Orthographic variation of (lol)

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Data and code available at https://osf.io/mgdpu/.

Phenomenon

1. James Ramirez: @xebeche914 Nobody knows nothing...lol
2. Josiah Eguino Silvas: @AthenaBass wave 2 me when u are on the plane over Nova Scotia LOl. Your getting closer LOL. Thx thumper Gr8 2 C U gigging
3. Alyshah Tsegay: @angew lololol that's so clever!!! Where are we flying to??? Muahaha!

Why (lol)

- Typical interpretation of *lol*
  - "Phatic filler" (Baron, 2004) or "a signal of interlocutor involvement" (Tagliamonte & Denis, 2008)
- Other possibilities yet to be ruled out
  - Social or pragmatic significance

(lol) as a lexical variable

- Mostly a small part of broader analyses
  - Most frequent acronym in instant messaging (IM) (Baron, 2004; Tagliamonte & Denis, 2008)
  - Less frequent with older IMers (Tagliamonte & Denis, 2008)
- But also sometimes the primary focus
  - Almost always turn initial or final (Schneier, 2021)
  - Also argued that *lol* coordinates turn taking and mitigates face threatening acts

(lol) as an orthographic variable

- Has not been studied as an orthographic variable
- Orthographic variation has been studied in general
- Significant factors:
  - **Audience** (Eisenstein, 2015)
  - **German hip-hop community membership** (Androutsopoulos, 2008)
  - **Virtual community membership** (Cherny 1995, as cited in Paolillo, 1999)
  - **Geographic location** (Jones, 2015)
  - **Race** (Eisenstein, 2015)
  - **Age** (Schnoebelen, 2012)
  - **Gender** (Baron, 2004; Varnhagen et al., 2010)
- Lengthening and capitalization have been argued to represent prosody (Schnoebelen, 2012; Thurlow and Brown 2003, as cited in Schneier, 2021)

Research question

What are the social constraints and/or pragmatic functions of the orthographic variable (lol), if any?

Data

- Collected from Twitter between January and February 2017
- Focused on directed tweets from the Maritime Provinces of Canada
- Final corpus has 3,938 tweets containing one of the 83 variants of (lol)

Social variables

- Traditional social variables are not easily accessible through Twitter
- Social network analysis (SNA) is *more* practical with Twitter data
  - Community detection
  - Centrality

Community detection

- Those who all mutually interact are considered a community
- Interactions based on directed tweets
- Louvain algorithm (Blondel et al., 2008) for finding the maximum modularity Q (Newman & Girvan, 2004)
  - 13 detected communities analyzed
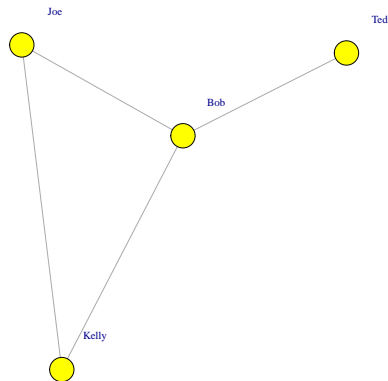
Centrality

PageRank PR is a function of the number of people tweeting at a user combined with the value of their own PRs

$$PR\left(A\right) = \left(1 - d\right) + d\left(\frac{PR\left(T1\right)}{C\left(T1\right)} + ... + \frac{PR\left(Tn\right)}{C\left(Tn\right)}\right) \tag{1}$$

Geographic location

The Twitter API returns manually entered locations from users' profiles

Pragmatic variables

A sentiment classifier based on sentiment polarity (Rinker, 2015/2019) was used to calculate the sentiment of each tweet

Sentence	great	sentences	can	be	ugly	
Sentiment	0.5	0	0	0	-0.75	= -0.11

Summary of communities

Community	Mode	Diversity	Members	
173	lol	0.45	2480	
302	lol	0.42	17279	
572	lol	0.45	3601	
756	lol	0.41	980	
799	lol	0	33	1 (lol) user
1032	lol	0.61	22531	
1097	lol	0.53	2955	
1227	lol	0.57	2214	
1291	lol	0.49	1073	
1917	lol	0.44	4432	
2067	lol	0	44	2 (lol) users
2265	LOL	0.71	242	1 user dominant
6817	lol	0.52	592	

Summary of provinces

Province	Mode	Diversity	Residents using (lol)
Auckland	lol	0	2
California	lol	0	4
England	lol	0	1
Maine	lol	0.51	7
New Brunswick	lol	0.51	195
New Jersey	lol	0	2
North Brabant	LOL	0	1
Nova Scotia	lol	0.56	403
Ontario	lol	0.67	2
Prince Edward Island	lol	0.68	30
Provence-Alps-French Riviera	lol	0	3
Quebec	lol	0.56	4
US Virgin Islands	LOL	0	1
Wairarapa	LOL	0.59	3

Difference in distributions of variants

Fisher's exact test for significance ($\alpha < 0.5$) and Cramér's V for effect size

	$P <$	$V \approx$
Communities	0.001	0.183
Provinces	0.0015	0.156

Sample of outlier individuals ($N = 18$)

User	Mode	Diversity	PR Percentile	Community
Briana Gray	Lol	0.57	0.76	1032
Cherokee Martin	Lol	0.59	1	1032
Aliyya el-Mowad	LOL	0.45	0.7	302
Erin Robinson	LOL	0.57	0.99	572
Jasmine Boller	LOL	0.4	0.78	1032
Josiah Eguino Silvas	LOL	0.03	0.76	1032
Tony Nauth	LOL	0.63	0.64	572

Sentiments of tweets with major (lol) variants

One-way ANOVA for the difference in means rejects the null
($P < 0.025$)
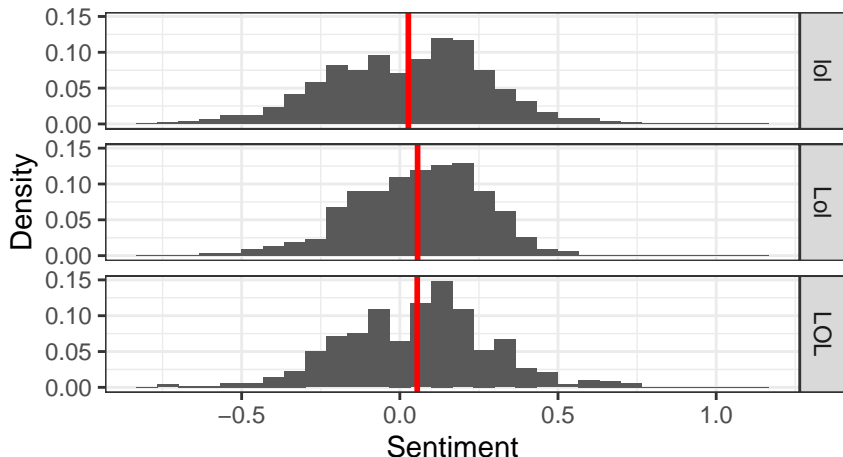
Outlier individuals

1. Jack Encina: @thejasonmack BTW, of course I can take a joke. I laughed at you didn't I? LOL! No offence, pal , keep smiling!
2. Josiah Eguino Silvas: @iowa_trump funny way the leftists fight Global Warming LOL

Individual variation of non-outlier individuals

1. Carlton Brink: @sahilshiraz99 lololol liar!!! U were sexually harassing her and when she shot ur ugly ass down u stalked her....ice cold killer
2. Fat'hi el-Abdalla: @CohenTisha Really?! LOL!! I got one of those big LOUD mouths too LOL

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Questions or comments?