Symbolic Capital in a Virtual Heterosexual Market

Abbreviation and Insertion in Italian iTV SMS

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This study analyzes gender variation in nonstandard typography—specifically, abbreviations and insertions—in mobile phone text messages (SMS) posted to a public Italian interactive television (iTV) program. All broadcast SMS were collected for a period of two days from the web archive for the iTV program, and the frequency and distribution of abbreviations and insertions, as well as overall message lengths, were analyzed according to sender gender. The results reveal that females posted more and longer SMS and followed more and more varied nonstandard typographic practices, contrary to previous gender-related findings in the sociolinguistics and CMC literatures. A theoretically-grounded explanation for these findings is developed in terms of the localized norms of a heterosexual market—and an implicit dating market—in Italian iTV SMS.

Keywords: CMC, dating, efficiency, expressiveness, gender differences, interactive television, linguistic market, SMS, sociolinguistics, text messaging

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Introduction

Text messaging from mobile phones, also known as short message service (SMS), constitutes new literacy practices. Like text-based computer-mediated communication (CMC) on the Internet, text messaging deviates from standard written language in manifesting "oral" language features (Anis, 2007; cf. Baron, 2008; Maynor, 1994), yet it is produced by selecting characters from a keyboard or keypad and read on a screen like typed, written language, and it involves written language skills, such as spelling and punctuation (Hård af Segerstad, 2002). Unlike most nonstandard writing discussed in the literacy literature, however, CMC—which we define broadly to include SMS, given the features shared by text messages and instant messages, email, and chat—is not "vernacular writing" in which writers carry over features of an unschooled, spoken, home (or street) language variety (cf. Camitta, 1993; Melchers, Taavitsainen, & Pahta, 2000). CMC language is no one's spoken mother tongue; rather, it is a consciously employed register shaped by properties of the technological medium and by situational factors such as topic, purpose, and participant characteristics (Crystal, 2001; Herring, 2007).

CMC language is also a social and ideological construct. Historically, writing practices in social CMC environments reflect ideologies of freedom of (self-) expression, creativity, and play (Danet, 2001) that can be traced to the libertarian values of the early developers of the Internet. For contemporary users, the choice to use characteristic features such as emoticons (e.g., ☺), acronyms (e.g., LOL), and various kinds of abbreviation and nonstandard punctuation indexes their membership in a broad community of CMC users, while group-specific practices index membership in specific CMC communities (Nastri, Peña, & Hancock, 2006). Participants who use language appropriate to the communication venue accrue social capital (e.g., social

acceptability); in this sense, CMC environments are virtual "linguistic markets" (Bourdieu, 1977) in which language use, including nonstandard typography and orthography, is the symbolic currency.

This article reports on a study of nonstandard typography in text messages (SMS) sent from viewers' mobile phones and broadcast publicly on interactive television (iTV) programs—a phenomenon known as iTV SMS, which we argue constitutes a virtual linguistic market. iTV SMS has been popular in Europe since its inception in 2002 and is spreading globally (Beyer et al., 2007), including in the United States, where it plays a limited role in some reality TV and music video programs. We analyzed SMS posted to a music video program in Italy, where iTV SMS is widespread, focusing on two nonstandard typographical practices previously observed to be common in SMS messages: abbreviation and insertion of extra characters.

The research question that guided our investigation was whether there are gender differences in abbreviation and insertion in iTV SMS, and if so, what they are, how frequently they occur, and what they mean. Previous sociolinguistic research has reported that women tend to use more standard speech variants than men, a pattern often ascribed to women's need to use the symbolic currency of standard language to achieve upward mobility, because they are unable to affect their socio-economic status through action in the economic marketplace (Bourdieu, 1998; Eckert & McConnell-Ginet, 1999). However, in Italian iTV SMS, we found that female-presenting participants used more nonstandard typography (both abbreviations and insertions) than did male-presenting participants.

Technological constraints on text message production cannot explain this finding, since no theory of technological determinism predicts that constraints—e.g., in the case of SMS, the

160 character limit per message or the requirement to input text using a telephone keypad[1]—should affect males and females differently. Rather, we invoke the linguistic marketplace metaphor to account for gender trends in abbreviation and insertion in Italian iTV SMS, but we assert that it is not economic opportunity that determines (at least not directly) what typological practices are valued or who uses them in this recreational environment. Instead, we propose that the Italian iTV SMS context is a *heterosexual market* (Eckert, 1996) and, implicitly, a *dating market* (Coupland, 1996), in which a speaker's gender requires the use of a particular kind of language in order to gain symbolic capital (attractiveness), and in which men and women "work to produce value as complementary commodities" (Eckert, 1996, p. 3). Specifically, we suggest that females' greater tendency to play with nonstandard writing symbolically indexes a lively personality and childlike playfulness, both qualities that are considered attractive in females, while males' use of more standard writing can be seen as symbolically representing masculine accomplishment within the dominant social order.

Ultimately, we suggest, these practices contribute to reifying gender as a set of polar oppositions and "legitimate[ ] a relation of domination which is inscribed in a biological nature, in itself a naturalised social construction" (Bourdieu, 1998, p. 29). They also illustrate the social functions of writing that can emerge when normative pressures are relaxed in an interactive, public context—a context that has traditionally been reserved for spoken communication. In this context, we argue, typographic variation expresses social meaning in ways broadly analogous to phonological variation in speech.

The following section lays out the theoretical foundations of this argument and reviews relevant empirical research on gender differences in CMC typography, with a focus on text messaging and the Italian context. The methodology of the Italian iTV SMS study is then

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[1] For further discussion of the logistics of inputting text messages on mobile phones, see Anis (2007).

described and the findings are presented. The article concludes by discussing the symbolic value of abbreviation and insertion in Italian iTV SMS and considering the implications of the findings for other cultural contexts, other modes of CMC, and other informal registers of writing.

Theoretical and Empirical Background

Linguistic Markets

French sociologist Pierre Bourdieu (1977) introduced the metaphor of the *linguistic market,* by which he meant that language users are participants in a market that is structured by social and economic power relations and in which linguistic competence functions as capital that can be accumulated and used to acquire other goods. According to Bourdieu, certain discourses have greater or lesser value in different marketplaces, and someone who uses a linguistic code that is highly regarded in a given context will accrue symbolic capital thereby. Values on the metaphorical linguistic market may also translate into real economic gain or loss for individual users of a given linguistic code. Thus, the construct draws attention to the social and economic conditions underlying linguistic practices (Zhang, 2006).

Although Bourdieu does not always distinguish between written and spoken language, he implies that written linguistic tokens have greater symbolic value than spoken ones (Schiffman, 2002). Moreover, according to Bourdieu (1977), the "legitimate" (standard) language is the norm against which the values of other language varieties are determined, and the domains where the legitimate language is expected to be used constitute the sites of the symbolic market. However, Bourdieu has been criticized for overemphasizing a dominant, centrally-controlled linguistic market where the standard language is the valued linguistic capital and ignoring the existence of alternative markets in which local varieties are valued (Zhang, 2006). Schiffman (2002) proposes

the concept *linguistic black market* to account for the covert prestige (Trudgill, 1972) associated with nonstandard language use in some contexts. These critiques shed light on the ways in which linguistic usage varies according to class and gender considerations, while shifting the focus to spoken language.

In industrial societies, covert prestige has been linked to men in blue-collar occupations (Trudgill, 1972). Nonstandard, "rough," speech that defies social dictates has been claimed to symbolize the courage and physical toughness required in such male-associated professions as police officer, ship builder, and construction worker. Jobs that are readily available to women, in contrast, such as secretary, teacher, and flight attendant, require standard language use, which bestows overt prestige. Moreover, as Eckert and McConnell-Ginet (1999, p. 94) note: "the same employment opportunities also call for politeness, indirection, attention to affect, and other features of interactional style that have been essentialized as female." That is, women gain access to female-appropriate employment (which is not as statusful or well-paid as male employment that requires standard language use) through use of language that reflects societal expectations about femininity. This activity reinforces ("essentializes") gender role polarization and naturalizes male domination of economic resources (Bourdieu, 1998).

Women's more standard speech has also been explained in terms of a desire for upward social mobility. Noting that women have always served as objects of exchange in the "matrimonial market," Bourdieu (1982) explains that French women are the first to adopt standard pronunciation in rural areas, because they specialize in "the language)[,] and by the logic of marriage, [this] is for them the principal route to social mobility, where they move upward" (p. 35). In other words, women's use of the symbolic currency of standard language

buys them attractiveness as potential brides in the eyes of standard-language speaking (educated, prosperous, statusful) males (see also Schiffman, 2002).

An obvious criticism of the above account is that not all women participate in the marriage market, and of those who do, not all aspire to change their social status. An alternative market-related account holds that all relations between males and females are mediated by a *heterosexual market*, in which the genders are mutually complementary commodities. Exchanges in the heterosexual market may lead to dating and marriage, although they need not; the market's main function is arguably as a site where binary gender identities are forged and enacted. Thus Eckert (1996, p. 2) describes the entrance of pre-adolescent children into this market as:

> [a] mutual and conscious engagement in gender differentiation, in the course of which boys appropriate arenas for the production of accomplishment, and girls move into the elaboration of stylized selves. […] Girls become engaged in the technology of beauty and personality, learning to use a range of resources in which language use is elaborated.

Participation in the heterosexual market offers new possibilities for the construction of a public persona, especially for girls. Realizing that they cannot gain recognition for pursuits that are being taken over by boys, girls "become heighteners of the social" and engage in "a conscious process of stylistic production." Because "heightened activity and style draw attention to those who are engaged in it," girls can "take on status as public people" in this way (Eckert, 1996, p. 4). This account predicts that females will use more stylized language (both spoken and written—as a traditional example of adolescent writing, think of note-passing in class) and thus will tend to depart more than males from standard norms.

The heterosexual market encompasses *dating markets* in which individuals actively seek members of the opposite sex for romantic and/or sexual relations (Coupland, 1996).[2] Personal advertisements in newspapers are a written linguistic site, and pick-up bars are a spoken and nonverbal site, of such markets. While we know of no studies of (non)standard language use in explicit dating contexts, a number of studies of print personal ads have found that men tend to describe themselves as financially secure and seek women with attractive appearance and personality, while women tend to describe themselves as attractive and likeable and seek men who are financially secure, consistent with traditional sex-role expectations (e.g., Bolig, Stein, & McKenry, 1984); Zelenkauskaite and Herring (2008b) report similar findings in SMS posted to a Lithuanian iTV program devoted to personal ads.

Like the gender differentiation described by Eckert for the heterosexual market overall, these patterns suggest an interpretation whereby males orient to standardness and the dominant social order that enforces it (Bourdieu, 1977), whereas for females, personal (including linguistic) style and physical appearance are symbolic capital that substitutes for—and can be exchanged for—economic power (Bourdieu, 1982, 1998). We will argue later that this interpretation also sheds light on gender trends in abbreviation and insertion in Italian iTV SMS.

Gender, Typography, and Computer-Mediated Communication

While research on spoken communication has identified numerous gender-related differences (see, e.g., Coates, 1993), less gender-based variation has been observed to occur in writing. What tendencies have been noted mostly involve discourse-level phenomena such as choice of topic or rhetorical style (e.g., Brody, 1993; Janssen & Murachver, 2003). Evidence of gender differences

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[2] Arguably, the heterosexual market also encompasses Bourdieu's "matrimonial markets"; we address dating markets separately here because claims of a different nature have been made about each.

in the grammar and mechanics of writing is rare, perhaps because most writing is subject to normative influences, and nonstandard grammar, spelling, and punctuation can generate implications of illiteracy that carry social stigma and thus are generally avoided by writers of both genders.

In contrast, computer-mediated communication (CMC) is typically produced in a more spontaneous and less edited manner than traditional writing, and manifests considerable variability in spelling and typography, and to a lesser extent, in grammar.[3] Rather than being stigmatized, in informal CMC contexts nonstandard typing practices are often valued; they are the symbolic currency of what can be considered linguistic black markets, in the sense of Schiffman (2002).

A small number of studies have reported gender differences in typography in CMC. Most often analyzed is the use of emoticons, or "smiley" face icons made out of keyboard symbols. Consistent with findings that women smile more than men in face-to-face settings, emoticons and other textual representations of smiling and laughter are also used more often by women than by men in both synchronous and asynchronous CMC (Herring, 2003; Witmer & Katz, 1997). Relatedly, in a study of an asynchronous discussion forum, Waseleski (2006) found that exclamation points were used more often by females. Rather than functioning as markers of excitability, as has been popularly claimed, the exclamation points were analyzed by Waseleski as indicating friendly interaction.

Short Message Service (SMS) or text messaging via mobile telephones is especially prone to typographic manipulation, due (it has been claimed) to spatial constraints on message length—a single SMS message is limited to 160 characters, including spaces. Many studies of private SMS have found that SMS messages contain shortenings and other nonstandard

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[3] For example, Baron (2008, chapter 4) discusses grammatical variation in instant messages.

typographic features (Anis, 2007; Bieswanger, 2007; Hård af Segerstad, 2002; Ling, 2005). To our knowledge, however, no research has yet examined gender in relation to typographical manipulation in SMS, despite the typographic variability attested in this mode of CMC.

One study of Norwegian private SMS users (Ling, 2005) found that although men were earlier adopters of SMS, female users, especially younger females, were more active texters and wrote longer messages. The issue of message length is related to shortening and lengthening practices and is addressed in the present study. In another study (Yates, Mills, Lockley, & Doherty, 2004), British texters displayed gender differences in politeness, similar to those reported for CMC on the Internet (Herring, 1994, 2003): Females attended more to the face of their addressees than did males. This finding recalls Eckert and McConnell-Ginet's (1999) observation that politeness is symbolic capital for females and suggests the existence of linguistic gender markets in social as well as occupational contexts.

Italian SMS

This study focuses on iTV SMS in Italian. There are several reasons for this choice. iTV SMS is well established (it was introduced in 2004) and popular with viewers in Italy, due to the nation's high mobile phone penetration rate (134% in 2006[4]) and use of private SMS (Fortunati, 2002). The second author has also observed the phenomenon directly during several recent stays in Italy. As a bonus, the Italian language facilitates the identification of gender in iTV SMS messages, in that it encodes agreement with the gender of the writer on pronouns, adjectives, and some verb forms, making it especially amenable to the purposes of this study.

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[4] *European Electronic Communications Regulation and Markets 2006* (12th Report), retrieved March 18, 2008 from http://www.ebu.ch/CMSimages/en/BRUDOC_INFO_EN_361_tcm6-50763.pdf

Several Italian scholars have noted the occurrence of nonstandard features in Italian SMS. Pistolesi (2004) collected a corpus of 1,211 private SMS from 28 participants, which she analyzed for various features, including abbreviations; she attributed the latter to the limited buffer space in which to type SMS. Zarantonello (2001) reports the use of shortenings, such as *3no* for *treno*[5] ('train'), as well as other types of nonstandard writing, relating them to the informal nature of SMS. However, Zarantonello analyzed a very limited corpus—only 15 private SMS and 6 SMS published in a newspaper—on which he based his conclusion that SMS language is highly informal. Pietrini (2001) collected a larger sample of 500 private SMS sent via telephone and via Internet by users 15 to 35 years old. In addition to abbreviations, Pietrini's SMS writers used insertions, which she analyzed as playful language use. These scholars attribute the informal nature of writing in Italian SMS to the informal nature of private communication. This leads naturally to the question of whether Italian SMS are also informal and nonstandard when they are public—as, for example, when they are posted to interactive television programs.

Methodology

Research Question and Hypotheses

The overall question that our investigation sought to address is: Are there gender differences in abbreviation and insertion in iTV SMS, and if so, what are they and how frequently do they occur? (The meaning of the observed differences is discussed following the presentation of the empirical findings.) Since CMC, including text messaging, is often claimed to be a spoken-written hybrid that resembles interactive conversation more than monologic text (e.g., Ferrara,

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[5] The number *3* is pronounced 'tre' in Italian.

Brunner, & Whittemore, 1991), we drew on both spoken language and CMC literature in formulating hypotheses about what we expected to find.

First, studies of gender and participation have found that men talk more than women in public settings (Coates, 2003; Hearn, 1992; Spender, 1980). A similar pattern has been reported in public CMC (Herring, 2003; Selfe & Meyer, 1991; Zelenkauskaite, 2004), whereas in one study of private SMS, women sent more and longer messages (Ling, 2005). Since iTV SMS is public, we hypothesized that men would post more and longer SMS to iTV than women would.

Second, as discussed earlier, sociolinguistic research has found that women tend to use more standard language, including pronunciation and grammar, than men do (Labov, 1990; Trudgill, 1972); this was also found by Zelenkauskaite and Herring (2006) for orthography in Internet Relay Chat. Indeed, the so-called Sociolinguistic Gender Pattern is one of the most robust findings regarding demographic variation in language use (Fasold, 1990). Therefore, since abbreviations and insertions result in nonstandard linguistic forms, we hypothesized that men would use more deletions and insertions in their iTV SMS than would women. In the absence of previous research on gender and abbreviation and/or insertion, we made no prediction as to which of these strategies would be preferred by each gender, beyond hypothesizing that both would be used more frequently by men.

Finally, given the findings of numerous studies that SMS messages tend to be abbreviated, as well as the 160-character constraint on SMS message length, we expected to find more instances of abbreviation than insertion overall. Thus, we hypothesized that both men and women would abbreviate more than they would insert extra characters in their iTV SMS.

Data

In order to test our hypotheses, we collected data from the "Inbox" program on the Italian music television channel *Allmusic*, which at the time of our study was broadcast nationwide for approximately two hours each afternoon, seven days a week. SMS displayed on this program can be viewed in three ways: 1) in real time, on traditional television; 2) in real time, through digital streaming of the TV channel on the Internet at www.allmusic.tv; and 3) for a period of several months after broadcast, from the publicly-available archives of the television channel at the same website. For the sake of convenience, we collected our data from the website archives.[6] For this study, we collected all SMS posted on two weekdays, March 14th and 15th, 2006, which amounted to 1,452 messages.

To post an SMS, viewers of the program must be customers of a mobile phone service provider in a territory of Italy. The viewers first need to register for the channel service by sending an SMS to the provider; registered users can then post messages to iTV programs from their mobile phones for a small fee (at the time of our data collection, 0.5 Euros per message) in addition to the cost of sending a regular SMS (approximately 0.1-0.15 Euros). The broadcast SMS are displayed for a brief time (roughly 12-17 seconds in our data; see Zelenkauskaite & Herring, 2008a) at the bottom of the TV screen, as shown in Figure 1. The phone number to which SMS should be sent is partially visible in the upper left corner of the figure.

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[6] We verified that the web archive matched what was broadcast on television by comparing the SMS that appeared in each format during a two-hour period of the *Inbox* program.
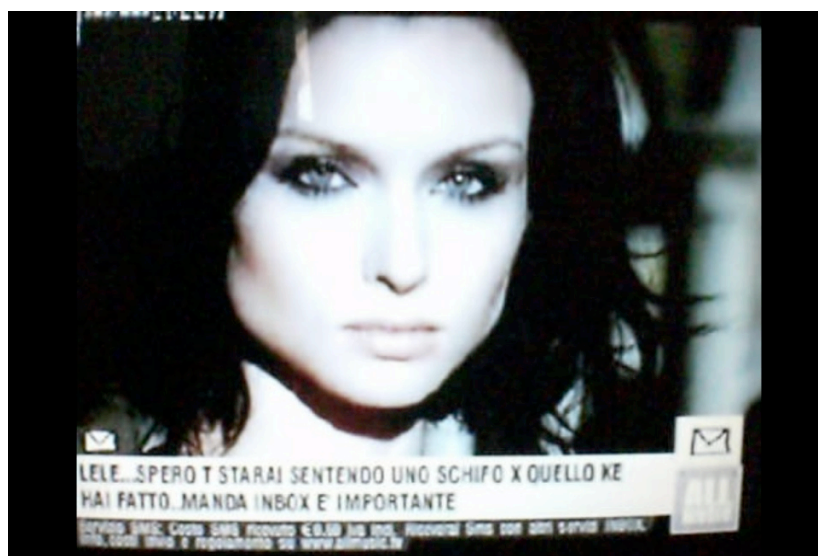
Figure 1. iTV screen with SMS message

The SMS in Figure 1 reads: *Lele…Spero t starai sentendo uno schifo x quello ke hai fatto..manda inbox e' importante* 'Lele, I hope you feel terrible for what you have done to me. Inbox, send this, it is important'. This message contains several abbreviations, such as *t* for *ti* 'you' and *x* for *per*[7] 'for,' as well as insertions such as repeated dots[8] and *e'* for standard Italian *è* 'is.'

The *Allmusic* channel has regulations regarding the content of text messages that can be broadcast on the channel. However, the regulations are rather generic; one of the criteria, for example, is that the SMS should be *interessante* ('interesting'). It seems that SMS are occasionally filtered for other reasons, as well. The comments of some iTV SMS senders suggest that telephone numbers, for example, are not always allowed to pass through the filter, presumably to reduce the incidence of inappropriate solicitations. This regulation will prove relevant in accounting for the frequency of insertions in broadcast iTV SMS.

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[7] This substitution derives from the use of *x* as the 'times' sign—which in Italian is pronounced 'per'—in multiplication.
[8] The term 'repeated dots' is used in this study in place of 'ellipsis' to include all instances in which two or more dots are used.

Analytical Methods

The first step in analyzing the SMS was to determine writer gender. Only the messages themselves were available for this purpose; we thus made our assessments based on textual clues. We first considered the grammatical cues available in the Italian language. In Italian, personal pronouns, adjectives, and past participles are marked for subject gender; for example, *sono stanca* 'I am tired' has feminine marking on the word 'tired,' and indicates that the writer/speaker is female. In addition, following Herring (1994), the nicknames of users were considered, although nicknames were not included in all messages. Gender-indexical language (e.g., reference to oneself as a 'girl' or a 'boy') also helped to establish user gender.

Most messages contained more than one gender cue, leading us to feel reasonably confident in our gender assignments. However, since we were not able to verify writers' actual gender, gender in this analysis should be understood as the gender in which individuals chose to present themselves in their SMS. Previous CMC research suggests that more often than not, this will be their gender in the physical world (Herring, 2003), due to the difficulty of maintaining an assumed identity—this is easier through text than face-to-face, but it still requires control of verbal gender cues that are given off largely unconsciously. In Italian, texters pretending to be a different gender also have to control grammatical agreement, which may occur multiple times within a single message, adding to the challenges of textual gender-bending.[9]

The total corpus of 1,452 SMS included 253 SMS for which gender could not be determined; these were excluded from further consideration. We further excluded eight SMS that were signed by more than one person and 27 SMS that were not entirely in Italian. The final

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[9] In our examination of the corpus, we found no evidence that led us to suspect play with gender identity.

number of messages analyzed was 1,164, of which 708 were posted by viewers presenting as female, and 456 were posted by viewers presenting as male. These were numbered according to their original broadcast order (as reflected in the web archive), placed in an Excel spreadsheet, and each message was assigned a gender code. From this corpus, a random gender-balanced subset of 800 messages (400 by each gender) was extracted; this was used for most of the subsequent calculations.

Deletions were chosen for analysis, because abbreviation has been reported in numerous studies of SMS (e.g., Anis, 2007 for French; Bieswanger, 2007 for German and English; Hård af Segerstad, 2002 for Swedish; Pistolesi, 2004 for Italian), ostensibly because it facilitates "typing" on the cramped telephone keypad and helps keep messages within the 160-character limit. Insertions have also been noted in SMS, for example, by Pietrini (2001), and in CMC more generally by Danet (2001) and Herring (2001), who attribute the expressive addition of extra characters (e.g., 'helloooooooo') to the playful nature of computer-mediated language use, even though such insertions require additional keystrokes (and may incur extra cost). Indeed, there is a tension between abbreviation, as a strategy of efficiency, and insertion, as a strategy of expression, and the two strategies often co-occur (Herring, 2001).

Deletions and insertions were analyzed by overall frequency of occurrence and by type. In order to analyze their *frequency*, each inserted or deleted character was tallied manually, counting punctuation and spaces, as well as letters, numbers, and keyboard symbols, as characters. We also calculated overall SMS length and the distribution of SMS of different lengths by gender.

For purposes of comparison, message length excluding deletions or insertions—referred to as *hypothesized* length—was also derived by converting each SMS into contemporary

Standard Italian. This national variety emerged in the 1980s to replace the previous literary standard and incorporates more simplified structures and everyday language use (Mioni, 1983); it is used in both writing and speaking.[10] Emoticons were treated as standard Italian elements, because emoticons do not exist in standard languages; thus comparison between actual and hypothesized emoticons is not possible. Relatively few emoticons were present in our iTV SMS corpus.[11]

In order to analyze the *types* of deletions that occurred, four categories of 'shortenings' were adopted from Bieswanger's (2007) comparative study of SMS abbreviations in German and English,[12] and two additional categories that we observed in our data were added to these. The six types are defined and illustrated below. (Hypothesized Standard Italian versions of messages are given in square brackets.)

Initialisms are shortenings that contain the first letter or letters of a phrase (Bieswanger, 2007). The following is an example of an initialism from the iTV SMS corpus:

(1) TVB   [Ti voglio bene]   '(I) love you'

Clipping refers to all forms of shortenings in which parts of a word are deleted. The term as used by Bieswanger (2007) refers not only to cases when deletions occur in final position (Cannon, 1989), but also to word-initial deletions and deletion of letters in the middle of a word.

(2) cmq   [comunque]   'anyway'

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[10] Italy has regional "dialects," some of which are mutually unintelligible Romance languages; traditionally, many Italians have spoken both a dialect and Standard Italian. Speaking only dialect carries social stigma, however, and there is a trend for contemporary urban dwellers (especially youth) to use only Standard Italian (Alfonzetti, 1998).

[11] There were 19 emoticons in the 800-message subsample; 14 were in female SMS, and 5 were in male SMS, consistent with research findings that females use more emoticons in CMC on the Internet (Witmer & Katz, 1997).

[12] Bieswanger (2007) also identified contractions as a shortening type. Contractions in Italian are acceptable (some are obligatory) in standard written Italian, unlike the other deletion types considered in this study; thus we excluded them from analysis.

The third type is *letter/number homophones*. Letters and numbers whose pronunciation is identical with that of words or parts of words are used to replace words or letter sequences (Anis, 2007; Bieswanger, 2007; Crystal, 2001). This is illustrated in the following Italian iTV SMS examples:

(3) c   [ci]   'us'

(4) 1   [uno]   'one'

(5) x   [per]   'for'

The fourth type identified by Bieswanger (2007) is *phonetic spelling*, which we considered to be all forms that are shorter than their representation in the standard orthography, that contain at least one character that is part of a nonstandard spelling of the word in question, and that represent the spoken pronunciation of the word.

(6) perke   [perché]   'why'

To the above types we added *omission of punctuation marks*. Omissions of punctuation required in the standard language are popular in SMS, because punctuation requires additional effort to search for the symbols, which are located under different keys and differ in each brand of phone. Italian iTV SMS senders tended to omit punctuation.

(7) Daniele mi manchi da morire Laura   [Daniele, mi manchi da morire. Laura]
     'Daniele, I miss you desperately. Laura'

In example (7), the sender "saved" two characters by omitting punctuation marks.

We also added *omission of spaces* as a type of deletion. Italian iTV SMS senders sometimes save characters by running words together (see also Anis, 2007 for French SMS), as shown in example (8):

(8) tipensotrp [Ti penso troppo] 'I think of you a lot'

Example (8) also illustrates clipping (omission of letters from the word 'troppo'); taken together, these two deletion strategies reduce the message by five characters, compared with the hypothesized Standard Italian version.

Insertions have been studied less frequently, and no taxonomy of insertion types is available in the literature, to our knowledge. We therefore classified insertions into the following five categories that emerged from our data. The first type involves *inserted (usually repeated) letters* in the nonstandard writing of Italian words:

(9) Ti voglio tanto beneeee.   [Ti voglio tanto bene.]   'I love you so much.'

In example (9), the final vowel of *bene* 'good' (here, with the sense of 'so') is repeated three times, lengthening the SMS from 21 characters (in Standard Italian) to 24 characters.

The second type of insertion involves *repeated punctuation*. In example (10), the message sender used both repeated exclamation marks and repeated dots to separate utterances:

(10) Nick: Vale...Dade t amo trp tanto!! Sguilly t voglio bene!!! Skusa x sabato sera...matteo e cote siete trp fighi!! Cote t prometto ke 1gg t vengo a trovare!!
[Nick: Vale. Dade, ti amo troppo tanto! Sguilly, ti voglio bene! Scusa per sabato sera. Matteo e Cote siete troppo fighi! Cote, te prometto che un giorno ti vengo a trovare!]

'Nick: Right. Dade, I love you so much!! Sguilly, I love you!!! Forgive me for Saturday evening. Matteo and Cote are so awesome!! Cote, I promise you that one day I'll come visit you!!'

The third type of insertion involves *numbers spelled out* in letters. Senders sometimes spell out their phone numbers to get around the television channel regulation that filters out SMS that contain phone numbers:

(11) Ho 37 anni di bari ki vuol conoscermi tre quattro sette sei uno otto due zerozero sei.
[Ho 37 anni di bari. Chi vuol conoscermi 3476182006.]
'I am 37 years old from Bari. Whoever wants to know me: 3476182006.'

This strategy can greatly extend a message. The SMS in example (11) is fully 34 characters longer than its Standard Italian counterpart.

The fourth type, *insertions of spaces within words*, can also add considerable length to a message. One of the strategies implemented by Italian users was the playful use of the space bar in order to create special effects, as in the following example:

(12) P u o i m e t t e r e a u d i o s l a v e g r a z i e m [Puoi mettere Audioslave? Grazie mille]
'Could you please play Audioslave? Thanks a million'

Italian iTV SMS writers sometimes used the space bar heavily, as in (12), where the strategy nearly doubles the length of the message. At other times, words are selectively highlighted by the insertion of extra spaces. In example (13), only the name of the place where Francesco is from is highlighted:

(13) Ho bisogno di coccole c'e qualcuna interessata ?francesco da o l b i a

[Ho bisogno di coccole c'è qualcuna interessata? Francesco da Olbia]

'I need some hugs, is there any girl who is interested? Francesco from o l b i a'

The fifth type is *inserting an apostrophe after a vowel,* instead of typing a stressed vowel (à, ò, è, é, ù, ì). Italian stressed vowels have to be searched for among the special characters available on a mobile phone. In order to avoid this effort, SMS writers sometimes place an apostrophe after the vowel, which results in increasing the length of the message by one character:

(14) Simone di lecce non ti dimentichero' mai. Francesca

    [Simone di lecce, non ti dimenticherò mai. Francesca]

    'Simone from Lecce, I will never forget you. Francesca'

The final type is the *insertion of Zz Zz* at the beginning and end of a text message. This was used by one person to differentiate his SMS from others:

(15) Zz hei claudia sono max. ci sei? fatti sentire....... suonami un tam tam. mi manchi Zz

    [Hey Claudia, sono Max. Ci sei? Fatti sentire. Suonami un tam tam. Mi manchi.]

    'Hey Claudia, it's Max. Are you there? Let me hear from you, give me a ring. I miss you.'

After the coding categories were established as described above, each message was manually coded for the features it contained. Coding was primarily done by the second author, who speaks and reads Italian fluently, with assistance from the first author; the second author also reconstructed the hypothesized Standard Italian versions of the messages. Because of the discrete structural nature of the phenomena under investigation, once the intended meaning of a

message was identified, it was generally straightforward to identify what constituted a deletion or an insertion, and the authors agreed in all cases on how to classify each type.

Empirical Findings

SMS Frequency and Length

Contrary to our first hypothesis, as noted in the description of the data above, women posted more iTV SMS to the Inbox program than men did, at a ratio of 1.6 to 1. Women's SMS were also longer on average, at 16.5 words and 89.7 characters (including spaces), than were men's SMS, which averaged 15.6 words and 84.7 characters,[13] in the gender-balanced sub-corpus. Moreover, a gender difference is evident in the distribution of messages of different lengths: Women posted more longer SMS. In particular, they posted more SMS that approached the maximum number of 160 characters than men did, as shown in Figure 2 for the full corpus.
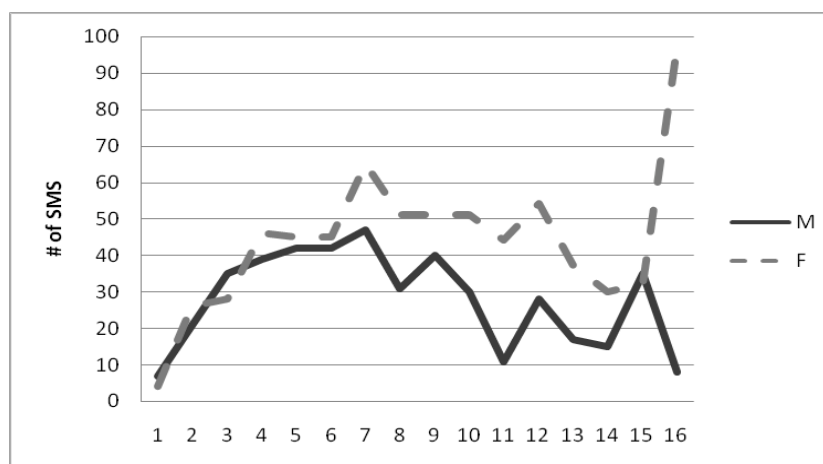

Figure 2. Distribution of message lengths (in tens of characters) by gender

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[13] An independent sample t-test shows that the difference in number of characters is significant at $p \leq .10$.

The tendency for females to pack more characters into their SMS than their male counterparts do is even more evident when hypothesized Standard Italian SMS lengths are considered.

Actual vs. Hypothesized Message Length

A comparison between actual and hypothesized Standard Italian SMS lengths reveals that if the SMS had been written in Standard Italian, for the gender-balanced sub-sample, female messages would have increased by 4.0%, while male messages would have increased by only 1.9%. Females would have produced 37 (out of 400) messages that exceeded the 160-character limit, some as long as 205 characters, whereas males would have had 22 (out of 400) messages that exceeded 160 characters, the longest being 184 characters.

That the hypothesized lengths are longer than the actual lengths supports the view that the constraints of the technology lead people to shorten their SMS messages, although the fact that the average message length would still have been well under 160 characters (93.6 characters for females, 86.4 for males[14]) suggests that other forces also act to keep iTV SMS brief.[15]

Deletions vs. Insertions

On average, female SMS have somewhat more deletions and insertions, in terms of actual numbers of affected characters. This is shown in Table 1 for the gender-balanced sub-sample.

Table 1. Deletions and insertions (in characters) per SMS by gender

	Deletions		Insertions		Combined
	Average	Range	Average	Range	Average

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[14] An independent sample t-test shows that this difference is significant at p<.05.
[15] For example, texters may be orienting to a casual (spoken) conversational norm of brief turns.

Male	6.1	0-38	2.4	0-39	8.5
Female	6.4	0-41	2.6	0-60[16]	9.0

When deletions and insertions are combined, females have an average of 9.0 of these nonstandard typographic features per message, and males have 8.5 per message. This suggests a relatively high degree of nonstandardness in Italian iTV SMS overall—affecting approximately 10% of the characters in each message—, consistent with the view that nonstandardness is the norm in this virtual linguistic environment. However, overall frequencies of deletions and insertions tell only part of the story as regards gender expression in iTV SMS; gender trends are more clearly evident in the use of different types of deletions and insertions.

Types of Deletions

The breakdown of deletion types by gender for the balanced subsample is shown in Table 2. In this and the following tables, instances of use of each strategy are counted, rather than characters.

Table 2. Instances of use of shortening types

	Initialisms	Clippings	Homophones	Phonetic spelling	No punctuation	No spaces	Total
Male	44	215	157	57	130	8	611
Female	35	351	222	86	75	7	776

Leaving aside initialisms and omission of spaces, which are used with the lowest frequencies at similar rates by both genders, females use more of three out of the four remaining shortening strategies, especially clipping (omission of letters) and homophones (replacement of letters with fewer characters that are pronounced the same). The only deletion type that males use more often

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[16] The longest female SMS reads: "mettete Pink con la sua feel good time by povera ammalata.PinkPinkPinkPinkPinkPinkPinkPinkPinkPinkPinkPinkPinkPinkPink." (Put on Pink's "Feel Good Time," by poor sick girl. PinkPinkPink, etc.)

is no punctuation,[17] which is arguably the simplest form of deletion that preserves legibility. (Omission of spaces is also easy to do when inputting a text message, but it can result in strings of characters that are difficult to decipher; see, e.g., ex. 8.) Females had more deletions overall.

Types of Insertions

The most common types of insertion are repeated punctuation of various types. Of these, repeated dots are most frequent, followed by repeated exclamation points and repeated question marks. The main subtypes of repeated punction found in the full iTV SMS corpus are broken down by gender in Table 3. (Note: The symbols …, !!!, and ??? in the figure are used to represent any number of repetitions of the symbol greater than 1.)

Table 3. Instances of use of repeated punctuation

	…	!!!	???	?!	Total
Male	224	152	45	1	422
Female	260	240	43	6	549

Except for repeated question marks, which were used equally often by both genders, females used more repeated punctuation of each type than did males. This is especially the case for exclamation marks, consistent with Waseleski's (2006) findings for an Internet discussion list and with the societal expectation that females are more emotionally expressive.

The results for the other types of insertion (with the exception of inserted *Zz* at the beginning and end of a message, which was used in eight SMS sent by one male) are presented in Table 4. Of these, most common is typing an apostrophe after a vowel to replace a diacritic that would be present in standard written Italian (ex. 14). This clearly reflects the constraints of

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[17] We assigned this code when no punctuation was used anywhere in a message.

the technological medium, which requires extra effort to type stressed vowels, and was used about the same by both genders. This aside, a gender preference for types of lengthening strategies is evident: Females inserted extra letters more often, while males inserted a space after each letter (exx. 12-13) and spelled out numbers (in all cases, their phone number) more often.[18]

Table 4. Instances of use of other insertion types

	Apostrophe	Extra letters	Space after each letter	Spelled-out numbers	Total
Male	117	3	5	24	149
Female	122	16	1	5	144

Overall, women used more instances of insertion than men did (F=693; M=571).

Sample iTV SMS

The following SMS illustrate the gender patterns reported in the previous sections. Examples (16)-(18) are from 'Nicola,' 'mirko,' and 'Raf'[19] (all male personal names in Italian):

(16) 1 bacio a Emy da Nicola.

[Un bacio a Emy da Nicola.]

'A kiss to Emy from Nicola.'

(17) Ciao krissy ti amo con tutta l anima ciao dolcezza by mirko

[Ciao krissy, ti amo con tutta la anima. Ciao dolcezza, by mirko]

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[18] In Table 4, instances are given rather than numbers of actual characters, to avoid having a few long instances convey a misleading impression of the overall use of these strategies. Examples 9, 11, and 12 provide an indication of how many extra characters are typically added through each strategy.

[19] The name Raf can also be female, but in this SMS, masculine agreement on 'ammalato' shows that he is male.

'Hello Krissy, I love you with all my soul. Bye sweetheart, by mirko.'

(18) Ciao sono Raf di udine 40anni single sono a casa ammalato cerco nuove amicizie tre tre

cinque uno sei tre nove sei zero tre

[Ciao, sono Raf di Udine. 40 anni, single. Sono a casa ammalato, cerco nuove amicizie:

335 1639603]

'Hello, I am Raf from Udine. 40 years old, single. I am at home, sick. I am looking for new

friends: 335 1639603.'

Example (16) contains a homophone ('1' for 'un'); (17) has missing punctuation and a clipping

('l' for 'la'); and (18), in addition to missing punctuation, spells out Raf's phone number. Except

for (18), the examples are short, and all of them are well under 160 characters.

In contrast, messages (19)-(21) from female names 'nunzy,' 'Giorgia,' and 'valeria' are

longer and contain more numerous and more varied abbreviations and insertions:

(19) Danyel 6 dolcissimooooo lo so ke 6 a lavor scusa x tt gli squill ke ti faccio nn vd l ora di

sentirti spero staser sn content ke ti piaccio by nunzy

[Danyel, sei dolcissimo. Lo so che sei a lavoro, scusa per tutti gli squilli che ti faccio. Non

vedo l'ora di sentirti, spero stasera. Sono contenta che ti piaccio, by nunzy]

'Danyel, you're soooo sweet. I know you're at work, sorry to make all these calls to you, I

can't wait to hear from you, I hope tonight. I'm glad you like me, from nunzy.'

(20) domenico di sicilia Tvtttttbxs....nn vedo l ora ke sia il 17 Xke' vieni A trovarmi...spero di incontrarti...ki m vuole conoscere?Rx in tanti...giorgia92 bologna

[Domenico di Sicilia, ti voglio tanto tanto tanto tanto bene per sempre.... non vedo l'ora che sia il 17 perché vieni a trovarmi... spero di incontrarti... chi mi vuole conoscere? Rispondete in tanti... giorgia92, Bologna]

'Domenico from Sicily, I love you so so so so so much forever. I can't wait till I see you on the 17th when you come to visit me. I hope to meet you. Who wants to get to know me? Send many responses. Giorgia92, Bologna'

(21) Ciao Laura mi spiace ke tu sia triste un bacio e un abbraccio x tirarti su:-):-):-)by Valeria

[Ciao Laura, mi spiace che tu sia triste. Un bacio e un abbraccio per tirarti su :-):-):-) by Valeria]

'Hello Laura, I'm sorry that you're sad. A kiss and a hug to cheer you up :-):-):-) by Valeria.'

In the category of deletions, (19) and (21) have missing punctuation, homophones (e.g., *x* for *per*), and phonetic spelling (*ke* for *che*), (19) and (20) have clippings (e.g., *Tvtttttbxs* for *ti voglio tanto tanto tanto tanto bene per sempre*), and (21) has missing spaces between the emoticons. All three also have insertions: (19) has repeated letters (*dolcissimoooo*) and an apostrophe (*cioe'* for *cioè*), (20) has repeated dots and an apostrophe, and (21) has an emoticon repeated three times in sequence. Rather than the effects of deletions and insertions cancelling each other out, in these females' SMS, they work together to create a highly expressive style.

Discussion

Our research question asked: Do men and women shorten and/or lengthen iTV SMS differently? The analysis of SMS posted during two consecutive days to an Italian iTV program revealed two main findings: 1) Women wrote longer SMS, more often approaching the 160-character limit, and 2) the SMS written by women tended to be more nonstandard. These findings contradict our first and second hypotheses, and require explanation. However, as predicted by our third hypothesis, abbreviations were more frequent than insertions, and the two strategies were used in similar proportions by both genders.

We expected that men would post more and longer SMS to the iTV program than women, consistent with previous findings that men talk more in public settings (Coates, 1993; Spender, 1980) and post more and longer public computer-mediated messages (Herring, 2003; Selfe & Meyer, 1991). However, the opposite was found to be the case, despite the very public nature of the iTV broadcast medium. One possible explanation is that Italian women feel comfortable communicating via SMS, which is already in widespread use as a private, interpersonal medium in Italy. Norman (2004) has suggested that the mobile phone is an emotional machine: Its small size and the fact that it fits in one's pocket, as well as the vibration it gives off when there is an incoming message, seem to create a strong emotional effect on the user. Women, who conventionally specialize in the emotional realm, may find mobile phone communication especially conducive to emotional expression and creativity.

Women's previous associations with text messaging may also lead them to perceive iTV SMS as a social communication medium. In support of the social nature of iTV SMS, Zelenkauskaite and Herring (2008a) found that 66% of the SMS posted to the Inbox program during the same two days were directed to individual viewers, and 73% contained personal

content, although the study did not break the results down by writer gender. The recreational theme of the channel, music videos, may also contribute to creating an informal, social context. Moreover, the Inbox program is broadcast in the afternoon, at a time when women presumably make up a significant proportion of TV viewers, in Italy as in other Western nations; this may contribute to women's comfort level with the program.

At the same time, some research has found evidence of women in non-English-speaking cultures being more active in public CMC than men (see Panyametheekul & Herring, 2003, for a case study of Thai webchat). It is possible that Italian women's participation in iTV SMS reflects a cultural dynamic. Zelenkauskaite (2004) found that men participated more than women on public Italian IRC channels, however, which is consistent with the pattern for English CMC. This suggests that local and contextual (and perhaps mode-specific), rather than broad cultural, factors account for the gender patterns in the present study.

The often-reported finding that women use more standard language variants than men in speech (Fasold, 1990; Labov, 1990; Trudgill, 1972) and, to a lesser extent, in CMC (Zelenkauskaite & Herring, 2006), was also contradicted by this study. Although both genders made considerable use of both abbreviations and insertions, women's iTV SMS deviated more from standard written Italian norms. Women abbreviated more, consistent with their tendency to pack as many characters as possible into a single SMS message. They also inserted more. With the exceptions of spelled-out phone numbers and apostrophes to replace diacritics, insertions appear to be mostly expressive in function: They express enthusiasm (ex. 9), sadness (ex. 10), emphasis (ex. 13), individuality (ex. 15), etc. Thus the women in this study appear to be both more economical and more expressive, in support of the observation that these two strategies tend to co-occur in CMC (Herring, 2001).

Our finding that women tend to use more nonstandard language is consistent with the view of Italian iTV SMS as a "heterosexual market" (Eckert, 1996), in which the symbolic capital is gender-appropriate language use. For women in the iTV SMS marketplace, this involves expressive, stylistically-marked typographic practices. Abbreviation and insertion in text messages symbolize feminine qualities of emotion, sociability, and playfulness (childishness); their longer, more "packed" messages may also symbolize talkativeness, another stereotypically feminine quality (Coates, 1993). In contrast, men's typography in this market tends to be more standard, which can be read as symbolic of masculine association with the dominant societal institutions that set and enforce standard language norms (Bourdieu, 1977, 1998).

The heterosexual iTV SMS market of the Inbox program also subsumes an implicit dating market, in which individuals seek others with whom to connect for romantic and/or sexual purposes (Coupland, 1996). In a previous study, we observed that many iTV SMS messages posted to the same program were romantic or flirtatious in tone; 15% described the sender and explicitly sought contact with others, as in personal ads (Zelenkauskaite & Herring, 2008a). Most of the examples analyzed in the present study are also flirtatious and/or emotional, and SMS with spelled-out phone numbers (e.g., exx. 11 and 18) strongly resemble personal ads. Moreover, the symbolic associations of the gender trends identified in this study are consistent with patterns of self-representation reported for personal advertisements, in which men tend to market themselves as respectable and financially secure, while women market themselves in terms of their physical attributes and other feminine charms (Bolig et al., 2004; Zelenkauskaite & Herring, 2008b).

Underlying all of these interpretations is the notion that typographic (non)standardness is a form of social capital in iTV SMS, much as phonological (non)standardness is in speech, and

that local markets (such as the dating and heterosexual markets proposed here, or the informal social marketplace in recreational CMC more generally) can exist within larger linguistic markets (Bourdieu, 1977), assigning different values to (non)standardness according to the context.

Implications and Directions for Further Research

Computer-mediated communication is writing, but it is also highly interactive—an insight reflected in Ferrera et al.'s (1991) early use of the term "interactive written discourse" to refer to CMC. In the Italian iTV SMS examined in this study, the resources of written language are employed variably to communicate social meanings that are traditionally conveyed through speech. These findings have implications for socially-oriented analysis of written language more generally. First, they predict that any unedited interactive writing, such as personal letters, would show socially-conditioned variation, as indeed has been observed to be the case (e.g., Barton & Hall, 2000). Second, it follows that if typographic variability is socially conditioned, it can contribute to the study of linguistic variation in CMC, as an analog to the study of sociophonetics in speech. Variationist principles and methods might usefully be adapted for the study of online writing, even when it takes novel forms (e.g., emoticons, extra spaces in words, apostrophes substituting for diacritics, message brackets). Finally, the study advances CMC research, in that it extends the previously limited research on gender and micro-level linguistic phenomena to a new mode of CMC. More broadly, it supports previous claims (e.g., Herring, 2003) that gender persists as a meaningful social category despite technological mediation.

A question for future research is whether similar amounts and types of nonstandard typography would be used in iTV SMS programs on different topics, e.g., political debates or news-related iTV programs (cf. Beyer et al., 2007), and how gender roles would map onto language standardness in these more "serious" contexts. More generally, we only analyzed one iTV program, at a single point in time, from a single language and culture. More research is needed into iTV SMS in other languages, as the iTV phenomenon continues to grow in popularity and expand around the globe. We recommend that such research go beyond simply noting the extent to which SMS text is nonstandard or classifying the types of nonstandard forms that occur, to considering the social and ideological functions of typographic variation. For in *short* message service (SMS) texts, perhaps more than in other modes of computer-mediated writing, it seems that "small things matter."

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