



Research Article

LOL in Non-mediated Communication Contexts? Investigating Perceived Appropriateness and Frequency of Using Text Speak in Verbal Communication

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Abstract: This study investigates how text message users view the expansion of text speak into non-mediated communication contexts and tests the three most common linguistic theoretical frameworks for their usefulness in explaining the relationship between society, technology and text speak language in this case. In particular, we examine potential reasons predicting the frequency of using acronyms in verbal communication. A survey conducted among 250 millennial-aged text users found that the frequency of texting did not predict the occurrence of acronym use within a variety of contexts. Rather, the results indicated the use of acronyms varied when communicating with different receivers while the perceived appropriateness predicted the frequency of acronym use with both close and distant receivers. Theoretical implications are then discussed.

Keywords: Text speak, verbal communication, technolinguistics, sociolinguistics, sociology of language

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Introduction

Text messaging can be defined as a technologically mediated discourse that uses simplified sentence structures like asynchronous text (Thurlow, 2003; Baron, 2005). These messages go through a *short message service* (SMS) in a process that is commonly referred to as text messaging. Historically, technology programmers developed text messaging for GSM (Global System for Mobile Communications) digital mobile phones in 1991 to fill space capacity (Baron, Patterson & Harris, 2006). At first the companies did not charge for texting, but twenty years later, this phenomenon turned into a billion dollar business. Indeed, text messaging is a growing phenomenon around the world as the adoption of mobile or cell phones continues to increase (Green, 2003; Ling 2004). Mobile phones with SMS capabilities have likely become the most accessible media form by the end of the first decade into the 21st century (Coyne, Stockdale, Busby, Iverson & Grant, 2011). With an initial estimate of over a billion text messages sent through mobile phones around the world each day (Bargh & McKenna, 2004), by 2010 the number of text messages sent on a monthly basis in the United States increased astronomically going from 14 billion in 2000 to 188 billion. Roughly 88 text messages are sent and received on a daily basis by Americans aged 18-29 (Kluger, 2012). Indeed, fast-paced changes in technology mean that texting behavior is constantly evolving (De Jonge & Kemp, 2012) and that the ways users interact, socialize, and communicate among themselves also change (Lindgren, Jedbratt, Svenson, 2002).

With the continuous growth of mobile phone users and the increase in the amount of text messages sent every day, new forms of communication within the English language would at first glance appear to be technologically driven. These new language forms, referred as “text speak” (Kleinman, 2009), textese (Ling & Baron, 2007) or “textism” (Powell & Dixon, 2011) entail abbreviations, acronyms, word combinations and punctuation (Patterson, 2005; Varnhagen, McFall, Pugh, Routledge, Sumida-MacDonald & Kwong, 2010), which new technology scholars see as representing a new media language as more and more people incorporate these changes into their lexicon (Crystal, 2006; Patterson, 2005; Kleinman, 2009; Powell & Dixon, 2011). Even though this technologically mediated discourse does not always conform to standardized understandings of English grammar (Bush, 2005) and is considered a hybrid between oral and written language (Baron, 2009), it is so frequently used and embedded within lexicons that it is already being collected in dictionaries (Shoeman & Shoeman, 2007).

Changes in technology and lexicon raise important questions such as if text speak language is altering language by expanding into verbal communication, and if so, what are some reasons behind this expansion. In addition, what are some norms and factors that may influence the frequency of using this language in verbal communication? The topic is especially relevant because scholars have been concerned about the decline of traditional literacy as a result of new communication technologies (Stolle, 2008). While mixed findings exist concerning the impact of new media language on traditional literacy, newer questions regarding the impacts of human behaviors when using technology and how text speak adoption may influence changes in language patterns are in need of investigation. As a result of these concerns, the purpose of this study is to investigate whether textism users feel it is appropriate to expand text speak into other mediated contexts, such as non-Internet and non-mobile communication contexts, and non-mediated contexts such as interpersonal communication. Moreover, we also test the usefulness of the three most common linguistic theoretical frameworks (technolinguistics, sociolinguistics, sociology of language) regarding societal linguistic change in relation to textism use in various communication contexts.

To do this, we focus on millennial users’ self-reported frequency of using acronyms, a form of text speak, in mediated and non-mediated communication contexts. Millennials are a technologically sophisticated group that spends slightly over 14 hours a week texting, compared to just 6.49 hours talking on the phone (Hanson, Drumheller, Mallard, McKee & Schlegel, 2011). Given the prevalence of texting in this group, we conduct a survey to investigate whether textism use expands into verbal communication and explore factors that may influence the frequency of textism use among this group. Diverse motivations, including both technological-driven and social oriented motivations, were measured to determine their impact on acronym use in verbal communication. At the onset of this study, the authors suspected textism use in verbal communication may be determined by many situational and contextual factors, perhaps socially or culturally constructed, in addition to technological influences.

Literature Review

Theoretical Approaches to Linguistic Studies

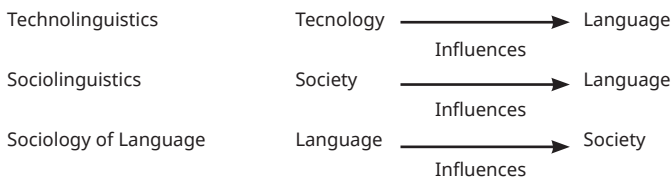
Three different theoretical frameworks: technolinguistics, sociolinguistics, and the sociology of language, can be useful when studying changes in linguistic patterns in relation to society. Coppen (1991) defines the term technolinguistics as a framework that includes both linguistics and computer technology. Technological change is considered as the underlying reason of an emerging language (Chambers, 1995). Although the early emphasis was on the role of linguistics rather than on technology in terms of the development of a language system (van Bakel, 1992), few scholars have questioned this unidirectional relationship since the invention of textese. In the case of this study, one would ask how human behavior, through its creation of mobile phones, ultimately influences language.

Sociolinguistics is a broad field that inevitably crosses social issues and influence with linguistic matters by examining how, and for what purposes people use language (Meyerhoff, 2006). It is the study of social uses of language (Chambers, 1995) and the place of language in human societies (Mesthrie, Swann, Deumert & Leap, 2009). In essence, sociolinguistics is the study of language in relation to society. It studies how society changes language over time. This approach views society as a driver of linguistic changes and considers language as a reflection of societal norms and values. In our case, sociolinguistics would ask how society influences language patterns and in specific, how society creates and accepts textisms as a new language.

The Sociology of language differs from sociolinguistics in its definition as the study of society in relation to language (Wardhaugh, 1992). Here, the question is how society changes as a result of language. The sociological approach views language as a driver of societal changes. In essence, words and evolving verbal constructions impact broader societal formations. In our case, this approach would ask how textisms, as a new language, challenges standardized modes of communication norms, and thus society.

Nonetheless, sociolinguistics and sociologists who study language are likely to clash or overlap in their definitions, as it seems clear they both would study how social structures influence linguistic structures/behavior in addition to how linguistic structures may influence social structures. The relationships herein could be complex, bi-directional, or insignificant. Surprisingly, these two theoretical frameworks are less likely to examine the role of exogenous variables, which may influence social or language structures. Chart 1 describes how each theoretical framework conceives of language change.

Chart 1. Linguistic Theoretical Frameworks



Text Speak or Textisms

According to Thurlow (2003), there are nine types of textisms: letter/number homophones (2nite-tonight), g clippings (goin - going), other clippings (bac - back), non-conventional spellings (numba - number), contractions (hs - his), shortenings (din - dinner), accent stylizations (gunna - going to), acronyms/ initialisms (LOL - laugh out loud) and symbols (@ - at). Many textisms developed similarly to instant messaging (IM) language, which consists of phonetic versions of either standard or accented pronunciation, suggesting their origins may come from phonological processes. Indeed, Ling & Baron (2007) note texting and IM usually take shape in contracted forms that often mirror informal speech patterns. In addition, text speak also conveys emotions that can be hard to express in non-verbal contexts (Provine, Spencer & Mandell, 2007). Some forms of textisms were already popular in email communications and at this rate, some acronyms such as lol, appear to be evolving into discourse markers within online interactions (Markman, 2013). In addition, the density of textisms increases with social media experience for adolescents (Bernicot, Volckaert-Legrier, Goumi & Bert-Erboul, 2012). However, message length does not necessarily affect textism use. One study found no correlation between message length and the proportion of the text that used standard spelling. However, with messages that contained more textisms than standard spellings, a majority were short messages below the average length of 14.3 words (Lyddy, Farina, Hanney, Farrell & O'Neill, 2014).

Similar to interpersonal communication among peers, the rules of spelling and grammar of text-based media, such as with IM or texting, are often relaxed, allowing for the creation of more casual messages (Livingstone & Bovill, 2001; Plester, Wood & Joshi, 2009). Textisms, such as emoticons, function similarly with non-verbal cues in interpersonal communication (Derks, Fischer & Bos, 2008). However, the text-based nature of early CMC (short for computer-mediated communication) was initially viewed as low in information richness in terms of social presence (Rice, Chang & Torobin, 1992). CMC entails "any communicative transactions that take place by way of a computer, whether online or offline, but especially the former" (McQuail, 2005, p. 551). Previous studies also suggest that CMC can lead to more extreme expressions of content than with face-to-face communication (Hancock & Dunham, 2001).

Given the similarities and differences between communication using text-based media and non-mediated communication, it is important to question whether people consider it *appropriate* to use text speak in other mediated and non-mediated communication contexts. As previous research suggests, perceived appropriateness reflects individual evaluations of the situations in which certain activities are conducted (Rice, 1993). In this case, we take personal evaluations of the mediated and non-mediated contexts into consideration, and ask whether text speak

in each context is perceptually appropriate. In addition to perceived norms associated with communicating in different contexts, we also want to examine if the expansion of textisms into other communication contexts is driven by people's heavy use of text messaging in daily life? These concerns led to the following two research questions:

RQ₂: Does perceived appropriateness of using acronyms vary in mediated communication forms versus non-mediated communication forms?

RQ₃: How does texting frequency influence perceived appropriateness of using acronyms in verbal communication?

Reasons and Motivations for Textisms Use

In order to contextualize how text speak may be expanding into other communication contexts, the reasons of using textisms need to be examined. Historically, early electronic communication had size restrictions and limited text box space on personal data service and cell phones (Leavitt, 2007), which created a challenge for users in terms of how they could maximize their messages with minimal wording (Baron, et al., 2006). In some of the first mobile phones with texting capabilities, there was an initial limit of 160 characters per message. Crystal (2001) found these space limitations and restrictions as being influential of the creation of short language forms. In addition to the space limit, other scholars thought this new form of communication derived from time constraints, as the new language created short cuts and abbreviations for expressing words to speed up communication (Werry, 1996). For younger time-starved people (Tasoulas, 2003), speaking is faster than typing (Herring 2003), so perhaps these conditions surrounding CMC influenced the creation of textisms.

In addition to functional use, textisms may be also used for social reasons. Many studies have found a preference to text message among people in romantic relationships (Coyne, et al., 2011; Patterson, 2005). These studies also confirmed the effects of text messaging on relationship satisfaction, as well noted how they can influence positive or negative communication within relationships (Coyne, et al., 2011). In addition, Ling (2004) found that SMS languages can positively influence group cohesion by creating a sort of common history, while Fox (2001) found that SMS can be used for social bonding. Further, Coe and Oakhill (2011) argued that some people use text speak to be creative and playful. This entertainment element may be associated with the social use of textisms as it may be important to be fun to facilitate social bonding. Therefore the following research questions are introduced:

RQ₃: What are some reasons that motivate millennial-aged texters to use acronyms?

RQ₄: How do different motivations of using acronyms predict the perceived appropriateness of using acronyms in verbal communication?

Textisms Use in Verbal Communication

While textism can be used for social bonding in general, relationships with different receivers may influence the adoption of acronyms in verbal communication. Communication accommodation theory (CAT) suggests people are often motivated to adjust their speech patterns and gestures when they interact with others in hopes of highlighting similarities and reducing their social differences (Coupland, Coupland, Giles & Henwood, 1988; Gallois, O'gay & Giles, 2005). However, the opposite, known as divergence, can also occur where communicators accentuate their individualized speech and communication behaviors during their interaction. Affinity between message senders and receivers influences verbal mimicry or language divergence (Gonzales, Hancock & Pennebaker, 2010). In other words, when people like each other, they often reproduce similar speech styles in the hope that the common linguistic background can facilitate information exchange and social bonding (Giles, Coupland & Coupland, 1991; Heinz & Rice, 2009). In addition, the group size and density of the network, as well as shared interests and topics, also influence

production of shared language (Huffaker, 2011). Language convergence is more likely to occur when groups are in constant communication while language divergence occurs when groups are separated (Labov, 2001). To further complicate this relationship, depending on the modality of the CMC conversation, meaning if it is task-oriented, or for social purposes, the linguistic features of IM and CMC language can also vary (Derks, Bos, & von Grumbkow, 2007; Maness, 2008). Last, textisms can also differ depending on the nature of the group. For example, deaf adolescents also use textisms that English-speaking and hearing adolescents use, but they also have unique structural components that English-speaking and hearing students do not use. Deaf students use linguistic features such as sign language syntactic patterns within their textisms (Okuyama, 2013). Last, at least one study has examined the use of texting with multi-lingual users and found that the context of the messages and the language in which they are used affects textism practices (Marzuki, 2013).

Following the prior research, we argue textisms as a shared language may be more observed when millennial-aged text users communicate with friends and peers than with seniors and distant others. As the interpersonal relationships with peers and friends are less hierarchical and foster affinity, language used in communication with these recipients may emphasize on the common linguistic background. To better understand the relationships, the following research questions were proposed:

RQ₅ : Does the relationship with the communication receiver influence the frequency of acronym use in interpersonal communication?

RQ₆ : What factors predict frequency of using acronyms with different communication receivers?

Impact of Textisms on English Language

Many educators are worried that traditional literacy practices, such as grammar skills and spelling will become challenged as a result of new communication technologies (Ross, 2007; Stolle, 2008). As evidence, exposure to textisms has been found to negatively affect spelling performance, especially with children's written language production, and with word and non-word reading abilities in both high school and college samples (De Jonge & Kemp, 2012; Lenhart, Arafeh, Smith, McGill, 2008; McWilliam, Schepman, & Rodway, 2009). In addition, the number of text messages sent per day combined with the proportion of textisms use correlate negatively with standardized measures of spelling and reading (De Jonge & Kemp, 2012). Other studies report contradictory findings. These studies found texting is not detrimental to pre-teens (Drouin & Driver, 2012) and or to highly literate adults (Coe & Oakhill, 2011; Powell & Dixon, 2011). Negative effects of texting have not been found on cognitive abilities, literacy skills, writing skills, and reading abilities either (Drouin & David, 2009; Grinter & Eldride, 2001; Plester, Wood & Bell, 2008; Varnhagen, et al., 2010; Wood, Jackson, Hart, Plester, & Wilde, 2011). According to Verheijen (2013), at this stage there are more studies reporting positive relationships between texting, instant messaging and literacy than negative relationships (Verheijen, 2013).

Although the debate is generally inconclusive and people report a variety of confusions and shortcomings related to acronym use due to different interpretations of acronyms (Leung, 2007), acronyms are continually being added to the Oxford English Dictionary even as they are opposed by language purists (McKie, 2001). Starting even before 2002, texting language has even managed to penetrate the mainstream media, such as *The Guardian* in the United Kingdom, with text poetry competitions (Keegan, 2002). With the growing prevalence of texting, this study also explores whether the acceptance of using acronyms in verbal communication functions as a driver for adopting acronyms into the English language. Therefore, the following research question was proposed:

RQ₇ : Does the frequency of acronym use in verbal communication influence users' beliefs about whether acronyms should be adopted in the English language?

Method

Sampling and Procedures

An online survey was conducted in a large metropolitan ethnically diverse university during 2011 and 2012. **Texting**, lecture notes and emails are cited as the most frequent writing practices for college students (Pigg, Grabill, Brunk-Chavez, Moore, Rosinski & Curran, 2013). The link to the online survey was sent to multiple university list-serves and personal contacts via email and social network sites. Survey subjects were also encouraged to send the survey link to other personal contacts in their networks. In short, convenience and snowball sampling were used to recruit survey respondents. The link first directed the respondents to the informed consent form. After obtaining informed consent, respondents were asked about a variety of questions such as frequency of texting, perceived appropriateness of using acronyms in different communication forms and frequency of using acronyms with different communication receivers. Demographic information was collected at the end of the questionnaire.

Survey Respondents

In total, 250 respondents answered the survey. The sample was female dominant (67.9% female, 32.1% male) and was diverse in terms of ethnic composition (Caucasian American: 30.9%, African American: 14.1%, Hispanic: 27.3%, Asian and Asian American: 23.7%, and other: 4.0%). All respondents reported that they were born after 1981 and that they text message. In other words, all respondents belonged to the millennial generation.

Measures

Texting frequency. Based on Rice, et al.'s (1992) frequency measures within communication channels, a question was asked to measure respondents' frequency of sending text messages per day: "On average, how many text messages do you send per day."

Perceived appropriateness of using acronyms. Respondents were asked to rate on a 5-point Likert scale (1 = *Strongly Disagree*, 5 = *Strongly Agree*) if they thought it is appropriate to use acronyms in the following mediated communication forms: texting, instant messaging, blogs/forum websites, social networking websites and e-mail (Drouin & Davis, 2009; Plester & Wood, 2009; Lenhart, Purcell, Smith, & Xichuhr, 2010). The five-item scale was reliable ($\alpha = .77$). A composite measure was created. Further, respondents were asked whether they think it is appropriate to use acronyms in verbal communication on the same scale.

Motivations to use acronyms. Informed by the functional use and social use of text speak discussed by previous scholars (Baron, et al., 2006; Coe & Oakhill, 2011; Fox, 2001; Ling, 2004; Tasoulas, 2003), four items were generated to measure user motivations when using acronyms. Respondents were asked to indicate their level of agreement with the following four motives: to save time, to have fun, to keep-up with trends, and to communicate easier. These motivations were measured through a 5-point Likert Scale (1 = *Strongly Disagree*, 5 = *Strongly Agree*).

Acronym use in verbal communication. The frequency of acronym use in verbal communication was measured by asking respondents to respond a 5-point scale (1 = *Never*, 5 = *Always*) with different recipients. Since Gonzales and colleagues (2010) argue that the relationship with the communication receiver may influence the tendency of verbal mimicry, this study divided communication receivers to close others and distant others. Close others include family, friends and acquaintances. The three-item scale was reliable ($\alpha = .81$). A composite measure was created by calculating the mean. Distant others included employees and professors. The two-item scale was also reliable ($r = .65, p < .001$). A composite measure was created by calculating the mean.

Control Variables. Demographic variables including gender (0 = *Male*, 1 = *Female*), ethnicity (1 = *Caucasian American/White*, 2 = *African American/Black*, 3 = *Hispanic/Latino*, 4 = *Asian*, 5 = *Other*) and academic classification (0 = *Undergraduate*, 1 = *Graduate*) were measured at the end of the questionnaire and controlled in data analysis.

In addition, Leung (2007) reported some people become confused with acronyms due to different interpretations associated with the same acronym. This confusion may influence the perceived appropriateness and the actual frequency of using acronyms in verbal communication. Therefore, *acronym recognition* was controlled in the data analysis. To measure this variable, our

respondents were asked to translate five frequently used acronyms: BRB (be right back), LOL (laugh out loud), LMAO (laugh my ass off), BTW (by the way), and OTOH (on the other hand) to assess whether they could recognize acronyms correctly. Because acronyms have been around before texting, we focused on what are mostly considered texting acronyms. The selection of acronyms were derived from Thurlow (2003) and Powell & Dixon (2011), as well as based on similar taxonomies from Varnhagen, et al. (2010). Each acronym respondents recognized correctly was coded as 1 and the incorrect answer was coded 0. It is worthy to note that subtle variations in translations such as translating LOL to "laughing out loudly" in addition to "laugh out loudly" were also coded as correct. A composite measure was created to capture how many acronyms in total respondents recognized correctly, possibly ranging from 0 to 5. Descriptive statistics revealed that 30.8% of respondents recognized all of the five acronyms. In average, respondents recognized 3.93 out of 5 acronyms correctly ($SD = 1.01$).

Data analysis

Repeated measures ANOVA tests were used to compare perceived appropriateness of acronym use in between computer-mediated communication and non-mediated communication forms (RQ1), and to compare frequency of using acronyms with close recipients versus other recipients (RQ5). Regression analyses were conducted to explore predictors of perceived appropriateness of using acronyms in verbal communication and actual uses of acronyms with different communication receivers (RQ2, RQ4, RQ6, and RQ7).

Results

Perceived Appropriateness of Acronym Use in Verbal Communication

A repeated measures ANOVA test was performed to answer RQ₁ on whether there is a difference in perceived appropriateness with using acronyms between mediated communication forms and non-mediated communication forms. The ANOVA test found significant difference in perceived appropriateness, $F(1, 225) = 10.30, p < .01$, with respondents considering it significantly more appropriate to use acronyms in mediated communication forms ($M = 2.98, SD = .63$) than in non-mediated communication forms ($M = 1.65, SD = .96$) after controlling the effects of gender, academic standing, ethnicity, and the number of acronyms recognized.

A regression analysis was performed to determine whether the frequency of texting influences the perceived appropriateness of acronym use in verbal communication (RQ₂). Interestingly, the result revealed that frequency of texting every day did not significantly influence the dependent variable ($\beta = .05, p = .48$) after controlling for demographic variables and acronym recognition. In other words, no matter how many text messages people sent every day, it did not influence their perceptions about appropriateness of using acronyms in verbal communication.

Motivations of Acronym Use in Verbal Communication

Descriptive statistics suggested that respondents were mostly motivated to use acronyms to save time ($M = 4.07, SD = 1.01$), or to make communication easier ($M = 3.53, SD = 1.26$), followed by an entertainment reason, to have fun ($M = 3.31, SD = 1.24$). They were less motivated by keeping up with trends ($M = 2.53, SD = 1.19$).

To determine how different motivations influence perceived appropriateness of using acronyms in verbal communication (RQ₃), a regression analysis was conducted. The analysis revealed that after controlling for the demographic variables and acronym recognition, the motivation to keep up with trends positively predicted the perceived appropriateness of using acronyms in verbal communication ($\beta = .18, p < .05$). Approaching statistical significance, the motivation to communicate easier was also positively related to perceived appropriateness of acronym use in verbal communication ($\beta = .14, p < .10$).

Frequency of Acronym Use in Verbal Communication

A repeated measures ANOVA was performed to examine whether the relationship with the

communication receiver influences the frequency of acronym use in verbal communication (RQ₅). The t-test found a significant difference in the actual use of acronyms with different recipients, $F(1, 234) = 11.19, p < .01$. Specifically, respondents reported a significantly greater use of acronyms when communicating with close recipients such as friends, family and acquaintances ($M = .94, SD = .86$) instead of when communicating with distant recipients such as employers and professors ($M = .29, SD = .53$).

To determine factors influencing the frequency of acronym use in verbal communication with different communication receivers (RQ₆), two hierarchical linear regression analyses were performed (see Table 1 and Table 2 in appendix). The analyses revealed that the motivation to have fun ($\beta = .20, p < .01$) positively predicted the frequency of using acronyms with close others. None of the motivations predicted the frequency of using acronyms with distant others in verbal communication. Perceived appropriateness positively predicted the frequency of using acronyms with both close recipients ($\beta = .38, p < .001$) and distant recipients ($\beta = .21, p < .01$) in verbal communication.

Adoption of Acronyms in English Language

A regression analysis was conducted to determine whether the acceptance of acronym use in verbal communication predicts the adoption of acronyms in English language (RQ₇). The analysis revealed that minority groups compared with Caucasian Americans are more likely to agree to adopt acronyms in the English language (African Americans: $\beta = .24, p < .001$; Hispanics: $\beta = .13, p < .10$; Asian Americans: $\beta = .39, p < .001$). Approaching statistical significance, the frequency of using acronyms in verbal communication with close others ($\beta = .12, p < .10$) and distant others ($\beta = .13, p < .10$) predicted advocacy of adopting acronyms in English.

Discussion

The present study investigates self-reported acronym use in verbal communication, motivations, and perceived appropriateness, as well as their interrelationships. The contributions of this study are fourfold. First, we assessed different motivations behind adopting text speak in verbal communication. Both technological and social motivations, such as to save time, communicate easier and have fun, are found to play a role. Second, our findings suggest that acronym use in verbal communication is a situational practice that varies when communicating with close or distant others. In other words, acceptance of text speak in daily communication interactions is not an outcome of heavy mobile technology use but is chosen based on respondents' evaluations of discrete situations, such as who they are speaking with and the understanding of the communication norms. Third, we found the use of text speak in verbal communication influences the willingness to adopt textism into English language. Last, as one can see in the next section, we applied three dominant frameworks: technolinguistics, sociolinguistics and the sociology of language, to study the expansion of text speak into verbal communication. We found the expansion of text speak into non-mediated communication contexts is a complicated phenomenon best explained by more than one framework.

Theoretical Explanations

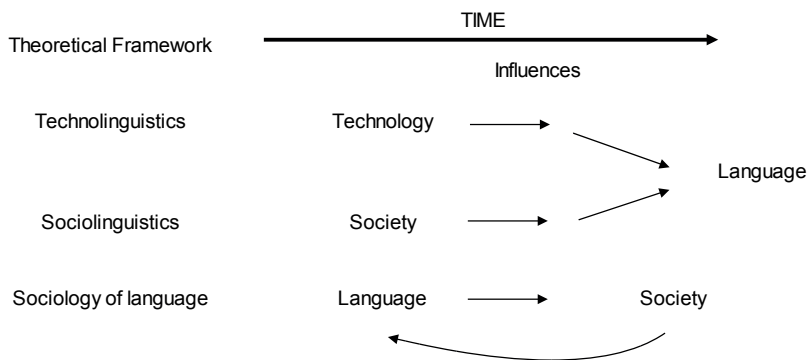
The three theoretical frameworks clearly outline useful tools in explaining the relationships between language formation, technology and society. In the case of the creation and adoption of text speak in the English language, each theoretical framework focuses on a pre-defined set of influences regarding language formation. While each framework is limited on its own in terms of its potential to explain text speak adoption, combining the three offers a more complex and dynamic way of explaining language change in this context.

Chart 2 shows that each linguistic framework on the latitudinal axis influences the creation of new language components together through distinct influences. In our context, technolinguistics views language change with the initial space limitations of mobile phone technology (Leavitt, 2007) as influencing the creation of new lexicon components. Sociolinguistics views societal influences, like the lack of time (Tasoulas, 2003) as explaining text speak, while the sociology of language

would view pre-existing expressions within language as influencing language modification – for example, great would become gr8 or laugh out loud to LOL (Thurlow, 2003, Ling & Baron, 2007).

Clearly all three frameworks influence language, which represents changes in word structure morphology that embodies a use pattern by society. While society is more likely to influence language (via sociolinguistics) and technology is also likely to influence language in this case (via technolinguistics), language is less likely to influence society in either of these frameworks, which means the circular nature of Chart 2 only intersects with the sociology of language. Here, the combination of pre-existing and new language creations go back to “re-influence” existing expressions along with the creation of new forms of expression with the case of the creation and adoption of text speak in the English language. Thus, great becomes gr8, laugh out loud becomes LOL and at becomes @. Society changes in that it accepts and adapts these into various forms of communication where they did not previously exist. The technolinguistic and sociolinguistic frameworks are constrained by their own definitions of how language change works in order to effectively explain language change in this context.

Chart 2. Theoretical Framework and Language Change



Adoption of Acronyms in Verbal Communication

Interestingly, the finding that millennial text users are more motivated to use acronyms for functional reasons such as to save time and to communicate easier was supported by previous studies confirming the invention of texting as a more convenient and efficient way for communication (Baron, et al., 2006), which may be especially true for time-starved young people living in fast paced societies (Tasoulas, 2003). However, these motivations did not translate to the frequency of acronym use in verbal communication. Rather, acronym use for fun motivated people to use acronyms more frequently when talking with friends, family and acquaintances. In other words, expanding acronyms from texting to non-mediated communication contexts may be less determined by easy communication than socialization. Being fun may help communication partners connect with each other quickly and may be especially valued when communicating with close others. The finding is supported by previous studies claiming that people may want to use acronyms to be creative and playful (Coe & Oakhill, 2011).

This study also found that the expansion of text speak from texting to verbal communication is a situational and strategic communication practice. As revealed by our findings, millennial-aged respondents considered that it is more appropriate to use acronyms in verbal communication with close others, such as friends, family and acquaintances, than with distant others, such as professors or employers. In other words, linguistic patterns rely on the perceptions of the relationship with the communication receiver that affinity with the communication receiver plays a key role (Coupland et al., 1988; Gonzales et al., 2010). It also shows that the adoption of text speak in verbal communication is influenced by social and cultural factors such as subjective evaluations of discrete situations. As perceived appropriateness taps into the arena of communication norms, the constant predictive power of perceived appropriateness demonstrates that acronym use is contingent on the understanding of social norms.

Limitations and Future Research

Although this study is innovative by examining the effects of mobile communication on daily communication practices, several limitations should be mentioned. First, we found 30.8% of participants recognized all five acronyms correctly and the overall number of participants averaged high on our acronym recognition scale. In other words, the five acronyms used to test the familiarity with text speak did not result in much variance in the current study. It is likely these acronyms are already embedded in English language. Future scholars should expand our acronym list to better control the effect of this variable on text speak frequency and perceived appropriateness. Second, our sample is biased towards female subjects and the degree of education of our general subjects is higher than the average degree of education of people within our age category. Indeed, Rosen, Chang, Erwin, Carrier & Cheever (2010) found differences in textism use and effects depending on education, while another study found that women were more likely than men to use emoticons and typographic characters like multiple punctuation and shortenings (Lyddy, Farina, Hanney, Farrell & O'Neill, 2014). As the age of having a mobile phone becomes lower, future studies will need to include pre-teens and teens to investigate their motivations for using text speak, as well as perceived appropriateness of using text speak in non-mediated communication contexts. In addition, perceived appropriateness of using acronyms in verbal communication may be determined by situational factors. Therefore, it may be beneficial to observe text users in specific situations instead of assessing perceived appropriateness in general for verbal communication.

Interestingly, as our results indicate minority groups as more likely to accept the use of text speak in spoken and written U.S. English, it is probable that over time and with evolving demographic changes in the United States that text-based acronyms will become even more incorporated into daily lexicon. Indeed, in 20 years, text speak may not only be common in verbal communication, political speeches, but it may also eventually be considered acceptable to use in academic journals. Although he omits the influence of technology, sociolinguist Holmes (2001) notes time, physical space and social influence are three main driving mechanisms that can alter language. We are hopeful future scholars will continue investigating norms associated with using text speak in verbal communication and address the limitations presented in our field.

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Appendix: Tables

Table 1. Predicting the frequency of acronym use with close others in verbal communication.

		β		β		β		β	
Block 1	Gender	0.05		0.05		0.07		0.08	
	Academic Standing	0.06		0.07		0.08		0.09	
	Ethnicity (White as the reference group)								
	African Americans	0.08		0.1		0.06		-0.03	
	Hispanic	0.03		0.04		-0.01		-0.03	
	Asian Americans	0.17	*	0.21	*	0.15	†	0.09	
	Other	-0.01		0		-0.02		-0.01	
	Number of acronyms recognized			0.03		-0.01		0.03	
Block 2	Frequency of texting everyday			0.09		0.06		0.05	
Block 3	Motivations								
	To save time					0.09		0.1	
	To have fun					0.21	**	0.2	
	To keep up with trends					0.06		-0.01	
	To communicate easier					0.07		0.02	
Block 4	Perceived appropriateness in verbal communication							0.38	***
R^2		0.03		0.04		0.15	***	0.27	
R^2 change		0.03		0.01		0.11		0.22	

Note: *** $p < .001$, ** $p < .01$, * $p < .05$, † $p < .10$.

Table 2. Predicting the frequency of acronym use with distant others in verbal communication.

		β		β		β		β	
Block 1	Gender	-0.03		-0.03		-0.03		-0.02	
	Academic Standing	0.06		0.04		0.04		0.05	
	Ethnicity (White as the reference group)								
	African Americans	0.06		0.04		0		-0.05	
	Hispanic	0.07		0.06		0.03		0.02	
	Asian Americans	0.22	**	0.19	*	0.15	†	0.11	
	Other	-0.03		-0.04		-0.06		-0.05	
	Number of acronyms recognized	-0.04		-0.03		-0.06		-0.04	
Block 2	Frequency of texting everyday			-0.08		-0.11		-0.11	
Block 3	Motivations								
	To save time					0.02		0.02	
	To have fun					0.11		0.1	
	To keep up with trends					0.02		-0.02	
	To communicate easier					0.15	†	0.12	
Block 4	Perceived appropriateness in verbal communication							0.21	**
R^2		0.05	†	0.06	†	0.11	**	0.15	
R^2 change		0.05		0.01		0.05		0.04	

Note: *** $p < .001$, ** $p < .01$, * $p < .05$, † $p < .10$.