and will be discussed in relation to the different studies and theories reviewed in the literature. The final chapter, the conclusion, includes a recapitulation of the research findings and a discussion of its implications. It also sheds light on the different research obstacles faced and suggest some future research directions.

2 Literature review

Men and women tend to use slightly different language styles. This is what is referred to in semiology as gender indexicality (Silverstein, 2003). These indices index the gender or "female/male" social status of the interlocutor. There are a multitude of linguistic variants that act to index sex and gender such as word-final, sentence-final, or morphological and phonological mechanisms (ibid). Gender indices suggest different levels of indexicality such as politeness, affiliation, social class, etc. In this research paper, gender indexicality is dealt with in relation to the use of emoticons in Tunisians' Facebook conversations. The focus will be devoted to emoticons as linguistic variables to see whether they index the gender of Tunisian users.

Extensive sociolinguistic researches have focused on gender and its role on linguistic variation in face-to-face conversations. Lakoff (1975) stated that women's style of language serves to maintain women's role in society. A later refinement of this argument was that gender differences in language reflected a power difference; however, both perspectives take male style as a norm and consider women's style as inferior. More recently, Tannen (1991) compared gender differences in language as more similar to 'cultural' differences. She argued that men and women differ in their conversational objectives where men aim to communicate factual information whereas women are more concerned with building and maintaining relationships. These findings are related to face-to-face conversations.

When it comes to emoticon variation in CMC, the debate is about whether males and females adopt the same linguistic behaviour online particularly in their use of emoticons. From a review of the literature, it is clear that there is a concentration on the factor of gender especially on female linguistic behaviour online. The tendency may be explained by certain claims stating that the Internet "is still predominantly male-oriented" (Srinivas, 2006, p. 8). It happens that some investigators opted for considering that linguistic choices made by males are the default along which other varieties are compared.

But, when it comes to the use of emoticons, it seems that such a consideration fades away since the use of emoticons as a linguistic behaviour in CMC is a new phenomenon that has increased rapidly and that does not follow any old theories on the basis of the users' gender. Based on the "Social Sharing Theory" developed by Rimé et al. (1991), Derks, Fischer, and Bos (2007) explained the variation of emotional styles in CMC. Social sharing refers to people's need to declare their emotional experiences to their communicators (ibid, 5). The theory maintains that the stronger the emotional experience, the wider the declaration of this experience, and that social sharing differs depending on the gender of its experiencers (Rimé et al, 1991, as cited in Derks, Fischer, and Bos, 2007, p. 5). According to such a theory, men are more likely to share their emotions with women but women are more likely to share their emotions with both sexes (ibid, 5). This may be explained by the difference in their social roles (Eagly and Wood, 1991, as cited in Derks, Fischer, and Bos, 2007, p. 5). Women are expected to be more affective than men (ibid, 5).

The bases of the social sharing theory are mirrored in Lee's (2003, as cited in Luor et al., 2010, p. 891) study of the gender differences and their relations with the use of emoticons in the workplace. He found that women's more frequent nonverbal displays in FtF interactions, especially smiling, could be reflected in the more frequent use of emoticons. Moreover, he found that men rarely used emoti-

cons when interacting with women. For women, there is no difference in relation to their interactants. Adopting the same line of thinking, Herring (2001) found that women reveal their emotional experience online more than men because, in real life, women are more likely to express their emotions (appreciation, thanking, apologising,...) while men tend to hide their feelings.

Not very different from this, Rober and Flammer (2002, as cited by Schmid et al., 2011, p. 103) argued that women might be freer to express and experience their emotions because in the context of social relationships and care-giving, there are fewer constraints to do so. Schmid et al. (2011, p. 103) referred to this phenomenon as “the emotion socialization”. One major consequence of this emotion socialization is that women “gain knowledge and experience concerning the meaning of nonverbal cues in general and emotional production and processing than men” (ibid, 103). Therefore, women are better emotional decoders than men (ibid, 103).

Some other researchers, on the other hand, offered other explanations of emoticon variation along the variable of gender. Huffaker and Calvert, 2005, for example, studied the linguistic choices of men and women in blogs. They found that there is no significant difference between the two genders in their use of emoticons in their blogs. “Both sexes are likely to the use of emoticons equally and they have exhibited increased frequency of use” (Huang, Yen, and Zhang, 2008, p. 467). They explained such a tendency by maintaining that women who use the Internet and particularly those who have their blogs seem to be different from “offline women”. Such an explanation contrasts the view that language use is not very different from that in FtF interaction and includes similar features such as its variation along the gender of its users (Herring, 2001). The same results were found by Walther and D’Addario (2001) when they analysed the e-mail messages of both sexes. They argued that there are no gender differences in the tendency of sending emoticons.

Some other researchers, however, offered other explanations; for example, Wolf (2000, as cited in Huang, Yen, and Zhang, 2008, p. 467) demonstrated that women do not use more emoticons but they use them in other ways. Females were found primarily to use emoticons to express humour of solidarity whereas males tended to use them to express sarcasm (ibid, 467). Much in the same vein, Walther (1992, as cited in Markman and Oshina, 2007, p. 2) seemed to reject the view that there are no gender differences between online sharing and that found in FtF interaction. According to him, such variation originates from the difference in experience and familiarity not from gender. As the user, male and female, becomes more and more familiar with the CMC medium and in a next level his/her interactant, his/her emotional style changes (ibid, 2).

3 Methodology

This study is a part of an extended study and the interest on the role of gender is just a subpart within a big study on the intervening factors (social, technological, and contextual) on emoticon variation. The standardised questionnaire is the basic method of data collection for this research topic. The questionnaire is based on closed and fixed response questions. The closed-ended questions limit the respondents’ answers to a fixed set of responses through dichotomous questions requiring YES or NO answers as well as several multiple-choice options. The fixed response questions provide opportunities to mark the most appropriate response and register a strong opinion on a fixed point Lickert scale ranging from strongly agree to strongly disagree. The set of questions and responses were prepared with reference to previous studies related to emoticons and based on a pre-test version.

In order to ensure the validity of the questionnaire, a pre-test was conducted so that the validity of the questions, how easy they are to understand, and the pertinence of the proposed response modalities can be verified. Accordingly, the structure of the questionnaire was progressively improved thanks to the reactions and the remarks of the test group. In order to ensure better comprehension and a

wide administration of the questionnaire, an Arabic parallel version was prepared and checked for translation accuracy.

Once the final version of the questionnaire was ready, two methods of administering were chosen. The first method consists in administering a print version of the questionnaire in a face-to-face setting. This procedure permits a direct response to the respondents' queries and requests of clarifications about the nature of the questions and it also enables a better control of the samples' representativeness.

In order to maximize response rates, a second method of monitoring questionnaires was used. It consists of a Web-based questionnaire available on: https://docs.google.com/forms/d/1k9nr-pC4_SZ2VUB5uHYK5d_CwDP20QqWl_i_ldh7R7M/pubVE#invite. This link was circulated to all my friends on Facebook. They were asked to anonymously fill in the questionnaire on a voluntary basis, and to forward the link to their friends.

Data collection started in June 2015 and stopped in January 2016. Two hundred fifty print questionnaires were distributed; only two hundred and twenty three out of them were fully answered. Online, four hundred and twelve entered the survey and provided a full response to the questionnaire. So, six hundred and thirty five participated in this study. 52.1% of the participants are males and 47.9% are females. The participants are a mixture of people with different socio-professional categories; that is to say, they have different educational levels and different incomes. The software of Statistical Package for the Social Sciences (SPSS 17.0) is used as software of statistical data analysis. Different types of data analysis will be used: descriptive statistics and multivariate data analysis.

4 Data analysis and discussion

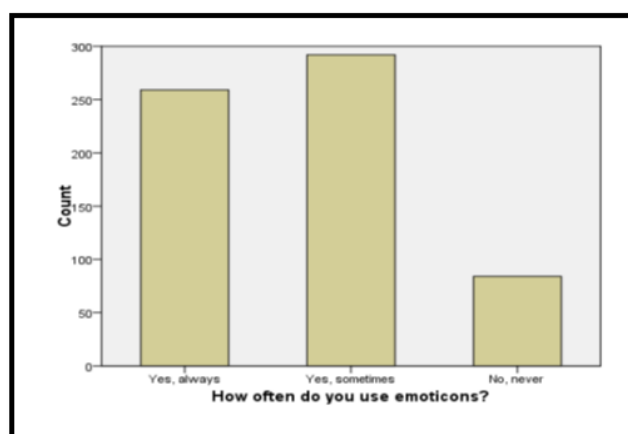
4.1 Tunisians' Communicative Behaviour on Facebook

The first purpose of this study was to get some general information on the Facebook IM users' experiences with Facebook and to learn about the users' stylistic choices for expressing the nonverbal cues through using emoticons in function of their gender. The findings indicated that most Tunisians have home Internet access, which enables the profound integration of social network sites in Tunisians' everyday life.

Regardless of Tunisians' occupation, Facebook has become part and parcel of their daily activities. Its use varies from searching for news, looking for friends to posting comments, playing games, audio/video downloading, and real time chat. As the use of emoticons is the main interest in this study, the participants were asked how often they used emoticons in their instant conversations. The following graph summarizes the obtained results.

It is clear from the graph above that most participants (86.8%) use emoticons usually or sometimes while 13.2% never use emoticons. Such use has many reasons. The participants were presented with a multiple-choice response question to state their reasons for using emoticons. Some freedom was left to the respondents to add another reason if they felt that they had something to add. Only the complete answers were counted. The data analysis revealed that 49% use emoticons to clarify their emotions, 53.5% use emoticons to strengthen the emotional meaning expressed in the written text, 37.8% use emoticons to soften the tone of the written text, while only 0.6% added another reason for their use of emoticons. These reasons range from 'avoiding the use of written language for the sake of brevity and speed of response to making fun, and imitating their interactants' use of emoticons.

An emoticon is a blend of icon and emotion. So, normally emoticons are used to communicate emotions in computer-mediated communication. The participants were presented with a Likert scale ranging from 'strongly agree' to 'strongly disagree' to reveal their opinion about how adequate emoticons

Figure 1: Frequency of emotion use

are in the communication of human emotions.

Table 1: The Adequacy of Communicating Emotions Using Emoticons

	Frequency	Percent	Valid Percent	cumulative percent
Strongly agree	169	26,6	26,6	26,6
Agree	346	54,5	54,5	81,1
Disagree	84	13,2	13,2	94,3
Strongly disagree	8	1,3	1,3	95,6
Neutral	28	4,4	4,4	100,00
Total	635	100,00	100,00	

It seems that there is a certain consensus that human emotions could be adequately communicated using emoticons on Facebook IM. But a considerable proportion (approximately 20%) disagrees that human emotions could be communicated using emoticons.

Facebook offers a wide range of activities, and real time chat is one of them. The instant messaging variety is agrammatical, with relaxed punctuation and capitalisation rules, and written in mix pidgin forms (Herring, 1999; Tippmann, 2002). One of the typical features of chat language is the use of emoticons. It was found that this emergent form is popularly used by Tunisian Facebookers.

The reasons for using emoticons are, in 53.5% of the cases, to strengthen the emotional meaning expressed in the written text, in 49% to clarify the participants' emotions and in 37.8% to soften the tone of the written text. Only 0.6% of the participants added other reasons for emoticon use. These reasons include avoiding the use of written language for the sake of speed and brevity, making fun, and imitating others. According to these figures, emoticons are used deliberately and in order to improve the understanding of the message, not as a quicker way of typing.

Adopting Kress (2005)'s sociolinguistic semiotics, emoticons are social codes that are needed for making meaning and making the sender's intended meaning understood rather than a social trend. In fact, only 0.6% of the participants used emoticons for the reason of imitating others, as some of the participants' answers show. In this context, this means that Tunisian Facebookers try to make themselves understood by using emoticons. An emoticon is used simply as an extension of the text and/or to emphasise the sentiment behind the text. According to Kress (2005), emoticons are used mainly to provide more detail to the text and that is why there is a need for a combination of text and image (62% of the participants in this study tend to mix written text and emoticons).

The main reason for using emoticons is to emphasize the emotional meaning expressed in the writ-

ten text (53.5% of the population sample). This corroborates with Segal et al. (2013) who found that nonverbal cues can play a significant role in “accenting” the emotional meaning expressed in the verbal message. Emoticons are also used to express human emotions. Emoticons can replace the verbal message and assume the burden of passing on the nonverbal information on their own. This preference highlights the socio-emotional oriented aspect of CMC (Walther, 1996). CMC is no longer an impoverished cold medium according to the filtered-out approach. CMC has become an interpersonal medium that helps the development of socio-emotional relations such as friendships and romances (ibid).

4.2 Gender and Emoticon Variation

4.2.1 The Gender of the Sender

In this part, the aim is to investigate the impact of gender as an independent social variable on the use of emoticons as a dependent linguistic variable. It was found that 86.8 % of the population sample use emoticons on Facebook IM. In order to study this variation, the Independent Samples T-Test is used. The Independent Samples t Test compares the means of two independent groups in order to determine whether there is statistical evidence that the associated population means are significantly different (SPSS Tutorials, 2016).

The null hypothesis (H0) and the alternative hypothesis (H1) of The Independent Samples T-Test can be expressed in this way:

1. H0: $\mu_1 = \mu_2$ (“the two population means are equal”)
2. H1: $\mu_1 \neq \mu_2$ (“the two population means are not equal”)

Where μ_1 and μ_2 are the population means for group 1 (males) and group 2 (females), respectively. Additionally, a significance level (typically denoted using the Greek letter alpha, α) is decided upon before the hypothesis tests are performed. The significance level is the threshold used to decide whether a test result is significant. In this case α equals 0.05. It should be remembered that the independent samples T test requires the assumption of homogeneity of variance (both groups have the same variance). SPSS conveniently includes a test for the homogeneity of variance, called Levene’s Test, whenever an independent samples T test is run.

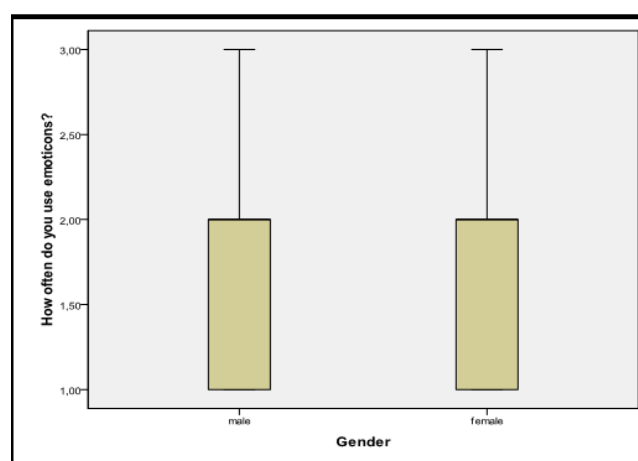
The Hypotheses for Levene’s Test are:

1. H0: $\sigma_1^2 - \sigma_2^2 = 0$ (“the population variances of group 1 and 2 are equal”)
2. H1: $\sigma_1^2 - \sigma_2^2 \neq 0$ (“the population variances of group 1 and 2 are not equal”)

This implies that if we reject the null hypothesis of Levene’s Test, this suggests that the variances of the two groups are not equal; i.e., that the homogeneity of variances assumption is violated (ibid). The output in the Independent Samples Test table includes two rows: Equal variances assumed and Equal variances not assumed. If Levene’s test indicates that the variances are equal across the two groups (i.e., p-value large), the reliance will be on the first row of the output, Equal variances assumed, for the actual Independent Samples T-Test (ibid). If Levene’s test indicates that the variances are not equal across the two groups (i.e., p-value small), you will need to rely on the second row of the output, Equal variances not assumed (ibid). The difference between these two rows of output lies in the way the Independent Samples T-Test statistic is calculated. When equal variances are assumed, the calculation uses pooled variances; when equal variances cannot be assumed, the calculation utilizes un-pooled variances and a correction to the degrees of freedom.

Before running the Independent Samples t Test, it is better to look at some descriptive statistics and graphs to get an idea of what to expect. The Compare Means Test takes place to get descriptive statistics by group. The results reveal that the standard deviation in emoticons for males is about 0.8; for females, it is about 0.6. This corresponds to a variance of 1.75 for males, and a variance of 1.7 for females. The Explore procedure is run to obtain a comparative box-plot that yields to the following graph:

Figure 2: Gender and Emoticon Variation



It is clear, from this box-plot, that the spread of observations for males is almost the same as the spread of observations for females. So, it could be estimated that the variances for these two groups are quite the same. It should not come as a surprise if the Independent Samples t Test is not significant.

Moving to the Independent Samples T-Test, in our sample dataset, the participants reported their frequency of using emoticons, whether they were males or females. The aim in this study is to know if the average of emoticon use is different for males versus females. This involves testing whether the sample means for emoticons among males and females in the sample are statistically different.

The hypotheses can be expressed as:

1. $H_0: \mu_{\text{males}} = \mu_{\text{females}}$ ("the mean emoticon use in the population of males is identical to the mean emoticon use in the population of females")
2. $H_1: \mu_{\text{males}} \neq \mu_{\text{females}}$ ("the two population means are not equal")

Where μ_{males} and μ_{females} are the population means for males and females, respectively.

Two sections appear in the output of the test: Group Statistics and Independent Samples Test. The first section, Group Statistics, provides basic information about the group comparisons, including the sample size (n), mean, standard deviation, and standard error for emoticon use by group. In this example, there are 331 males and 304 females.

Table 2: T-Test Group Statistics

	Gender	N	Mean	std. Deviation	sta. Error Mean
How often do you use emoticons?	Male	331	1,7462	,75615	,04156
	Female	304	1,7007	,59080	,03388

The second section, Independent Samples Test, displays the results most relevant to the Independent Samples t Test. There are two parts that provide different pieces of information: Levene's Test for Equality of Variances and t-test for Equality of Means. Levene's Test for Equality of Variances reveals

Table 3: Independent Samples T-Test

		Levene's Test for Equality of Variances		t-test for Equality of Means					
								95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	Lower Upper
How often do you use emoticons?	Equal variances assumed	31,673	,000	,841	633	,401	,04557	,05418	-,06083 ,15196
	Equal variances not assumed			,850	617,407	,396	,04557	,05362	-,05974 ,15087

a p-value of ".000" (but should be read as $p < 0.001$ – i.e. p very small), so the null hypothesis of Levene's test is rejected and it can be concluded that the variance in the frequency of using emoticons for males is significantly different from that of females. So the focus will be on the "Equal variances not assumed" row for the t-test results.

The t-test for Equality of Means provides the results for the actual Independent Samples t Test where t is the computed test statistic, df is the degrees of freedom, Sig (2-tailed) is the p-value corresponding to the given test statistic and degrees of freedom, Mean Difference is the difference between the sample means; it also corresponds to the numerator of the test statistic, and Std. Error Difference is the standard error; it also corresponds to the denominator of the test statistic.

The mean difference is calculated by subtracting the mean of the second group from the mean of the first group. In this example, the mean for females was subtracted from the mean for males (1.70 minus $1.75 = -0.05$). The sign of the mean difference differs from the sign of the t value. The associated p-value is 0.4 more than the chosen significance level $\alpha = 0.05$. Accordingly, this test result was not significant. In this case, the "Equal variances assumed" output would be used. So, the null hypothesis is maintained, and it can be concluded that males and females have identical mean emoticon frequency on Facebook IM; hence, the gender independent social variable has no effect on the variation of emoticons on Facebook IM.

4.2.2 The Gender of the Receiver

The data analysis provides ample evidence that the gender of the sender has no significant effect on the variation of emoticon use on Facebook IM. Males and females display identical linguistic behaviour in their use of emoticons. What about the gender of the receiver? Does it affect the sender's frequency of using emoticons? In fact, the study of the impact of the receiver's gender on the sender's stylistic choices is associated to the contextual aspects of linguistic variation on Facebook conversations. The cross-tabulation test is used, with gender as an independent social variable and the frequency of emoticon use according to the receiver's gender as a dependent variable. The obtained results are shown in the following table.

The cross-tabulation test reveals that males tend to use emoticons with their respective receivers and with less frequency with female receivers. On the other hand, females use emoticons almost in the same way regardless of the receiver's gender.

Table 4: The Sender's Gender and the Frequency of Emoticon Use

		<u>Gender</u>		<u>Total</u>
		<u>male</u>	<u>female</u>	
Do you use emoticons most with:	Males	95	51	146
	<u>Females</u>	236	253	489
Total		331	304	635

The aim of this study was to investigate the impact of gender as an independent social variable on emoticon use as a dependent linguistic variable. In the first stage, the aim was to prove whether males and females adopt different linguistic behaviour regarding their use of emoticons on Facebook IM, hence the second sub-hypothesis in this study. It states that males differ in their use of emoticons from females by incorporating more emoticons in Facebook conversations. The data analysis and the compare means test revealed a variance of 1.75 for males and a variance of 1.7 for females (see Figure 1). In order to study this variance in depth, the independent samples t-test was used in order to determine whether there is statistical evidence that the associated population means of males and females are significantly different. The results are reported in Tables 4 and 5 which determined a p-value of 0.4 that exceeds the threshold level of 0.05. Accordingly the null hypothesis was maintained and it was concluded that males and females have identical mean emoticon frequency on Facebook IM and the gender factor has no effect on the variation of emoticons in Facebook instant conversations.

At a next stage, the aim was to investigate the impact of the receiver's gender on emoticon frequency. The data provided ample evidence that males tend to use emoticons more with males than with females. Females, on the other hand, use emoticons almost in the same way with both sexes. These findings gainsay Srinivas (2006)'s claims that 'the Internet is male-oriented' and that the linguistic choices made by males are the default along which other varieties are compared. In our case and as the use of emoticons is a new linguistic phenomenon, these gender considerations fade away. Much in the same vein, the findings contradict Herring (2001)'s and Lee's (2003) findings where women used more frequent nonverbal displays than men.

The obtained results in terms of the users' gender corroborate many research findings in different contexts such as those of Derks, Fischer, and Bos (2007), Huffaker and Calvert (2005), Huang et al. (2008) and Walther and D'Addario (2001). These researchers uphold the idea that there is no significant difference between the two genders in their use of emoticons. According to the Social Sharing Theory developed by Rimé et al. (1991) and later by Derks, Fischer, and Bos (2007), the variation of emotional styles in CMC is due to people's need to declare their emotional experiences to their communicators (ibid, 5). Such a declaration depends on the strength of this emotional experience (ibid). According to the theory, men are more likely to share their emotions with women. This is at odds with the studied case where men share their emotions more with men. And according to the same theory, women are likely to share their emotions with their interactants regardless of their sex. This principle substantiates with the findings of this study where women reveal the same emotional sharing frequency with both sexes.

These tendencies may be explained by the fact that women are more affectionate than men and this is due to the difference in their social roles (Eagly and Wood, 1991). But these differences in social

sharing are related to face-to-face interactions. Some researchers like Lee (2003), Herring (2001) and Robert and Flamer (2002) maintained that these social sharing bases relevant to face-to-face contexts could be applicable in CMC contexts. Accordingly, women are more likely to use more emoticons as women are more likely to reveal their emotions such as appreciation, thanking, and apologising while men tend to hide their feelings (Herring, 2001). This phenomenon is referred to in the literature as ‘emotion socialisation’ (Schmid et al., 2011) where women are found to be better emotional decoders than men (ibid, 103) since women’s knowledge of emotions exceeds that of men (ibid).

Other researchers, however, such as Huang, Yen, and Zhang (2008) rejected the social sharing bases and declared that face-to-face interactions and gender considerations cannot be applicable in CMC because women online are not the same offline since language use differs. Not very different from this view, Walther (1996) stated that other factors intervene in CMC interactions such as online experience and familiarity with computer-mediated discourse not the gender of the user (Markman and Oshina, 2007, p. 2). Gender considerations fade away in relation to emoticon use on Facebook IM and emoticons cannot be used to index gender in the Tunisian context.

Unpackaged sociolinguistic studies have tried to shed light on the issue of gender within different theoretical frameworks. Nowadays, the gender debate needs to be understood in the light of the social and technological changes. The male-female categorisation seems to be unfair for those who deny being referred to as masculine or feminine. Heterosexuals support the “other” gender option that seems much fair in relation to their gender status and that has become available in many social network sites and blogs where the gender information is crucial to be a citizen in a virtual speech community (Stutzman, 2010, para.3). According to this framework “gender researchers can more fruitfully focus on “people’s active engagement in the reproduction of or resistance to gender arrangements in their communities” (Holmes and Meyerhoff, 2008, p. 634). Hence, the rejection of the essentialist perspective of gender to a constructivist perspective that judges people’s gender from their doings rather than their biological differences.

5 Conclusion

One of the remarkable features of technological evolution is the diffusion of computer-mediated communication that faced different challenges since its early days because it is always subjected to comparisons with face-to-face communication as a perfect reference. Progressively, CMC has succeeded to surmount many problems by expanding its tools and affordances and to attract a vast platform of users with different socio-cultural backgrounds and professional interests. One of the main challenges that CMC faced is the communication of non-verbal cues as early CMC was referred to as a cold medium adequate only in task-oriented communications.

Although early CMC had excluded the non-verbal factors, it seemed unexpected that it develops communicative channels to provide immediate feedback and emotional content like in face-to-face contexts. The intense use of CMC together with users’ interest to develop their communicative input has led to the inception of emoticons. Emoticons are created as substitutes to facial expression in face-to-face communication. Since their inception, the use of emoticons in computer-mediated discourse has been subject to many debates. One of these debates is its relation with gender. Researchers tried to find out the nature of emoticon use in relation to gender variation.

As for the gender of Tunisian Facebookers, the data analysis showed that the role of gender is trivial and blurred in relation to emoticon variation and it was concluded that gender considerations fade away in the Tunisian context. The study of Arabic e-discourse in general is of wider interest because of the exceptional linguistic features of Arabic in comparison to other Indo-European languages, the number of its users, and its geographical spread (5th language in the world), and since English is no

longer the dominant language online (Palfreyman and Al Khalil, 2003, 5). This study contributes to the study of Arabs' computer-mediated linguistic behaviours, particularly that of Tunisian Facebookers.

One major importance of this study is that it gives an idea about the virtual speech community in Tunisia. It highlights some aspects of the linguistic characteristics and stylistic choices in Tunisian e-discourse, in general, and of Facebook instant conversations, in particular. Besides, one main theoretical implication behind this study is to surmount the anecdotal and speculative claims that gender roles are strong and highly appearing in Arab's social and linguistic behaviours.

By providing a comprehensive sociolinguistic study of Facebook instant messages displayed by Tunisians, this study helps bring some clarity to research in this new domain and provide a foundation on which subsequent research can build. The study was an attempt to identify the role of one variable that intervenes in the linguistic variation of emoticons on Facebook IM. It is an important piece of the puzzle in figuring out how the use of emoticons is like in the Tunisian context.

The study has offered an evaluative perspective on an important online linguistic behaviour and it was conducted in a natural context through sampling Tunisian Facebookers. The importance of the obtained results does not negate the existence of some limitations and flaws in this study that might affect its findings. First of all, the number of participants in this study (635) seems to be low in comparison with the target population (i.e. those who have Facebook accounts: 5,400,000 until 2016). Accordingly, further generalizations of this study will be limited. In addition, a central methodological limitation of this study is that it is based on the use of a questionnaire and particularly closed questions. These questions might limit the respondents to the predefined set of response alternatives to choose from. This may eliminate some response modalities which might be preferred by the participants although the propositions suggested during the distribution of the pilot version of the questionnaire were taken into consideration.

This study has just scratched the surface. The subject is far reaching than it was expected and there is a need for more research in order to further establish the interpretation and context within the use of emoticons. To ensure the effectiveness of future research, one obvious extension of this study is to increase the sample size, in a manner that will allow additional manipulations such as investigating the views of more people.

It is also important to assess the impact of other intervening variables. In relation to emoticon variation in the Tunisian context, it was found that there are other variables that govern emoticon use such as age (Chbichib, 2015), the personality of the sender (Chbichib, 2020), and some contextual factors such as politeness or netiquette (Chbichib, 2017). It is needed to use longitudinal studies that will permit the exploration of Facebook conversations of one person as he/she develops across and see whether these variables will continue to have remarkable influences in terms of stylistic choices.

Moreover, the study of the factors behind the variation of nonverbal cues using emoticons is highly important but it is not clear whether this use is driven by a conscious deliberate choice or it is a spontaneous unconscious process. It is recommended to direct future research to new fields of studies such as psycho-linguistic, pragmatics, and semiotics.

Finally, another important research direction will be the use of cross-cultural studies. It is important to obtain culture-specific findings that can later be linked to findings from other cultures. Comparative studies will allow the identification of cross-cultural differences that will help recognizing and understanding emoticons between different cross-cultural users to improve the intercultural social relationships between Internet users particularly as social network sites such as Facebook open the way for the construction of relations that would be impossible in real contexts. Comparing differences and preferences of emoticon use between different cultures will provide information which is both inter-

esting and useful to compare effectively the differences of the emoticon influence between various cultures.

References

- Auchard, E. (2008). *He said, she said: Which is it? Facebook asks*. Tech. rep. URL: <http://www.reuters.com/article/2008/06/27/us-facebook-gender-idUSN2633402020080627> (cit. on p. 80).
- Chbichib, S. (2015). “The Linguistic Characteristics and Stylistic Choices of Tunisian Facebookers on Facebook Instant Messaging Conversations”. In: *Arts and humanities* 2.2. ISSN: 22865705. DOI: [10.12816/0025223](https://doi.org/10.12816/0025223) (cit. on p. 91).
- (2017). “The importance of netiquette in the Tunisian virtual speech community”. In: *International Journal of Social Science and Humanities Research* 5.1, pp. 311–317 (cit. on p. 91).
- (2020). “Who are you? Personality as a regulator of emotional exchange in Tunisians’ Facebook instant messages”. In: *The International Journal of Humanities and cultural studies* 7.4, pp. 18–38 (cit. on p. 91).
- Derks, D., A.H. Fischer, and A.E.R. Bos (2007). “The role of emotion in computer-mediated communication: A review”. In: *Computers in Human Behavior* 24.3, pp. 1–20 (cit. on pp. 80, 82, 89).
- Fenstermaker, S. and C. West (2013). *Doing gender; doing difference inequality, power, and institutional change*. DOI: [10.4324/9780203615683](https://doi.org/10.4324/9780203615683) (cit. on p. 81).
- Herring, S. (1999). *Interactional coherence in CMC*. DOI: [10.1111/j.1083-6101.1999.tb00106.x](https://doi.org/10.1111/j.1083-6101.1999.tb00106.x) (cit. on pp. 80, 85).
- (2001). *Computer-mediated discourse*. Tech. rep. URL: www.let.rug.nl/redeker/herring.pdf (cit. on pp. 80, 83, 89, 90).
- Heyman, G. D. and J. W. Giles (2006). “Gender and psychological essentialism”. In: *Enfance* 58.3. ISSN: 00137545. DOI: [10.3917/enf.583.0293](https://doi.org/10.3917/enf.583.0293) (cit. on p. 81).
- Holmes, J. and M. Meyerhoff (2008). *The handbook of language and gender*. DOI: [10.1002/9780470756942](https://doi.org/10.1002/9780470756942) (cit. on p. 90).
- Huang, A. H., D. C. Yen, and X. Zhang (2008). “Exploring the potential effects of emoticons”. In: *Information and Management* 45.7. ISSN: 03787206. DOI: [10.1016/j.im.2008.07.001](https://doi.org/10.1016/j.im.2008.07.001) (cit. on pp. 83, 90).
- Huffaker, D. A. and S. L. Calvert (2005). “Gender, identity, and language use in teenage blogs”. In: *Journal of Computer-Mediated Communication* 10.2. ISSN: 10836101. DOI: [10.1111/j.1083-6101.2005.tb00238.x](https://doi.org/10.1111/j.1083-6101.2005.tb00238.x) (cit. on pp. 80, 83, 89).
- Kress, G. (2005). *Sociolinguistics and social semiotics. Semiotics and Linguistics*. URL: <http://faculty.georgetown.edu/irvinem/theory/Merrell-Peirce-onsign-Routledge.pdf> (cit. on p. 85).
- Lakoff, R. (1975). *Language and Women’s Place*. New York: Harper & Row (cit. on p. 82).
- Luor, T. et al. (2010). “The effect of emoticons in simplex and complex task-oriented communication: An empirical study of instant messaging”. In: *Computers in Human Behavior* 26.5. ISSN: 07475632. DOI: [10.1016/j.chb.2010.02.003](https://doi.org/10.1016/j.chb.2010.02.003) (cit. on p. 82).
- Markman, K. M. and S. Oshina (2007). “Pragmatic play? Some possible functions of English emoticons and japanese kaomoji in computer-mediated discourse”. In: *Association of Internet Researchers Annual Conference 8.0: Let’s Play!*, Vancouver, B. C. URL: <http://umdrive.memphis.edu/kmmrkman/www/AoIR8MarkmanoshinaFinalDraft.pdf> (cit. on pp. 83, 90).
- Paolillo, J. (2006). “The Virtual Speech Community: Social Network and Language Variation on IRC”. In: *JCMC* 4.4 (cit. on p. 80).
- Schmid, P. C. et al. (2011). “Gender Effects in Information Processing on a Nonverbal Decoding Task”. In: *Sex Roles* 65.1. ISSN: 03600025. DOI: [10.1007/s11199-011-9979-3](https://doi.org/10.1007/s11199-011-9979-3) (cit. on pp. 83, 90).

- Segal, J. et al. (2013). *Nonverbal communication*. URL: www.helpguide.org/mental/eq6{_}nonverbal{_}communication.htm (visited on 01/01/2013) (cit. on p. 86).
- Silverstein, M. (2003). "Indexical order and the dialectics of sociolinguistic life". In: *Language and Communication* 23.3-4. ISSN: 02715309. DOI: [10.1016/S0271-5309\(03\)00013-2](https://doi.org/10.1016/S0271-5309(03)00013-2) (cit. on p. 82).
- Srinivas, H. (2006). *Online technology and networking some gender perspectives*. Tech. rep. URL: www.gdrc.org/gender/ait-paper.html (cit. on pp. 82, 89).
- Stutzman, F. (2010). *Why gender is important in Facebook* (cit. on pp. 81, 90).
- Tannen, D. (1991). *You Just Don't Understand: Women and Men in Conversation*. London.: Virago (cit. on pp. 80, 82).
- Tippmann, T. (2002). "English in /@ nd the Internet: The challenge to standard English in communication systems". In: *English as an international lingua franca*. URL: <http://www.linguatronic.de/studium/Anglistik/Internetenglish/EnglishandtheInternet.pdf> (cit. on p. 85).
- Walther, J. B. (1996). "Computer-mediated communication: Impersonal, interpersonal, and hyperpersonal interaction". In: *Communication Research* 23.1. ISSN: 00936502. DOI: [10.1177/00936509602300100](https://doi.org/10.1177/00936509602300100) (cit. on pp. 86, 90).
- Walther, J. B. and K. P. D'Addario (2001). "The impacts of emoticons on message interpretation in computer-mediated communication". In: *Social Science Computer Review* 19.3. ISSN: 08944393. DOI: [10.1177/089443930101900307](https://doi.org/10.1177/089443930101900307) (cit. on pp. 83, 89).
- West, C. and D. H. Zimmerman (1987). "Doing gender". In: *Gender & Society* 1.2 (cit. on p. 81).