Giles - Communication Accomodation Theory

Introduction & RQs

- The goal of the paper is to present communication accommodation theory as a lens through which we can examine sociolinguistic phenomena
- Why is this important?
- What did the field look like before?
- Speech accommodation theory was primarily a , communication accommodation theory broadens this to include
- Introduce convergence and divergence
- What is a framework that describes patterns of accommodation between speakers?

Methodology

- Introduces various case studies of convergence or divergence
- e.g. Welsh speakers being questioned by a hostile English interrogator intensify the Welsh aspects of their speech

Results

Takeways + Thoughts + questions

- Upward and downwards convergence/divergence
    - are the speakers changing their speech for someone with higher or lower (perceived) social power
- Subjective and objective convergence/divergence
    - how much does your speech change vs. how do others think your speech changes?
- perceptual convergence
- Convergence generally flows towards the source of power
- convergence can be an attempt to socially integrate oneself into the same roles as the other speaker
- divergence can similarly integrate oneself with someone outside of the other speaker's role
- speech can have multiple social meanings (e.g. standard speech is socially valuable but emotionally distant)

Three Waves of Variation Study: The Emergence of Meaning in the Study of Sociolinguistic Variation

Introduction & RQs

- The goal of the paper is to establish paradigm shifts in how sociolinguistic variation is studied
- The paper presents 3 waves of sociolinguistic study and focuses on the last wave
- variation constitutes a system of meanings-making where variation communicates something about the speaker to others
- the meanings of variables gain more specific meanings in the context of styles
- variation does not simply reflect social change, but constructs it

Methodology

- first wave is the initial study of sociolinguistics where speech variables are markers of broad group identity
- second wave focuses on social agency of individuals in their speech, the speech variables are knowingly chosen by speakers to express identity
- thirdwave views stylistic variation is an essential part of language, its a system that speakers understand and use to construct new social categories and indicate their standing with regards to other social categories
- stylistic variation becomes an index of social organization

Results

- Beijing yuppies have adopted new cosmopolitan stylistic patterns to construct a new identity in the managerial class that is contrasted with those working in less prestigious state-owned firms
- jocks and burnouts used stylistic variation to construct opposite social categories

Takeways + Thoughts + questions

- stylistic practice is not passive, it is an active attempt to construct one's social identity in contrast with other social identities

Bases of Power

- Power (social influence) can be categorized based on where it's source is
    - coercive
    - reward
    - legitimacy
    - expert
    - referent
    - informational

Measuring Adaptation Between Dialogs

Introduction & RQs

- The goal of the paper is to present metrics by which adaptation can be measured between conversational participants
- These metrics should be able to be measure the presence of adaptation as well as the strength of the adaptation
- Patterns of accommodation between conversational partners are known to exist, but there is debate on whether they are the result of partner adaptation (speaker changes based on adaptation of partner) or recency adaptation (speaker changes based on what they most recently have heard)
- Previous measures for adaptation could not be used to find the strength of the adaptation or its source (Church's measure)
- How can we objectively measure adaptation of speech patterns in dialogue and allow for its strength and source to be quantified?

Methodology

- Paper introduces two metrics computed over a corpus that is separated into prime and target documents to measure how much any feature f exhibits adaptation
- frequency of f in prime and frequency of f in target is compared to frequency in the baseline
- relative or absolute frequencies can be used
- Adaptation ratio
    - +adapt / chance
    - +adapt is the probability that f is greater in target documents than baseline, given that f is greater than baseline in the prime documents
    - chance is the probability that a feature f co-occurs in the prime and target by chance

    - define N to be the number of dialog pairs between prime and target documents
    - define P to be the number of dialog pairs where feature f occurs more than baseline in the prime documents
    - define T to be the number of dialog pairs where feature f occurs more than baseline in the target documents
    - we define chance as the probability that f is greater than baseline in both the prime documents and target documents
    - chance = (P / N) * (T / N)
    - +adapt = T and P / P
    - use a chi squared test to find features with statistically significant adaptation ratios
- Adaptation strength
    - distance = t - (p - b) / 2

- let t be the frequency of feature f in target
- let p be the frequency of feature f in prime
- let b be the frequency of feature f in baseline
- adaptation strength is the average distance over all adapted features

Results

- calculating over the Maptask corpus
- more syntactic features exhibit recency adaptation than partner adaptation
- lexical features do not have a significant difference between partner and recency adaptation counts (according to adaptation ratio)
- lexical features exhibit stronger adaptation strength in partner pairs
- syntactic features have stronger adaptation ratios for partner adaptation than for recency
- higher occurrence of a feature in prime dialog causes stronger adaptation

Takeways + Thoughts + questions

- adaptation strength and adaptation ratio allow us to measure how likely a feature is to appear based on its frequency of occurrence
- working with frequencies over binary variables allow us to measure adaptation effects for all features regardless of frequency
- adaptation strength does not take into account probability of feature repeating within the same document (only compares to the baseline/priming documents)
- minimum frequency before a feature is considered is a hyperparameter that needs to be tuned
- in our analysis of power, we're most likely to follow the partner adaptation effects but the priming effect is a confound that we should consider

Mark My Words! Linguistic Style Accommodation in Social Media

Introduction & RQs

- the goal of this paper is to introduce a measure for linguistic accommodation that can be applied to social media
- previous accommodation theory work had established that convergence/divergence occurs in a variety of communication patterns
- Do facets of communication accommodation theory replicate in online spaces?
- this study shows similar patterns for the first time in a large-scale online community

Methodology

- using a large corpus from Twitter, filtered to only include conversations between users where both users engage with each other twice
- linguistic style measured based on LIWC method
- stylistic cohesion

        - the probability that a stylistic dimension in a tweet is similar within a conversation as compared to the baseline
        - the probability that a tweet and its reply exhibit C given they form a conversational turn minus the probability that any tweet and reply exhibit the same C
        - if cohesion is observable for C, then cohesion score > 0
- stylistic accommodation
    - must correct for background style similarity (similarity in conversation not a result of accommodation)
    - formally for a given stylistic dimension C, the increase in probability that a user will exhibit C in a tweet in a reply given that another user also exhibits C
    - averaged over the entire conversation for a global metric of accommodation
- symmetry
    - the stylistic accommodation metric can be calculated with respect to each speaker and can reveal asymmetry in levels of accomodation
    - the difference between accommodation of speaker a to b and accommodation of b to a

Results

- stylistic cohesion and accommodation are validated in the corpus
- users accommodate more on tentativeness than on certainty
- users accommodate more on negative emotions than positive emotions
- accommodation is not exhibited for 2nd person pronoun but is for 1st person pronouns
- asymmetric accommodation is dominant in most dimensions
- symmetrical accommodation is dominant for 1st pronoun plurals, discrepancy, and indefinite pronouns
- stylistic influence is weakly connected to social status (limitation of study that this is not well defined)

Takeways + Thoughts + questions

- concepts that are found in communication accommodation theory of convergence and divergence hold in online spaces
- accommodation is found to generally be asymmetrical
- I wonder how the accommodation patterns change if we look at clusters of users that interact with each other often, how do their patterns change when looking at people within that cluster and outside of it

Echoes of Power: Language Effects and Power Differences in Social Interaction

Introduction & RQs

- the goal of this paper is to focus on how power imbalance (perceived or actual) between speakers affects accommodation patterns in their speech
- do people co-ordinate their language towards those with higher power more than they would to those with lower power?
- do people with higher power co-ordinate their language less than those who have low power?

Methodology

- use the same stylistic cohesion, accommodation, and symmetry from the previous paper to measure language coordination
- review conversations between Wikipedia editors, power determined by those who have admin and those who do not
- review conversations between Supreme Court judges and lawyers, power being in the hands of judges
    - we can breakdown judges into categories of favourable/unfavourable judges based on how they are expected to align with the lawyers case
- test generalization of features by building classifier models to predict which speaker had more power

Results

- in general, people with low power exhibit greater language coordination than people with high power.
- Conversely, people coordinate more with interlocutors who have higher power than with those who have lower power.
- When a person undergoes a change in status, their coordination behavior changes, and so does the coordination behavior of people talking to them.
- When an individual is trying to convince someone who holds an opposing view, this creates a form of dependence and hence a power deficit in the sense of exchange theory; we find increased levels of language coordination in such cases.
- The relation between status level and the extent of language coordination transfers across domains, and is a reliable cross-domain feature for status prediction.

Takeways + Thoughts + questions

- The phenomena of adaptation, accommodation, language coordination is evident throughout a variety of domains

- the source of power is relative and can be situation and context specific even within situations where there are clear power differentials
- people with higher power in the Wikipedia case study also accommodated to other users more (against the power hypothesis), Wikipedia has a less zero-sum aspect than Supreme Court cases, how does the nature of the relationship change accommodation patterns?

A robust framework for estimating linguistic alignment in Twitter conversations

Introduction & RQs

- The paper examines existing metrics for determining linguistic alignment in online conversations (in particular Twitter) and presents their weaknesses
- It introduces a new framework based on subtractive conditional probability to quantify accommodation in Twitter users

Methodology

- A proposed metric for measuring linguistic alignment must:
    - have a measure for directionality, not just similarity in text
        - accommodation vs. homophily (conditioning vs. baselines)
    - must be separable for different linguistic markers
    - consistent/normalized over frequency
    - robust to sparse data
- introduce a hierarchical alignment model inspired by subtractive conditional probability
- Bayesian model

Results

- lots of analysis on Twitter data

Takeways + Thoughts + questions

- the framework provides a good overview of good qualities we want in a metric for linguistic alignment