# Dimensions of Self-Expression in Facebook Status Updates

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# Text Analysis

- Natural language (text) is how we express *who* we are and *how* we are to the world.

# Word Counts

- "Word count" approaches to text analysis rely on the *lexical hypothesis,* that the most *important* terms will become encoded as *single lexical items* as language evolves (c.f. Goldberg, 1990)

Fred Zeleny hates passive-aggressive Facebook updates, but loves irony.
3 hours ago • Like • Comment

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# The Meaning Extraction Method (MEM)

- Beyond our words: Our vocabularies in some context
  - Which words co-occur?

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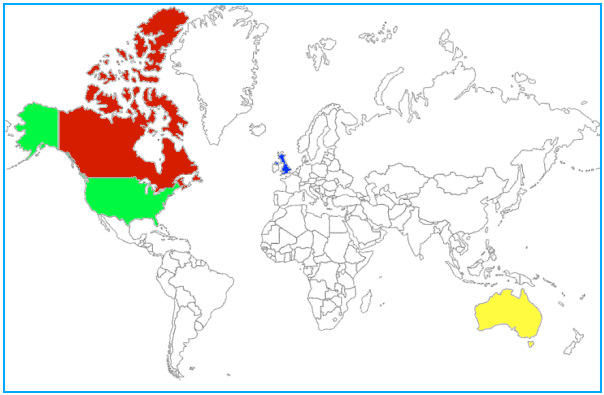
# Our Goal

- Our corpus is Facebook “status updates”
  - Which words co-occur for users, across their updates?
  - Sampled separately for four countries: Australia, Canada, UK, US

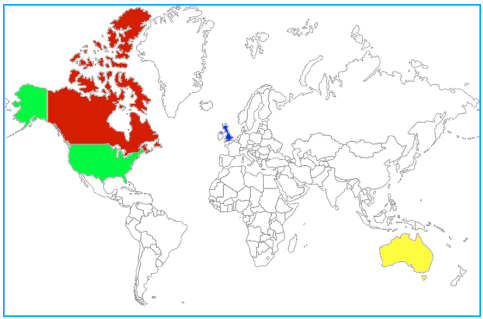


# Method

- We randomly selected 1m users from each country (N=4m)
  - Corpus: the set of all status updates from these users
- We parsed and sorted the 1,000 most frequently used words into a set of 760 stemmed content words, examined each update, conducted principle components analysis
  - PCAs computed both within and across countries
  - These PCAs extract “meaning:” *dimensions* along which users differ in usage of the Status Update product
- At no point were any raw status updates read by researchers, nor were aggregates viewed in any manner connected to an identifying quality of the user as part of this research.

# Results: Overall matrix

- These results should represent cross-cultural systems by which status updates were used
  - One large first factor emerged, representing the natural separation of the use of language among countries



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  - Loadings for, e.g., “mom,” “vacation,” and “laundry,” opposed loadings for “pub,” “mate,” and “arse.”

# Results: Individual Countries

- Countries' individual correlation matrices were quite similar, $\alpha=0.97$, but differed significantly $\chi^2(3) = 40{,}202$; we examine the US first.

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- Component 3 contained mostly school-related words (homework, study, essay)

# Results: Australia, Canada, the UK...

- ...overall the same. But differences exist in the specifics:
  - Australians showed negative loadings for profanity in the “school” component; *hubby* and *daughter* in informal speech
  - The UK used more neologisms for informality, but showed “Family” instead as an opposite to school

# Discussion

Informal Speech

Reminiscing

School

# Caveats and Future Directions

# Special Thanks!


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  facebook.com/data
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Questions?