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## **GENDER ENCODING OF TYPOGRAPHICAL ELEMENTS IN LITHUANIAN AND CROATIAN IRC**

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**Abstract.** Much sociolinguistic research discusses differences between male and female language. In this paper we consider the language of Internet Relay Chat (IRC), studying if and how non-standard typography depends on the gender of the writer. We distinguish two kinds of non-standard typography that are typical of IRC users: technology-conditioned and voluntary. Our results show that use of non-standard writing variants depends on writer gender in both cases. Comparable results are found for Lithuanian and Croatian chat.

### **1. Introduction**

Many studies have been dedicated to the description of differences between women and men in different linguistic situations. At the same time, research on computer-mediated communication (CMC) has shown corresponding similarities regarding gender differences in language use in CMC, despite the fact that virtual space provides ideal conditions for hiding identity, in that it conveys minimal physical clues (Danet, 1998).

Various studies confirm that the CMC language of female and male users differs (Hall, 1996; Herring, 1993, 1994, 1996, 1998, 2003; Savicki, 1996). Existing gender studies of CMC in English-speaking communities are focused on stylistic, lexical, and discourse-pragmatic aspects of language. These aspects are also evident in traditional modes of speaking and writing. In contrast, in this paper we focus on CMC *typography*, which raises issues unique to the online communication environment. To our knowledge, this aspect has not yet been investigated from a gender perspective.

Aside from language usage proper, typography can be considered the most important aspect of the public face of CMC users. Typography and orthography are the primary "physical" cues available to users to express themselves and to convey information about their identity. Non-standard typography substitutes for such non-verbal phenomena as laughter (e.g., emoticons), volume (e.g., ALL CAPS), and

behavior (e.g., \*waves\*) (Danet, 2001; Herring, 2001). Synchronous CMC in particular seems to encourage play with typography, as discussed by Danet (1995).

According to Danet (1998), gender is "performed" in online chat spaces such as MUDs and Internet Relay Chat. Herring (1996) states that "unconscious use of gendered discourse styles can reveal one's actual gender even when one is performing a different gender". That is, online communicators give off linguistic clues to their gender, although these may not always be noticed or interpreted correctly (Herring and Martinson, 2004). Thus one might ask whether typographical choices are a way to perform gender online as well.

Internet Relay Chat (IRC) typography shows deviations from standard writing in a number of languages (e.g., Hård af Segerstad, 2002; Hentschel, 1997; Werry, 1996). The most common explanation for this is the informal nature of IRC, which is produced and read in near-real time (Werry 1996). Danet (1995) suggests that IRC is inherently playful. It has also been suggested that some deviations were inspired by Internet "hackers" who incorporated programming language for the communication of the members of this community. Over time, this practice was adopted and applied with variations by a majority of users, regardless of their computer expertise. Anis (in press) also documents the creation of novel spellings, or "neography", in SMS in French. Crystal (2001) has labeled the non-standard writing practices characteristic of informal CMC "netspeak".

A factor that complicates considering netspeak as a global phenomenon, however, is the writing system of the language of communication. English is written in the roman alphabet with no diacritics, and conforms well to the ASCII and extended ASCII character systems used in most forms of text-based CMC. Languages with different writing systems have a harder time mapping their standard writing onto ASCII (Pargman and Palme, 2004). Users of such languages are often forced to resort to creative orthographic and typographic "work-arounds"; for example, CMC users of Arabic and Greek sometimes replace letters not found in ASCII or the roman alphabet with visually similar numbers (Palfreyman and Al Khalil, 2003; Tseliga, in press). In this paper, we examine non-standard typography in Lithuanian and Croatian, two languages whose writing systems require diacritics, as for example on the letter č.

The IRC channels studied in this research allow only plain text; users may not transmit non-ASCII characters. Therefore Lithuanian and Croatian IRC users face the problem that they will not be able to produce standard spellings of some words in their languages in IRC. We refer to the typographic representations produced under such constraints as "technology conditioned". At the same time, Lithuanian and Croatian users sometimes produce non-standard spellings when they are under no apparent constraint to do so, as for example when they change the letter 's' to 'z'. We refer to these typographic deviations from the standard as "voluntary".

The results of our study of five IRC chat channels in each language show that both technologically conditioned and voluntary deviant typography are correlated with the gender of the user. In both Lithuanian and Croatian, the characters š, ž, č cannot be typed in IRC. Women tend to use s, z, c, while men prefer the longer forms sh, zh, ch. Another finding is that female users, especially in Lithuanian, voluntarily use "softer", palatalized consonants. We propose interpretations of these findings in terms of gender differences in orientation towards standard and non-standard language practices (Labov,

2001), along with a tendency of some female users to encode "baby talk" elements in their typography.

### 1.1. RESEARCH QUESTIONS

This research was developed in order to examine the orthography of chat users of two languages, Lithuanian and Croatian. These two languages were selected for comparison because they have similar writing systems, yet are geographically and genetically distinct. Hence they can be considered independent examples of a similar phenomenon. The two languages are geographically non-adjacent, Lithuanian being spoken in northern Europe, and Croatian in southeastern Europe. Although both are Indo-European languages, they do not belong to the same linguistic group; Lithuanian is Baltic, and Croatian is a Slavic language. However, Lithuanian has had extensive contact with Slavic languages in the course of its history, and it shares common orthographic features with them in the standard language.

Specifically, both Lithuanian and Croatian are written in a modified roman script that requires the use of diacritic marks such as š, ž, č. We are interested in general to know how characters such as these with diacritics that can not be rendered in ASCII code are rendered in IRC chat in these two languages, and whether their alternative typographical practices are similar or different. More specifically, with regard to writer gender, we ask:

- In cases where both languages have special characters that cannot be transmitted on IRC, and must be replaced by some other symbol(s), does the choice of alternative symbol(s) depend on user gender?
- In cases of non-standard writing that are voluntary and language-specific, are there gender differences in user choice of non-standard typographical elements?
- The number and gender ratio of users on different IRC channels are taken into consideration in this analysis. Thus we also ask: Does participation by gender vary according to the topic of the chatroom, and does chatroom topic influence use of non-standard typography?

### 1.2. ORGANIZATION OF THE PAPER

In Section 2 we discuss the methodology and data sample. In Section 3 we present an analysis of the gender demographics of the channels that shows variability according to channel but a similar overall ratio of number of participants by gender in the two languages. Overall, the ratio of male users to female users is approximately 3:1.

Section 4 discusses adaptations to ASCII-based limitations; the results are similar for Lithuanian and Croatian. Section 5 discusses voluntary non-standard writing, identifying differences between the two languages. Section 6 presents the Conclusions for the study as a whole.

## 2. Data and Methodology

### 2.1. DATA

For this study, data were collected from public synchronous IRC channels by the first author in 2001. The IRC channels were accessed by connecting to the popular local Lithuanian IP server *irc.omnitel.net* and the Croatian IP server *irc.carnet.net* in the role of a participant observer over a period of three weeks. All chat was logged and saved. From the logged material, the Lithuanian corpus was formed by selecting five channels that had similar continuous amounts of active participation over a period of three weeks from the channels with the highest number of users. The most popular channels were chosen to represent the widest range of IRC users, rather than specific channels that might give a partial picture of IRC ways of writing.

The Croatian sample was drawn from six randomly selected channels in order to be consistent with the quantity of data selected for the Lithuanian sample. The selected channels were popular enough to be frequented by a sufficient numbers of participants. In both cases, the samples were selected from monolingual channels in order to get representative data from the target languages.

In the Lithuanian sample, the total number of active users was 81 male and 29 female participants. In the Croatian data, 33 active male participants and 15 active female participants were identified.

#### 2.1.1. *Limitations of the Data*

In this study, instances of typographical errors were not taken into consideration. In addition, lexical items that were not words in the study's target languages were excluded. Our focus in this study is on gender differences, rather than on providing a general comparison of typographic practices in the two languages. Finally, because the number of unique participants in each language is small when broken down by gender and channel, the findings should be considered suggestive rather than conclusive.

### 2.2. METHODOLOGY

#### 2.2.1. *Determining Gender of Participants*

In order to determine gender of participants, two primary criteria were used. First, nicknames were categorized according to gender. Users can choose either gender-transparent nicknames or neutral ones, however (Bechar-Israeli, 1995). Similarly, in the Lithuanian and Croatian data, some nicknames were not so transparent from the point of view of gender. In those cases, additional variables were taken into consideration (Herring, 2003).

Speaker/writer gender is encoded in many grammatical categories in both languages, so that the grammatical system helped to determine the gender of the users. Some users expressed their gender by talking about themselves or being addressed by others with certain forms bearing grammatical gender. It was particularly useful to employ this criterion in Croatian, where it turned out that some of the Croatian female

users chose gender-neutral or masculine nicknames. Examples are the nicknames <peps> and <tinax>, which are gender-neutral in Croatian.

First-person reference:

71. <tinax> sam ti rekla da su sve svinje odletjele  
*I have told (fem) you that all the pigs have gone*
109. <peps> hmm..ozbiljna sam  
*I am very serious (fem)*

<Peps> addresses <tinax>:

81. <peps> i sad si tek skuzila  
*And only now you got (fem) it?*

<Tinax> addresses <peps>:

113. <tinax> pa ti bi trebala znati da ja tebe volim, mucos, mucos  
*you should (fem) know that I love you mucho, mucho*

In another Croatian channel there is a user named JASTREB. This word could be translated in English as 'eagle'. In Croatian it is used both for the female and the male eagle bird, although grammatically the word itself is masculine. However, from the test of grammatical expression of gender, it appears that it is the nickname of a female user.

### 2.3. QUANTITATIVE ANALYSIS

Frequency counts of participants, messages, and words were used to determine participation by gender in the entire corpus and also the gender ratio of participants in each channel.

In order to understand if there are gender differences in the use of non-standard forms, the frequency of non-standard forms by female and male users was counted in both languages. Frequencies of typographical elements were calculated and normalized as percentages in order to compare them across languages, channels, and genders.

## 3. Analysis of Participation

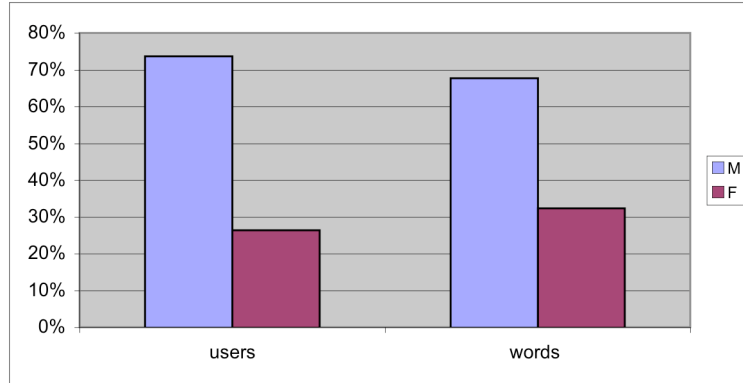
### 3.1. PARTICIPATION BY LANGUAGE

The number of female and male participants in the two samples was not equal. In order to determine if female and male users contributed proportionately to their numerical representation in each language, quantitative analysis was conducted. The distribution of Lithuanian users by gender and number of words is summarized in Table 1 and represented graphically in Figure 1.

These data show that the ratio of female to male users is roughly one female to three males. This proportion corresponds to that of previous estimates for public multi-participant chat in English (Herring, 2003). In comparison to the quantity of posted words, female users appear to post slightly more words per person than male users.

*Table 1. Participation in Lithuanian sample*

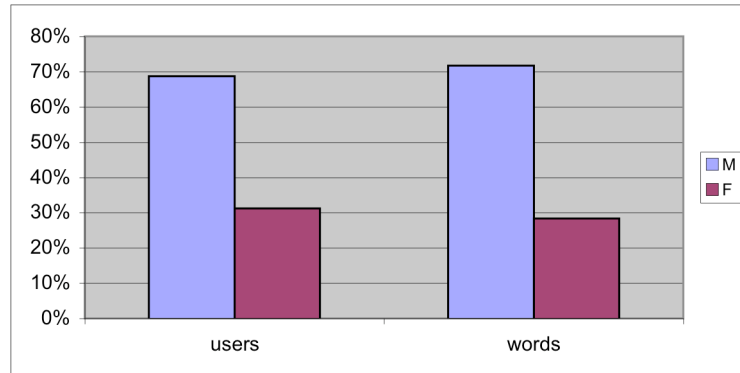
	Users	Words
Male	81 (74%)	3897 (68%)
Female	29 (26%)	1866 (32%)

*Figure 1. Participation in Lithuanian sample*

As for the Croatian sample, the distribution of female and male users and words is shown in Table 2 and Figure 2.

*Table 2. Participation in Croatian sample*

	Users	Words
Male	33 (69%)	4633 (72%)
Female	15 (31%)	1826 (28%)

*Figure 2. Participation in Croatian sample*

The findings for the Croatian sample are consistent with the previous estimates for English and also with the Lithuanian sample described above, where the number of

active male users is nearly three times greater than the number of active female users. In the Croatian sample, females appear to post slightly fewer words per person than males.

### 3.2. PARTICIPATION BY CHANNEL

The above summaries reveal general tendencies regarding participation by gender in IRC in Lithuanian and Croatian. However, it is likely that participation will vary by channel topic. In a study of English-language IRC channels, Herring (1998) observed that females were most active in a channel on the topic of love, whereas males dominated channels on the topics of politics and sex, consistent with off-line stereotypes. Such stereotypes are also present in Lithuanian and Croatian society.

In order to address this possibility in the present study, a gender breakdown of participation in each chat channel was conducted for both samples. Figure 3 shows the breakdown of participants in the Lithuanian IRC channels.

Table 3. Participants by gender and channel (Lithuanian)

	M users	F users
seimas	15 (88%)	2 (12%)
phantom	7 (87%)	1 (13%)
mejle	19 (66%)	10 (34%)
lithuania	15 (68%)	7 (32%)
alus	25 (74%)	9 (26%)
	81 (100%)	29 (100%)

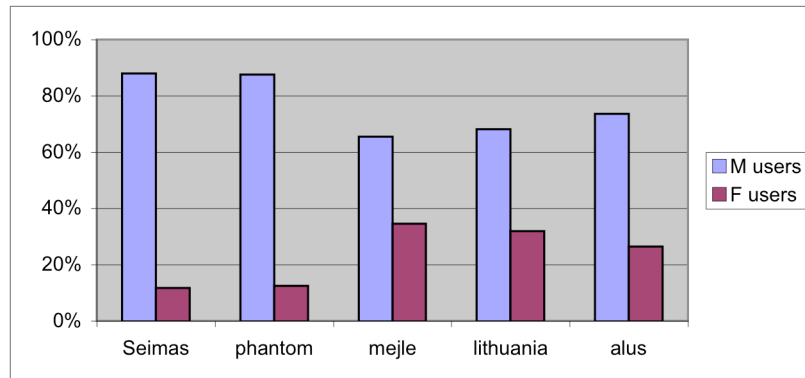


Figure 3. Participants by gender and channel (Lithuanian)

The largest percentage of male users is found in a channel called *#seimas*, which translates as 'Parliament'. Another channel popular with males is named *#phantom*, an English word that could not be translated. The channel *#mejle* ('love') has the highest percentage of women. In it and the remaining channels *#lithuania* and *#alus* ('beer'; an IRC pub), however, females are only about one-third of all the participants. This percentage corresponds to the previous findings as to the overall number of women in IRC (Herring, 2003).

From these data, we can see that the distribution of male users and female users varies from channel to channel. There is a tendency for male users to meet in such virtual places that fit real life stereotypes. In Lithuania, in reality, Parliament members are mostly male and women are a minority. For this reason, it is not surprising to find such a large number of male users in this channel. On the other hand, such channels as 'love' stereotypically should be more frequented by female users, and the data confirm this hypothesis. These findings correspond to previous observations for English IRC chatrooms (Herring, 1998).

Croatian participants' distribution by channel is summarized in Table 4 and represented graphically in Figure 4.

Table 4. Participants by gender and channel (Croatian)

	M users	F users
cedevita	5 (63%)	3 (38%)
banda	8 (80%)	2 (20%)
loveboat	5 (50%)	5 (50%)
tisina	2 (40%)	3 (60%)
west coast	7 (100%)	0
woodoo	6 (75%)	2 (25%)
	33 (100%)	15 (100%)

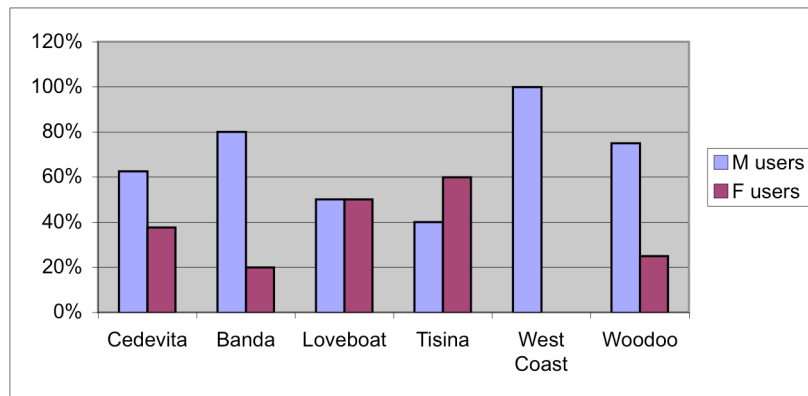


Figure 4. Participants by gender and channel (Croatian)

The Croatian data are also variable. In the channel *#westcoast* there are no female users at all, perhaps because the English name and the cultural associations it invokes appeal more to male users. However in *#tisina* (in English, 'silence'), there are more female than male users. The channel *#loveboat* also attracts female participation, similar to the Lithuanian and English chat channels on the topic of love. As for the topics of the other channels, *banda* means 'group', and *cedavita* is the name of a Croatian vitamin drink; these topics have no obvious gender connotations. *Woodoo* is the English word 'voodoo'. These last three channels are all more popular with males.



Thus it appears that IRC users decide which channel they would like to join more willingly than another in part according to its name or topic. Men and women differ in their topical interests. In the following sections, we consider whether a sense of gender identity is expressed through IRC users' typographical choices.

#### 4. Technology-Conditioned Non-Standard Typography

In this study, non-standard typing of Lithuanian and Croatian was divided into two main categories. The first consists of cases where certain symbols from both alphabets cannot be transmitted to IRC channels. In such cases users are forced to make a decision which symbols to substitute for the original ones, since using the standard symbols is not an option. In each case, two different solutions are possible.

##### 4.1. LITHUANIAN

The mostly frequent consonants of the Lithuanian alphabet that cannot be typed in IRC are shown in Table 5.

š	ž	č
[sh][s]	[zh][z]	[ch][c]

*Table 5.* Consonants that cannot be typed in IRC, and common substitutions

These three consonants are commonly expressed in two different ways. In one option, instead of the original monographs, the users create digraphs by adding 'h' to the symbol minus the diacritic (henceforth, SH/ZH/CH). The other, "simplified" option is to type the symbol minus the diacritic, consistent with the ASCII chart (henceforth, S/Z/C). As regards the option with 'h', it is necessary to point out that such a sequence of letters is not allowed in standard Lithuanian. Furthermore, IRC users had to consider that by using such a solution they would be obliged to type two symbols instead of one. Adding extra keystrokes is contrary to the general philosophy of IRC users for whom writing economy is valued. In spite of these considerations, some users tend to favor this solution. Frequencies of the two different realizations by channel and gender of user are presented in Figures 5 and 6.

An advantage of the option with 'h' is that it avoids ambiguity. In standard written Lithuanian, s and š are minimal pairs and they are distinctive. They cannot be used interchangeably. Some IRC users use the unmarked symbol interchangeably with the simple phoneme. While it could seem that such usage could create ambiguity in the understanding of the text, IRC users appear to understand each other using this and another types of unconventional spelling.

In addition to showing that the S/Z/C forms are preferred overall, the data presented in Figures 5 and 6 reveal gender differences. SH/ZH/CH forms were used more frequently by males than females. There are certain channels where there were no forms of SH/ZH/CH used by females at all. Conversely, use of S/Z/C forms was more frequent by female than male users.

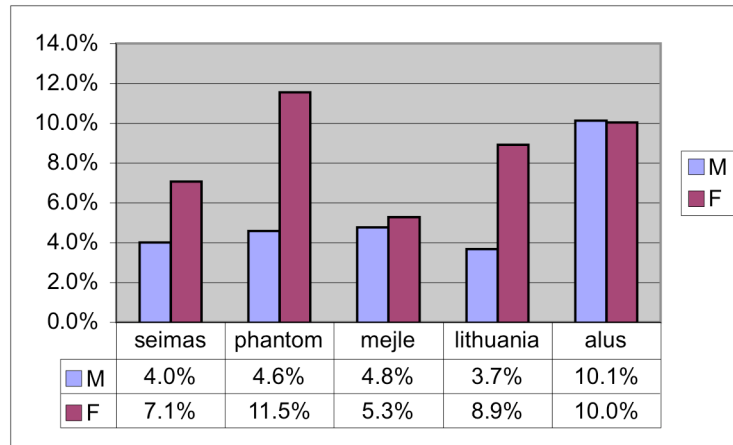


Figure 5. Percent of words that are S/Z/C forms by channel (Lithuanian)

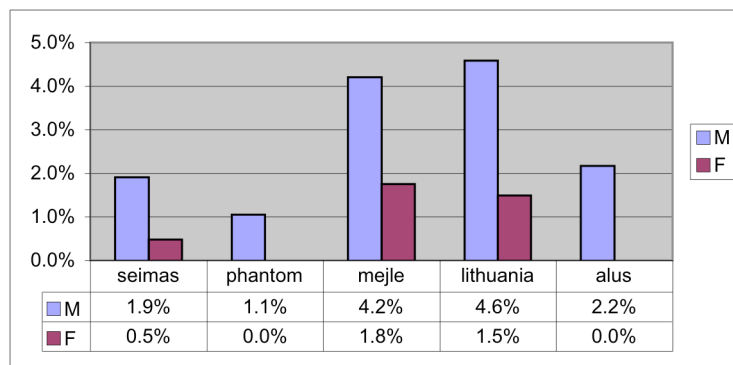


Figure 6. Percent of words that are SH/ZH/CH forms by channel (Lithuanian)

## 4.2. CROATIAN

The most frequent consonants that cannot be transmitted into Croatian IRC are the same as in Lithuanian: s, z, and c with the upper diacritic (háček). The same substitutions are also observed in IRC typing.

The frequency of the distribution of the two ways of writing by channel is presented in Figure 7. Again, despite the possible ambiguity, the S/Z/C option was more commonly used. The use of these symbols varies from channel to channel and by gender. The data show that S/Z/C was used somewhat more by males.

Data from Figure 8 show that use of the SH/ZH/CH forms is rare among Croatian female users. The phenomenon was found only in a few channels, and was mostly used by males. Only one female used such forms. Despite the small number of SH/ZH/CH forms found, their presence in several channels shows that this phenomenon is known by Croatian users. It is just not very popular.

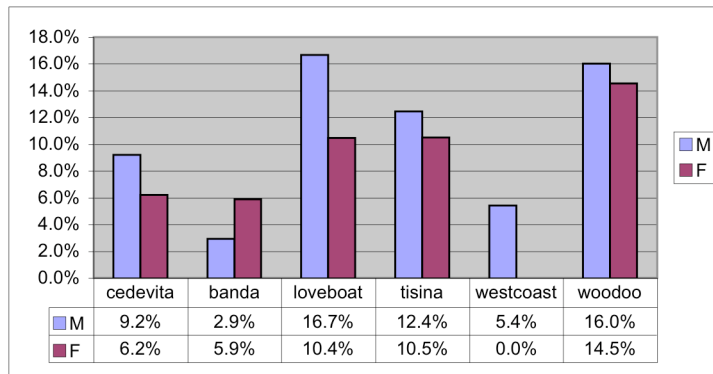


Figure 7. Percent of words that are S/Z/C forms by channel (Croatian)

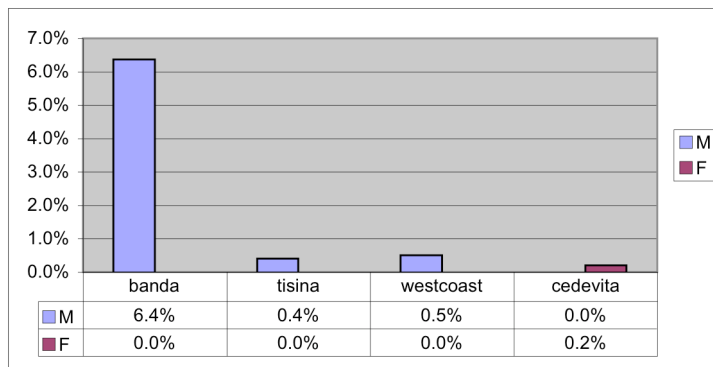


Figure 8. Percent of words that are SH/ZH/CH forms by channel (Croatian)

Figures 11 and 12 compare the use of S/Z/C and SH/ZH/CH by gender in the two samples. In both languages, the SH/ZH/CH forms are strongly associated with males, while females prefer the S/Z/C forms.

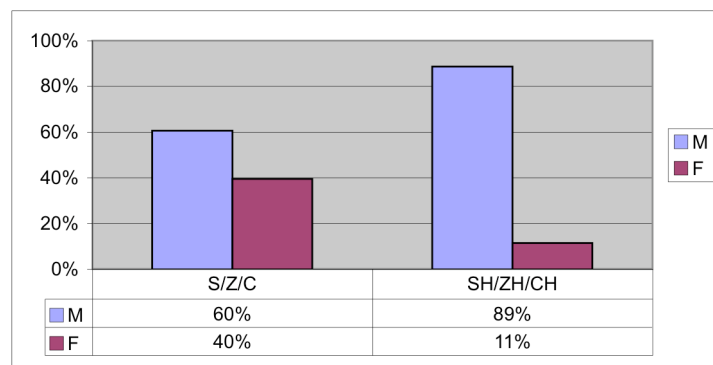


Figure 11. Comparison of S/Z/C and SH/ZH/CH use in Lithuanian

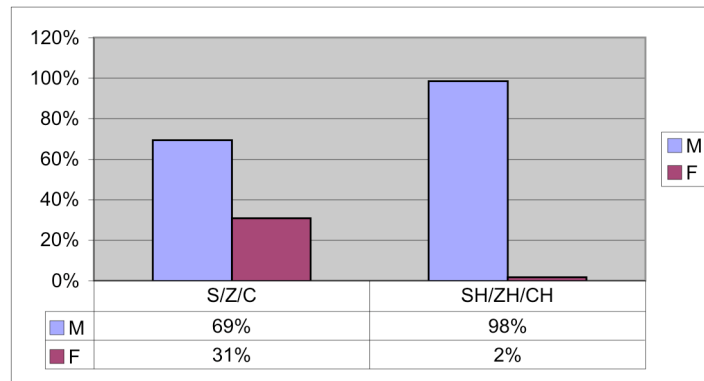


Figure 12. Comparison of S/Z/C and SH/ZH/CH use in Croatian

## 5. Voluntary Typographical Changes

We also observed non-standard typography in the IRC samples that was not conditioned by ASCII constraints, but rather appeared to have been produced voluntarily, for expressive effect. Some such examples were typically used more by females and others more often by males, although the number of instances for each was small. To normalize the frequencies for the purpose of comparison across samples, we present the numbers as ratios per 1000 words.

### 5.1. CONSONANTAL PALATALIZATION BY LITHUANIAN FEMALES

In our data, Lithuanian females were more likely than Lithuanian males to palatalize or "soften" consonants.

#### 5.1.1. Palatalization of *č*

A palatalized [ç] was sometimes found in place of the affricate [č]. This particular case was found in a word *ačiū* ('thank you') which was transcribed as *asiu*. This usage recalls Lithuanian "baby talk" pronunciation.

1087. <Shele> **asiux** (thank you)

561. <Dalytezz> **asiu** (thank you)

The frequency of this usage by females is 8 per 1000 words, compared to .2 per 1000 words (a single instance) by males.

#### 5.1.2. Palatalization of [n]

A palatalized [n'] was used in the word for 'so'. Some females wrote a colloquial *nu*, softening it by adding the letter 'i':

554. <KIta> **niu** tai ka  
*well and so what*

1338. <stellina> **niu** matai tai tex man silver ;)   
*well, you see I will have to drink "silver" ;)*

The frequency of this usage by females is 20 per 1000 words; by males, it is 2 per 1000 words.

Male users, in contrast, use a form without the "softener":

316. <Mefisto> **nu** tai aisq viskas   
*I see, it is all clear*

### 5.1.3. Palatalization of [l]

A palatalized [l'] is sometimes used in words where the hard 'l' allophone should be used instead, as it is followed by a back or mid vowel. By adding the front vowel 'i' after it, the 'l' was "softened":

229. <Shele> **liabaz** dzienas:)) (good day)   
 431. <KIta> **liaba** (hello)

Females used this in 8 out of 1000 words, males in 1 out of 1000 words.

## 5.2. CONSONANTAL PALATALIZATION BY CROATIAN FEMALES

Croatian female IRCers in our sample also showed a tendency to palatalize consonants.

### 5.2.1 Palatalization of Affricates

A palatalized stop [t'] was found in place of the affricate [č]. In the following example, a female, Selfout, palatalizes the word *neću* ('I don't want').

240. <Selfout> **netju** fala (I don't want them thanks)   
 242. <|Ch405|> :) **netjes** (you don't want)   
 243. <|Ch405|> zasto **netjes** (why don't you want?)   
 244. <|Ch405|> :)   
 245. <Selfout> zato jer **Netju**!!:) (because I don't want!)

Interestingly, in this example the male user <|Ch405|> writes *netjes* in the same way, teasingly repeating Selfout's previous statement. He insists repetitively and finishes with a smiling face, reinforcing the teasing flavor of the exchange.

Both females and males used this variant in 1 per 1000 words.

Selfout also used [t'] once for the affricate [č], in the word *čeka*:

253. Selfout jedva **tjeka** veceRas:)   
*Selfout can hardly wait for tonight :)*

### 5.2.2. Palatalization of [d̃]

Palatalized [d̃] was used in place of [d] by females in 27 per 1000 words, and by males in 15 per 1000 words.

The use of palatalized consonants mostly by female IRCers would seem to be related to the "softer", sometimes childish way of talking stereotypically associated with women's speech.

## 5.3. FORMS USED BY LITHUANIAN MALES

Lithuanian male IRC users tended to use certain characters that do not belong to the Lithuanian alphabet.

### 5.3.1. Use of 'oo'

In Lithuanian there is a short and a long 'u'. Lithuanian males sometimes typed 'oo' in place of long [u:], which in standard Lithuanian is written as ū or ū̄, depending on where it occurs in a word.

160. <CheRis> o kodel turetu **boot** kitaip?  
*why it should be different?*

Males used this variant in 10 out of 1000 words. No females used the form.

### 5.3.2. Use of 'aw'

Some males used 'aw' for [au] (10 per 1000 words). No females used this form.

- 145a. aurimux dabar dingsta (mokslas tai shviesa...bet shviesa akis gadina...nx **mokaws** ;) )... ( aurimux@xxx.lt )  
*aurimux is leaving now (study is like a light.... But light sometimes hurts our eyes... damn, why do I study;)*

### 5.3.3. Use of 'q'

Some cases of 'q' for [ku] were found (males, 5 per 1000 words; no female examples):

316. <Mefisto> nu tai **aisq** viskas  
*I see, it is all clear*

The three cases mentioned above were used only by male IRC users. All three forms correspond to writing conventions associated with the English language. This leads to the conclusion that Lithuanian male users tend to use more spellings that are reminiscent of English writing. This could be related to the fact that the IRC interface is written in English. It might be that male users want to demonstrate their knowledge of the system itself or appear "cool" and attractive to other users through their association with (English) technology culture. Similar findings have been observed in French SMS by Anis (in press).

#### 5.4. FORMS USED BY CROATIAN MALES

In Croatian IRC channels non-standard forms were less frequent. However, there were some cases found where the palatalized Croatian consonant *ć* was rendered by Croatian males using 'ch', as if to underline that palatalization is not a masculine trait. No female users used this form.

### 6. Conclusions

Based on the results of our analyses, the following answers can now be given to the research questions raised at the beginning of this paper.

In response to the language question, common features in the orthography use by users of two languages belonging to different language branches, Lithuanian and Croatian, were found. Specifically, in both Croatian and Lithuanian there are a number of symbols that cannot be transmitted because of ASCII-code limitations. Symbols such as *š*, *ž*, *č* could not be represented in the text of IRC programs for either Lithuanian or Croatian users. Users of both languages chose two ways to represent the symbols mentioned above: S/Z/C or SH/ZH/CH.

Distribution of the SH/ZH/CH forms by channel showed that these forms are not consistently used by all users but they were predominantly used by males. Female users, when having to deal with ASCII limitation problems, tended to use forms that look more similar to the "standard" forms. They chose a more traditional way of writing by opting for symbols that already represent sounds in the language, despite the risk of ambiguity. Male users, in contrast, were more likely to create new forms using 'h' that require more effort, as a single phoneme has to be typed using two keys on the keyboard.

Language-specific cases of voluntary non-standard writing were also identified and their frequencies presented by gender in order to determine if they could be considered gender-preferential variants. Female users tended to use "softer" consonants, palatalizing them. Sometimes this typography encodes "baby talk" elements, such as *asiu* ('thanks'). Male users tend to use more innovative forms, associated with English, and technology, and disassociate themselves with the feminine "palatalizing" tendency.

The proportion of users of each gender on different IRC channels was also investigated. The distribution of female and male users varies from channel to channel, with females being outnumbered by males overall by a ratio of about 3:1. It is possible that the number of female users is lower than male users because women choose one-to-one communication more often than actively participating in public IRC channels. Further research is needed to investigate this possibility.

Another question is why female users decide to chat in certain channels. An interest in certain topics would seem to be part of the answer. Women on Lithuanian and Croatian IRC, being a minority, may also seek out other women for support and solidarity, and therefore gravitate to certain channels where women are more likely to gather. There they may communicate as actively among themselves as male users do, or even more actively, as the present findings show.

In conclusion, our analysis of non-standard typography has demonstrated that users of IRC, not having face-to-face contact, develop subtle cues through which they

communicate their gender identity. This is not only evident from choice of nicknames and discourse-pragmatic usage, as found in previous research, but also at the micro-level of typography. Future research focusing on this more fine-grained level of analysis should be extended to other languages and cultural contexts.

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