

# WHATS THE USE OF APOSTROPHES?

## GENDER DIFFERENCE AND LINGUISTIC VARIATION IN INSTANT MESSAGING

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### Introduction

With the expanding amount of information and applications available through the internet in the past decade, computer mediated communication (CMC) in general and instant messaging (IM) in particular have exploded in popularity as forms of interpersonal interaction in wired societies. Though popular for many years among younger cohorts such as teenagers, IM is also prevalent among adults, even in workplace environments (Lenhart, Lewis, & Rainie, 2001; Lenhart, Madden, & Hitlin, 2005; Shiu & Lenhart, 2004; Harmon, 2003; Quan-Haase, Cothrel, & Wellman, 2005). Interaction in IM consists of interlocutors typing and reading messages via computer screens. It is potentially synchronous and generally occurs between two users in a one-to-one format, which distinguishes it from other forms of one-to-many CMC such as message boards, listservs, or chat rooms (Baron, in press).

As CMC becomes more embedded in daily life as a typical mode of communication, an understanding of its unique properties becomes salient. What distinguishes it from other forms of communication and how it is used and perceived as a social instrument have engaged our research efforts, and at the heart of these questions is how users use and perceive *language* in CMC. We have only begun to address the nature of linguistic behavior in CMC, though its use is necessarily discursive.

This study contributes to the burgeoning field of empirically-based literature on linguistic issues in CMC, and IM in particular, by applying the sociolinguistic concept of *variation* to IM as it relates to standard usage and gender. While there has been much sociolinguistic work on variation and gender, there has been little work on variation in written modalities, and even less on variation and CMC. We lack quantitative sociolinguistic investigation of

linguistic variables and their social correlates from a variationist perspective. After providing a brief background on sociolinguistic variation, standards, gender, writing, speech, and CMC, I present findings of an empirical study of the use of apostrophes in IM conversations. I then argue for the usefulness of the concept of “standard” in analyzing CMC linguistic behavior.

## **Background**

### *Variation and Gender*

The study of linguistic variation examines the patterns by which language users differ in their production of linguistic forms, mapping variation onto social properties. Regional variation concerns the speech of regionally-situated speech communities, whereas social variation correlates linguistic variables with social variables such as socioeconomic class, ethnicity, gender, and age. Much variationist research investigates the use of “standard” linguistic forms and “nonstandard” variants, that is, forms that enjoy mainstream prestige within a speech community and variants from it that are frowned upon or proscribed within a speech community. Adherence to standards are thus societally influenced, rather than a reflection of linguistic ability (see Price & Graves, 1980).

A primary focus for studies regarding standards is gender. Research has consistently found that men are more likely to use nonstandard variants, whereas women are more likely to use standard forms (for summaries, see Labov, 2001; Eckert, 1989; Romaine, 2003). For example, Trudgill’s (1974) study of variation in Norwich, England, and Labov’s (1972) study of variation in New York City found that men use a higher proportion of nonstandard variants, while women are more likely to use standard, or overtly prestigious, forms of language. Standard forms are said to carry “overt prestige,” while nonstandard forms also can carry a positive social marking of “covert prestige.” This distinction has also been related to “local” and “global” prestige, which refer to the status one gains in the larger speech community versus the status within a more localized environment (see Eckert 1989). While women appeal to “overt” or “global” prestige

attributed to standard linguistic forms, men appeal to “covert” or “local” prestige of nonstandard forms, with group identity marked by linguistic features that are in contrast or even conscious opposition to mainstream practice.

Commonly, this difference has been attributed to women’s awareness of their lesser social status; women reject nonstandard variants in favor of forms for which they will be positively assessed, or conversely, they seize on language as a means to greater power (see Romaine, 2003; Cheshire, 2002). Studies have also explained this phenomenon through a historical perception of “masculinity” attached to nonstandard speech features, particularly among the working class; and of “femininity” attached to standard, or “proper,” features (Labov, 1966; Trudgill, 1995; Edwards, 1979; Romaine, 2003).

Historically, linguistics in general and variationist research in particular have focused on spoken registers (see Chafe & Tannen, 1987, for a review and exceptions). Sociolinguistic studies of gender and writing are thus scarce, though several studies have shown quantifiable differences in the writing of men and women. Biber (1988) found that women’s written personal letters were more emphatic than men’s, and that women’s letters were more “involved” or “interactive”. Men’s letters were more “informational;” a finding confirmed by Pallander-Collin (1999). Koppel, Argamon, and Shimoni (2002) found that automatic text categorization techniques could determine an author’s gender in a majority of cases based on lexical and syntactic features.

These studies, though they have identified features of writing as correlational with gender, have not performed what is analogous to quantitative variationist studies done on spoken language. Price and Graves (1980) found that men used more nonstandard features in writing than women. Yet in that study as in others on writing, the features quantified were at the lexical level and above.<sup>1</sup> Variationist studies, on the other hand, tend to look at

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<sup>1</sup> It is unclear how “deviation” from standard usage was defined. Though the article outlines features under analysis, such as verbs and “possessive inflections,” it does not explain precisely what was measured as a variant. It is, in other words, hard to say whether a distinction was attempted between unconscious “errors” and possibly conscious stylistic variance.

lower-level phonological variables that (generally) lie under the conscious radar of a speaker. This is because there is flexibility for variation at this level, where alternate forms do not obscure comprehension and are enabled by phonological environment, and because phonological variation is often a precursor to broad linguistic change.

This discrepancy in levels represents a considerable difference in, and challenge to, doing variationist work on written texts: what counts as a good, lower-level linguistic variable in written language? Part of the goal of this paper is to investigate how we can study written registers in a way that is similar to the way we have studied spoken ones. The emergence of text-based CMC presents an opportunity to take seriously the study of similar linguistic features that apply to *written* language, as we have studied phonological variables. Where a spoken variable might include oral articulation of a phoneme, a written variable might be orthographic articulation of a particular morpheme.

### *Computer Mediated Communication and Gender*

Few empirical studies have been performed on IM; most studies examining CMC have focused on asynchronous channels (email, message boards, listservs), cooperative group settings, or message interpretation (for a review, see Squires, 2003). Studies pertaining to linguistics in CMC settings have focused on features such as emoticons (Walther & D'Addario, 2001), abbreviations and acronyms, and punctuation broadly defined (see Randall 2001; Baron 2004; Hård af Segerstad, 2002; Yates, 1996; Collott & Belmore, 1996). Much of the empirical research in CMC has sought to probe the feeling among users that, while synchronous CMC is usually text-based, it feels speech-like (the moniker "chat room" is not merely one of convenience) (see Horowitz & Berkowitz, 1964, for the effect that the facility of production has in shaping writing's resemblance to speech). There are classic distinctions drawn between written and spoken language: writing is permanent, speech is ephemeral; writing takes thoughtful composition, speech is unplanned. By design, instant messaging (IM) blurs these boundaries. Messages are *typed* and *read*, physically like writing, but messaging occurs almost synchronously

(“instantly”), like speech, and there is a sense of social presence absent in most written genres (for an overview of the features of IM, see Baron, 2004; Hård af Segerstad, 2002).

This dual character creates an emergent space for linguistic practices that are not fully concordant with the customs of either speech or writing. Moreover, the features of speech (simultaneity, social presence, informality) and writing (orthography, punctuation, composition) can be in tension, causing some features to be sacrificed for the sake of others (Vaida, Newstetter, & Mynatt 2002). For example, textual “shortcuts” such as abbreviations, acronyms, and omissions of punctuation can be used in CMC to decrease typing and transmission time – thereby eliminating some typical features of writing in order to bolster features of speech, such as synchronicity.

This study contributes to the ongoing investigation of IM as a medium that encompasses features of speech and writing, and the relationship between those properties and their socially situated users. It asks whether linguistic variation is exhibited in IM according to gender, as it is in speech. If so, how is the difference related to standard and nonstandard linguistic forms? How is the difference related to spoken and written language? To my knowledge, CMC literature has not heretofore directly addressed such questions.

Researchers have asked how gender differences are upheld in CMC through discursive resources (see Herring, 2003; Panyamethekul & Herring, 2003; Herring, 2004; Boneva, Kraut, & Frohlich, 2001; Baron, 2004; Sundén, 2002) and whether CMC is more like speech or more like writing (Baron, in press; Yates, Collot & Belmore, 1996). Baron (In press) concluded that IM more closely resembled spoken discourse than written; yet females’ IM conversations more closely resembled writing, and males’ conversations more closely resembled speech, based on a number of paradigmatic features of written and spoken language. Baron (2004) also found differences in men’s and women’s use of contractions (women use fewer) and emoticons (women use more). Echoing the latter finding, Herring (2003, 2004) also has found that women are more likely to represent emotion through graphical means in CMC.

The question of “standard” usage in IM remains to be directly asked. I suspect that this is because the medium is considered too new to have a standard at all, that language within it is notoriously nebulous. By focusing on one written linguistic variable and examining its relationship to one social variable, I hope to present an overview of how we can begin to talk about the notion of standards in IM as a unique discursive environment, as well as how we can apply variationist techniques to CMC.

## Method

### *Apostrophes as a Linguistic Variable*

In the same way that variationist research has treated phonological, lexical, and grammatical features, the present study treats the apostrophe in written language as a linguistic variable and examines whether its inclusion or omission correlates with gender. Unlike punctuation marks whose “appropriate” use is less clear (such as commas), the apostrophe’s commonly held standards for usage are easy to delineate; moreover, it is easily quantified and a reasonable feature for which to expect variation.<sup>2</sup> In standard written English, apostrophes serve two chief grammatical functions (see Hacker 2003). In contractions, an apostrophe replaces letters that have been omitted (i.e., *don’t*, where *-n’t* is equivalent to *not*). In possessive nouns, apostrophes precede *-s* (i.e., *dog’s*) or follow *-s* in the case of plural nouns ending in *-s* (i.e., *dogs’*).<sup>3</sup>

### *Hypothesis*

This study examines how the written standard for apostrophe use is characterized in IM; that is, whether the standard holds across modalities from “ordinary” writing to the writing

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<sup>2</sup> If an IM user attempts to approximate real-time speech (though whether or not this is always a goal for users is questionable), an apostrophe and other punctuation marks are easy to omit. That a word’s pronunciation transfers across modalities with or without an apostrophe (*don’t* and *dont* will likely both be read the same way) means that the risk of incomprehensibility is low. Users are thus relatively free in choosing a style for this variable.

<sup>3</sup> An exception is the third person singular possessive pronoun *its*, which contains no apostrophe.

in IM. I therefore consider inclusion of the apostrophe in contractions and possessive nouns to be the standard realization, and omission to be a nonstandard variant.

My hypothesis is drawn from prior sociolinguistic findings that women are more likely to use standard linguistic features than men, as well as the contention that women's IM exchanges more clearly resemble traditional writing than do men's. That is, I hypothesize that females will use apostrophes in their standard occurrence more frequently than males.

#### *Data Collection and Analysis*

The data come from a corpus of English-language IM conversations from undergraduate students collected at the University of Virginia in the fall of 2004. All conversations occurred using AOL Instant Messenger. Data from a total of 26 subjects, who generated 16 IM conversations, are included. I recruited participants for the study personally, considered "primary subjects," and those subjects in turn had IM interlocutors who were considered "secondary subjects." Out of the 24 primary subjects I initially recruited, only 10 are included in the final study (several withdrew from the study or were unresponsive after initial contact). Primary subjects were asked to save and submit two IM conversations, one from an interlocutor of the same gender and one from an interlocutor of the opposite gender. However, several primary subjects were only able to contribute one conversation. The distribution of subjects is shown in **Table 1**, and the number of conversations by each combination of gender is shown in **Table 2**.

**Table 1: Subject Type**

<i>Subject Type</i>	<i>Female</i>	<i>Male</i>	<i>Total</i>
<i>Primary</i>	5	5	10
<i>Secondary</i>	8	8	16
<i>Total</i>	13	13	26

**Table 2: Conversation Type**

<i>Gender of Dyad</i>	<i>Conversations in Corpus</i>
<i>FF</i>	4
<i>FM</i>	8
<i>MM</i>	4
<i>Total</i>	16

Each contraction (e.g., *don't* or *dont*) and each possessive noun (e.g., *dog's* or *dogs*) in the corpus was coded as an opportunity for apostrophe inclusion. Each time a contraction (that is, a single word formed by omitting all or part of another word) was used, I coded its grammatical function, its inclusion or omission of the apostrophe, and its contracted word (i.e., *not*). For a possessive noun, I simply coded grammatical function and its use or omission of the apostrophe. I aggregated all tokens and apostrophes, then sub-analyzed by grammatical function, conversation, gender, conversation dyad gender, subject, and contracted word.

## Findings

### *Apostrophe Inclusion*

The 16 IM conversations yielded 404 tokens of contractions or possessive nouns. In total, apostrophes were used 233 times, or in 57.67% of cases. The overall distribution of apostrophe inclusion is shown in **Table 3**. Of the 404 total tokens, 389 were contractions, 222 of which contained apostrophes, or 57.07%. Possessive nouns included apostrophes in a higher percentage of cases but from far fewer tokens – 11 out of 15, or 73%.



**Table 3: Total Tokens and Apostrophe Inclusion**

	<i>Tokens</i>	<i>Apostrophes</i>	<i>Percent Apostrophe Inclusion</i>
<i>Contraction</i>	389	222	57.07
<i>Possessive Noun</i>	15	11	73.00
<i>Total</i>	404	233	57.67

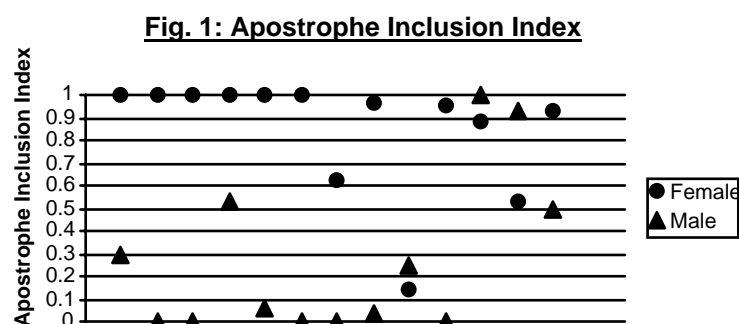
In female-produced tokens (N=218), apostrophes were used in 85.31% of cases (see **Table 4**). In male-produced tokens, apostrophes were used in 25.81% of cases (N=186).

**Table 4: Total Tokens and Apostrophe Inclusion by Gender**

	<i>Tokens</i>	<i>Apostrophes</i>	<i>Percent Apostrophe Inclusion</i>
<i>Male</i>	186	48	25.81
<i>Female</i>	218	185	84.86
<i>Total</i>	404	233	57.67

### *Subjects' Indices*

An index was calculated for each subject to show the likelihood of their using apostrophes. I divided the total number of apostrophes by the total number of tokens a subject produced (regardless of grammatical function). In cases where subjects submitted two conversations, the counts from both conversations were combined. This gave a score ranging from 0 (always nonstandard) to 1 (always standard). The index range for the 13 female subjects was .14 to 1, with six female subjects scoring 1. The index range for the 13 male subjects was 0 to 1, with five male subjects scoring 0. No female scored 0, and only one male scored 1. The mean index for all subjects was .56. The mean score for females was .85, while the mean score for males was .28. The distribution of scores is shown in **Fig. 1**.



### *Possessive Nouns vs. Contractions*

Possessive nouns contained a higher percentage of apostrophes than contractions, though the data yielded a small number of tokens (N=15). Males and females behaved nearly the same when forming possessives: males used the standard realization in 75% of cases (N=8), while females used the standard realization in 71.43% of cases (N=7). For contractions, the gender gap is opposite, wider, and entailed more tokens (See **Tables 5 and 6**). Males used apostrophes 23.60% of the time (N=178), while females used apostrophes 85.31% of the time (N=211).

**Table 5: Apostrophe Inclusion in Contractions**

	<i>Tokens</i>	<i>Apostrophes</i>	<i>Percent</i> <i>Inclusion</i>
Male	178	42	23.60
Female	211	180	85.31
Total	389	222	57.07

**Table 6: Apostrophe Inclusion in Possessives**

	<i>Tokens</i>	<i>Apostrophes</i>	<i>Percent</i> <i>Inclusion</i>
Male	8	6	75
Female	7	5	71.43
Total	15	11	73

## Discussion

Apostrophes were often omitted in IM conversations. Analyses by gender support the hypothesis that females included apostrophes more frequently than males did. Moreover, based on individual subjects' indices for apostrophe use, female subjects had a higher likelihood of including apostrophes than did males. Thus, while apostrophes were frequently omitted overall in IM, they were more frequently omitted by men. In the case of possessive nouns, the number of instances for both males and females was too small to discern a statistical difference between genders. I turn now to the implications of these findings.

If we accepted that the “standards” of usage in IM were the standards of written language only, we might conclude that these findings represent simply a replication of the same gender difference found in spoken language: women are more likely to use standard forms. Yet because IM resembles speech more closely than does traditional writing, we must consider explanations having to do with *modality* as well as norms.

Considered from a modal perspective, the findings in this study lend support to other analyses claiming that women's IMs resemble writing more than men's. It could indeed be that women perceive IM as fundamentally a written experience and thus uphold conventions from writing. Because the apostrophe has no corresponding spoken sound, its inclusion does not contribute to making IM “sound like” casual speech, though nor does its omission as far as “sound” is concerned. However, omitting apostrophes might make IM *seem* more like speech due to reduced processing time; or, perhaps, a *perception* of reduced processing time.

It may be that men desire this speed and synchronicity more than do women, or merely that they do not discern negative consequences for taking shortcuts – they are more concerned with seeming “casual” in this mostly inter-peer medium, and less concerned with seeming “careful.” But this, too, is irrelevant without standards: shortcuts are a way around what is

standard. Omitting an apostrophe might produce the same perception of casualness as omitting a “g” sound in a spoken gerund (i.e., *leavin’*).

One problem with the purely modal explanation is that if we accept that women use IM as more like writing, a paradox seems to arise: while maintaining written standards more than men in apostrophe usage, in other forms of language in CMC they deviate from conventional written usage. Other studies have found women to be linguistic innovators in CMC, more frequently using features like emoticons, abbreviations, and acronyms than men (Baron, 2004; Herring, 2003).

If we put these findings in the context of sociolinguistic studies on gender and standards, though, this seeming paradox makes sense. Women are found to lead change when it moves in the direction of overtly prescribed high-status forms, but they are also leaders in forms that lie below the radar of already-established usage (see Labov, 2001). If the omission of the apostrophe is considered nonstandard, it makes sense that men would exhibit the trait more readily than women. On the other hand, women also lead linguistic change when a new usage is not overtly prescribed by society as having either a high or low status – when no framework for “standard” exists for a variable.

IM is perhaps such an environment. In some traditional written features, like the apostrophe, women are maintaining what is seen as the “right” way to do things. In new features of the IM register, like emoticons, where no standard yet is cemented, women are creative in adopting the forms (whether or not they originated them). In IM, perhaps, women are opting for an expansion of the written repertoire, while men are opting for its reduction. The impact of these attitudes toward language in CMC is of greatest interest when considering why forms are socially marked as “masculine” or “feminine.” Hence we can explain why women are in some ways using more speech-like forms, whilst elsewhere not so readily eschewing written forms. Conversely, men are not using some speech-like forms, while they also seem less concerned with upholding written standards.

To summarize, a modal explanation's fundamental concern is users' perceptions and awareness of the *kind* of communication in which they are engaged, while a normative explanation concerns users' awareness of *standards* of linguistic form. I have suggested that if women's IMs appear more like writing, the reason has more to do with standards, rather than modality; though we must look to the intersection of the two explanations. I also suggest that when talking about standards in IM, we keep the ideas of *expansion* and *reduction* in mind; these are inevitably tied to issues of speed and synchronicity, as well.

### **Directions for Future Research**

To continue investigating the notions of standards and gender in CMC, more thoroughgoing empirical research and analysis are needed. Future research on IM should examine social differences in terms of the traditional sociolinguistic paradigm of standard and nonstandard forms, but it also must address features specific to the medium of IM – just as all studies of CMC must take into account the uniqueness of particular applications.

In terms of research on apostrophes and other punctuation, we need to consider a range of demographic/social variables that could affect behavior, including age, ethnicity, spoken dialect, register, topic of conversation, experience with IM, literacy level, linguistic ability, etc. In this study, men and women used apostrophes in possessives with roughly equal frequency, though men were more likely to use apostrophes in possessive nouns than in contractions. We should look to the grammatical environment of punctuation for influences that might affect punctuation patterns. Other possibilities are aesthetic: might the “look” of a typed word affect the use of punctuation?

To investigate the issue of IM being more like speech or writing, it would be useful (albeit ambitious) to have comparison data of spoken, written, and IM samples from the same subjects. Moreover, samples of IMs written in different registers – that is, for different purposes – as well as IMs written to a range of interlocutors can illuminate how single users utilize language differently from conversation to conversation.

As always, the importance of qualitative investigation into users' perceptions of IM conversations, particularly categorizing texts based on social features, cannot be overestimated if we are to understand how social relations are articulated in discourse. The choices an IM user makes are complex and interwoven; what is socially acceptable or even advantageous in writing may be frowned upon in casual speech and thus in IM, while what is acceptable (or even crucial) in speech may be difficult to imitate on IM.

With each message, IM users subconsciously (and often consciously, no doubt) ask themselves questions like, "What will this message make me *sound* like?" The metaphor is not accidental: many IM users enjoy IM because of its similarities to spoken language, as much as they enjoy it because of its similarities to writing. We should therefore take into account the standards of writing and speaking that converge in the medium, as well as the social and linguistic consciousness of users.

Finally, we need to know how people perceive IM as fitting into the whole of their internet usage and of their use of time in general. Explanations for linguistic behavior in CMC have often speculatively claimed that *speed* is of great concern and exerts influence over users' writing. Public discussions also typically hold that variation is incidental, simply the product of users' relative typing abilities. Yet the present study suggests that social factors are also implicated in stylistic choices. Of critical import is an understanding of how modal constraints - including attitudes toward typing quickly or accurately, dedication to single or multiple conversations, and one's facility with a given medium - intersect with social factors to inform linguistic practice.

### **Summary and Conclusion**

This paper has presented an empirical study of English-language instant messaging conversations, using a variationist framework to analyze the apostrophe as a linguistic variable. I found that women used apostrophes more frequently than men, and then

discussed this finding primarily in terms of two explanations: modal and normative. I have argued that we cannot simply assume that women perceive or use IM as fundamentally more like traditional written communication without augmenting that view with a notion of standards. We must take what we have learned from spoken discourse studies in sociolinguistics and apply it to CMC, while understanding the unique discursive contexts furnished by CMC's features.

### Acknowledgments

I am grateful to Naomi S. Baron and Eve Danziger for their support and feedback. Thanks to Beverly Adams for statistical counseling.

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