**Predictions**

Is Prediction Viable?

* Do Tweets contain enough information to make a prediction?
  + Do people Tweet about short term or long term issues?
* Is the sample good?
* Does Twitter lead or lag?

Areas in which Prediction may be Possible

* Anything affected by general well being or emotional state of a population
  + Crime, Charitable Giving, Stock Movements, Mental Health
* Things related to trends in topics discussed
  + Commodity and Stock pricing (regional and macroscopic)
    - People in Florida make remarks about orange shortage. Possible that Orange Juice price increase.
  + Insurance Claims (regional)
    - People talking about hail in some region. Insurance companies may want to know about this. Roofing companies may want to know so they can get in the market quickly.
  + Charitable Giving (both?)
  + Where performances should be held (band on tour) (regional)
  + Civil Unrest (regional then spreads)
    - Political Stability Ranking. Rank a countries stability using social media.
  + Disease spread (regional and spreads)
  + Unemployment (both?)
    - Attempt to predict unemployment before official announcement.
    - Possibly use Tweets about job loss or infer loss of job using new connections in network or certain tweet topics. Eg. “anyone have any good résumé tips?”
    - Other project related: LinkedIn found that when employees of a certain company start updating their profiles, the companies stock price is likely to decrease in the future.
  + Elections (regional and macro)
    - Been shown to **not** really work. Kind of.
    - <http://arxiv.org/abs/1204.6441>
  + Grab big news events quickly.

Other Considerations:

* Noise
  + Falsified Information.
    - Accounts that create an “echo chamber.”
  + Advertising
    - Sentiment of advertising will be positive, probably will skew results.
* Strong influencers have strong influence
  + If Justin Beiber complains about Crest toothpaste, does that affect the company’s sales?
  + If these influences do happen, are they reflected macroscopically through retweets?
    - If not, this would be a major blow to any sort of sentiment based prediction.
* Small Name Outbreak
  + If Charlie Sheen gets 2000 retweets this is a normal occurrence.
  + If some someone that is not a large player (use Klout score) “explodes,” it is probably a big deal.
  + If someone’s Tweets seem to be getting out of the person’s normal network and into other networks on Twitter (more than usual), it is probably a big deal.
* Dramatic changes in networks
  + If someone seems to be very quickly increasing the size of their network it is clear they are attempting to gain exposure for personal brand or brand they are attached to.
    - Pushing for an increase in network size (trying to promote).
    - Becoming more popular.
  + If someone is pushing to get into a specific network, they may be something to watch.
    - Someone trying to get into a network of venture capitalists?
    - Someone trying to gain exposure in a certain field?

**Networking**

Understanding the Twitter network may enable better predictions. I have not seen any Twitter based predictions that do not simply average out sentiment and attempt to find correlations. Prediction improvement is done by improving sentiment analysis and using different techniques to make predictions.

* Understand how information moves through Twitter’s network.
  + Does it change as it moves? Different meaning in different parts of network?
* Understand what information Twitter actually has on it.
  + How do other Twitter users perceive the information on Twitter.
* Almost all of my other considerations regarding predictions relate to networking.
* Possibly an important first step if attempting to make decent predictions.
* A new visualization of networks in Twitter and information movement could potentially be very interesting.
* Pick up on trends; possibly make our own “trending” algorithm.
* Understand how to effectively inject data into Twitter.
  + Take advantage of cognitive biases.

<http://gigaom.com/2011/10/19/can-watching-twitter-trends-help-predict-the-future/>

<http://www.cnbc.com/id/41948279/Hedge_Fund_to_Predict_Markets_Using_Twitter>

<http://mashable.com/2012/06/26/marketers-failing-twitter-study/>

<http://socialmediatoday.com/1003281/webinar-replay-effective-brand-marketing-twitter-how-rise-above-noise>

<http://www.techzone360.com/topics/techzone/articles/2013/01/15/323002-government-turns-twitter-predict-future.htm>