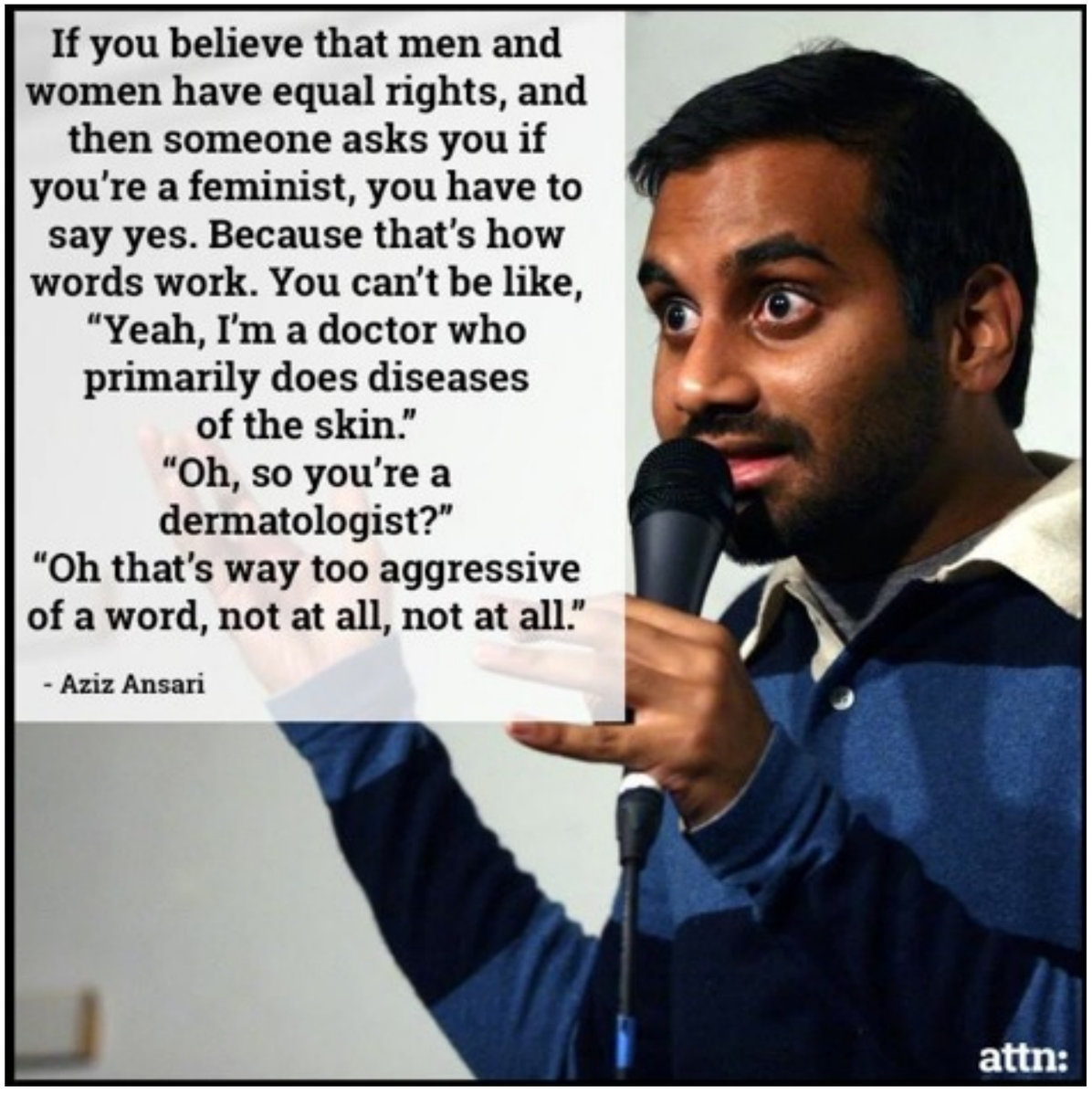


Twitter & Feminism

Pilot Study

What is a pilot study?

Pilot Study

- A pilot study is an initial run-through of the procedures to be used in an investigation; it involves selecting a few people and trying out the study on them. It is possible to save time, and in some cases, money, by identifying any flaws in the procedures designed by the researcher.

- A pilot study can help the researcher spot any ambiguities (i.e. unusual things) or confusion in the information given to participants or problems with the task devised.

- Sometimes the task is too hard, and the researcher may get a floor effect, because none of the participants can score at all or can complete the task – all performances are low. The opposite effect is a ceiling effect, when the task is so easy that all achieve virtually full marks or top performances and are "hitting the ceiling".

McLeod, S. A. (2007). Psychology Research Methods. Retrieved from http://www.simplypsychology.org/research-methods.html

Why Twitter?

- Twitter is becoming a recognized and valid measure of the zeitgeist.

- Twitter is being used to collect data by social scientists.

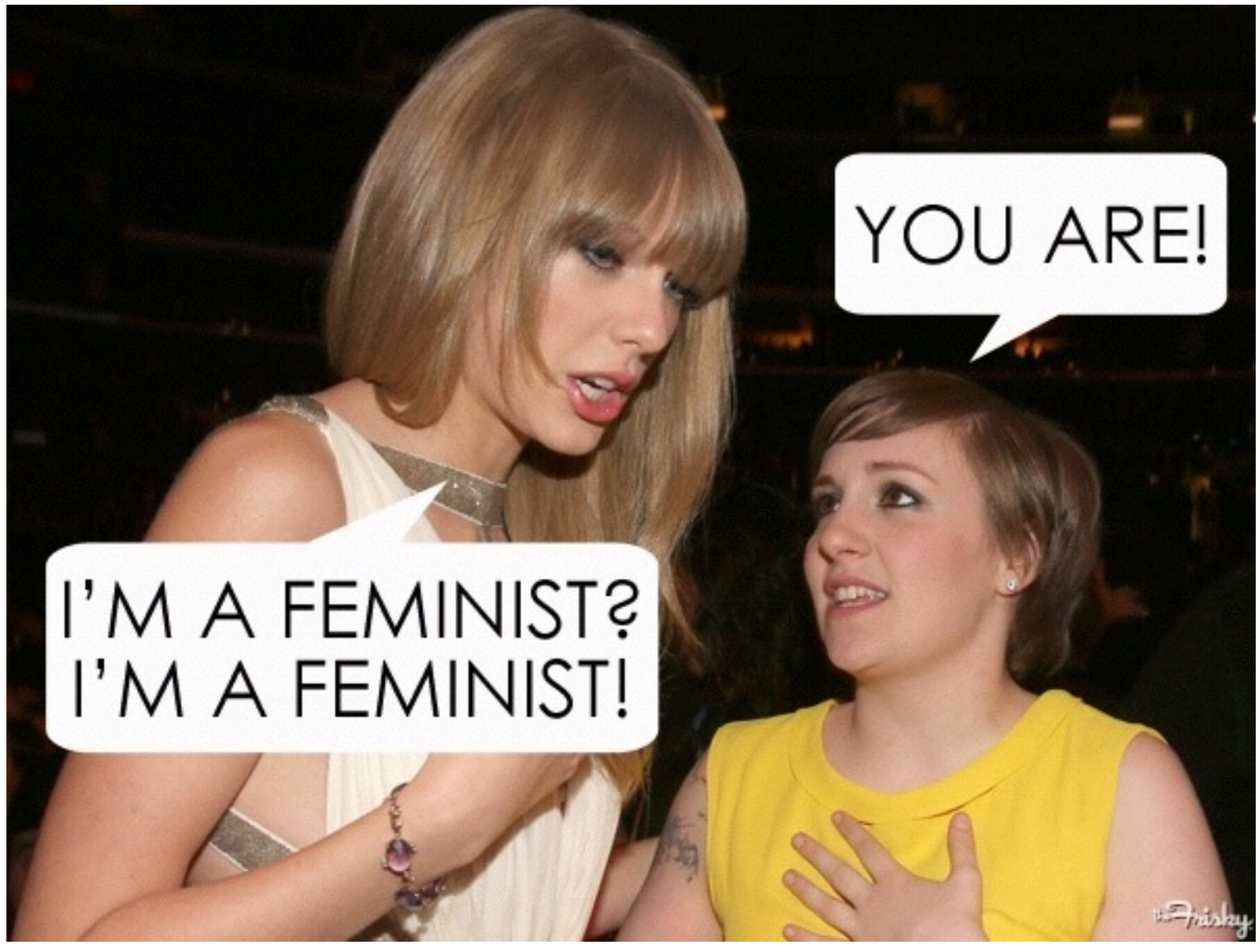
    - Using Twitter for Demographic and Social Science Research: Tools for Data Collection
      http://paa2013.princeton.edu/papers/130624

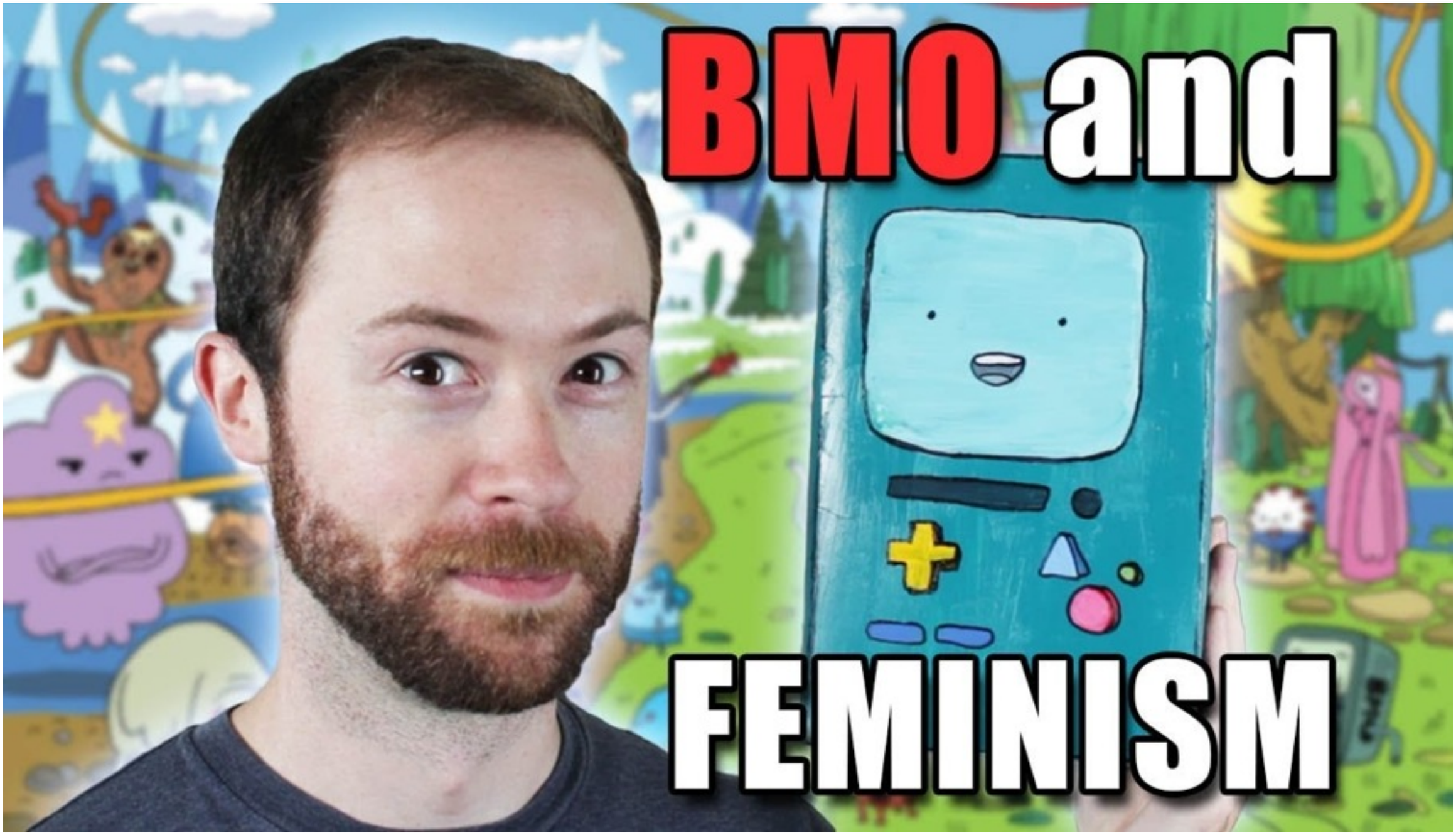
- Viral marketing, memetic theory and the ability of small groups to control the space create new and more polarized dialogues.

- Current debate on extremism — “The Counter Extremism Project welcomes press reports that Twitter Chief Executive Officer Dick Costolo has publicly acknowledged his platform’s failure to combat online abuse. This is clearly – even dangerously – overdue.” http://www.counterextremism.com/press/counter-extremism-project-calls-twitter-confront-all-abuse#sthash.bjDAXHzU.dpuf

Why Feminism?

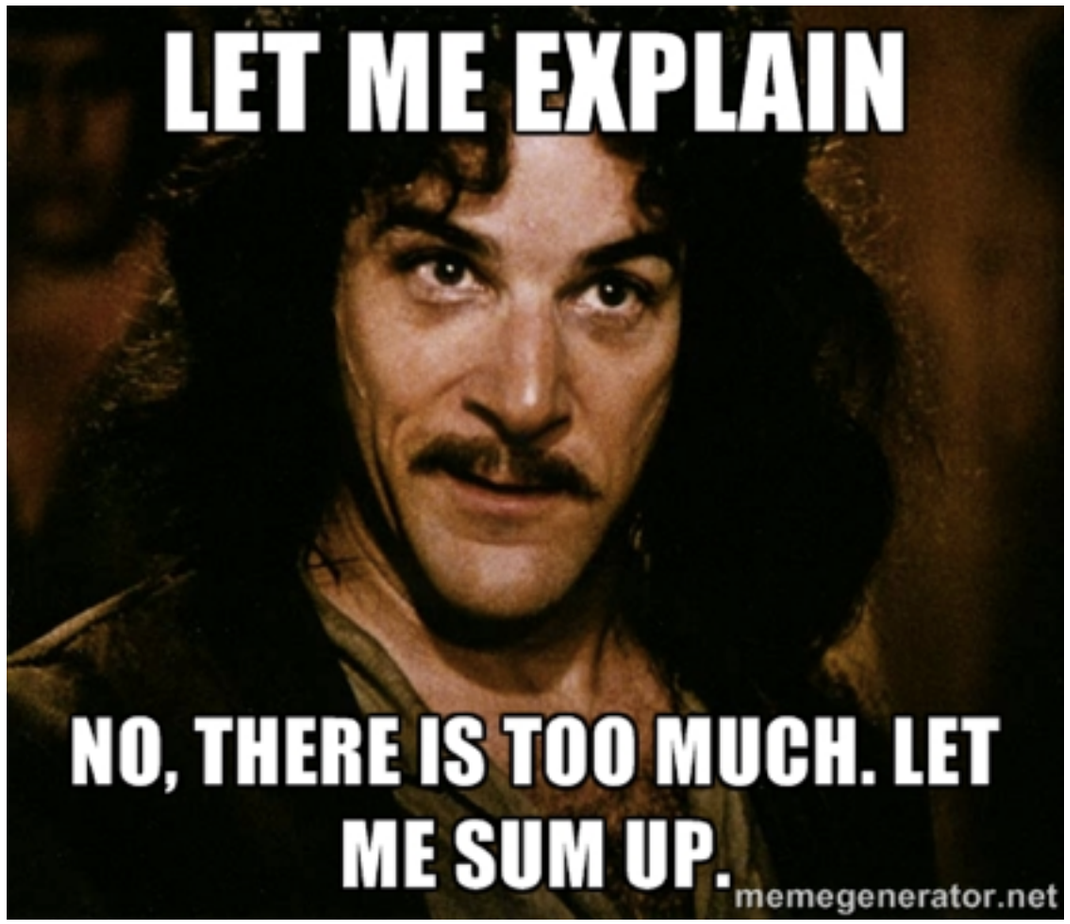
- Renewed interest and dialogue on new media
- Attention in traditional media, celebrities taking visible stances - 2014 as a bumper year for pop feminism, contraceptives, legal abortion, etc.
- Potential backlash
- Hunger Games and Frozen to 50 Shades of Grey and Meninism





Current Feminism: A Refresher

Feminism :
A Very Short History



- First Wave: Women's suffrage and basic political inequalities.
- Second Wave: Mid-60s onward, social and cultural inequalities beyond basic political inequalities.
- Third Wave: 90s and ongoing, focus on queer/trans/PoC and other diversity voices. Intersectionality, gender discrimination, and the normalization of BMO.

Feminism is having a fascinating moment and is noteworthily well documented via social media in a way that captures, more precisely and more accurately than before, the public opinion as it evolves on modern feminism.

Method

- Participants: The people with public twitter feeds who tweeted, during the 7 random times of day I ran the code, with the word “feminist” or “feminism.

- Materials: The twitter API (accessed via Python and Tweepy) returns JSONs containing data about the tweet as well as the text of the tweet, which were then stored by MongoDB as BSONs.

- An example datum: { "_id" : ObjectId(“54c6f420700d5a918cc47e0c"), "lang" : "en", "text" : "Why do people use the word feminist like it's a bad thing that irritates me so much", "fem" : 0 }

Method- Cont. : Procedure

- Tweets captured by API at various times, to account for time of day bias in location. Only tweets in English.
- Sub-section of random tweets hand-coded for valence:
    - 0 : positive or neutral opinions on feminism
    - 1: negative opinions of feminism or hate speech
- Coded tweets used to train various machine learning model, and then test them. Models then extrapolated onto the much larger corpus of tweets to measure them for perceived valence on feminism.
- Pros: Some context and humor controlled for by human coding
- Cons: Time consuming, low context, uncaught irony

- Semi-Supervised Learning : Trained on codified subsample and used Multinomial Naive Bayes, Logistic Regression, Linear SVC and Bernoulli Naive Bayes in the sklearn library on the data.

- Un-Supervised Learning:

  - Used gensim library to find most common tweets and construct a LDA model yielding 50 topics/clusterings within the data.

  - Used sklearn MiniBatchKMeans to cluster data into 10 main groups.

  - Used textstat to determine grade level of average negative or positive tweet.

Results: Semi-Supervised

Twitter Doesn't Love Feminism

- Most Accurate models:
  - Linear SVC models Twitter as 52% negative on feminism
  - Logistic Regression models Twitter as 54% negative on feminism

Results: Unsupervised Learning

Most retweeted tweets:

- RT @MeninistTweet: Today, a feminist asked me how I view lesbian relationships... Apparently "in HD" was not the right answer

- RT @vanbadham: Why feminism? Because you can sell 30 MILLION copies of a single book and when you die, The Australian prints this: ->

- RT @vanbadham: Why feminism? Because she was ALSO a FREAKIN' NEUROPHYSICIST at YALE & this is how The Australian begins her obituary

- RT @JessicaKRoy: finally a feminist snowstorm

- RT @hayleyestxlle: Feminism has never made me hate men but men's reaction to feminism definitely has.

- RT @TheBlackVoice: It's amazing how threatened men are by the term feminist while not even being able to provide a working definition

- T @clementine_ford: I keep hearing that feminism is bad for women, and I think what that's supposed mean is that feminism is bad for men

OBITUARY

Colleen McCullough
Novelist and neurophysiologist
Wellington, NSW, June 1, 1937.
Died January 29, aged 77.

COLLEEN McCullough, Australia's bestselling author, was a charmer. Plain of feature, and certainly overweight, she was, nevertheless a woman of wit and warmth. In one interview, she said: "I've never been into clothes or figure and the interesting thing is I never had any trouble attracting men."

In Australia one of the highest

Main Clusters/ MiniBatchKMeans

- White feminism and intersectionality ->
- Feminism isn't necessary
    - "ellekersten because theres a difference between a women who is a feminist and a women who wants equal rights feminist are crazy"

•General shaming, profanity and MRA

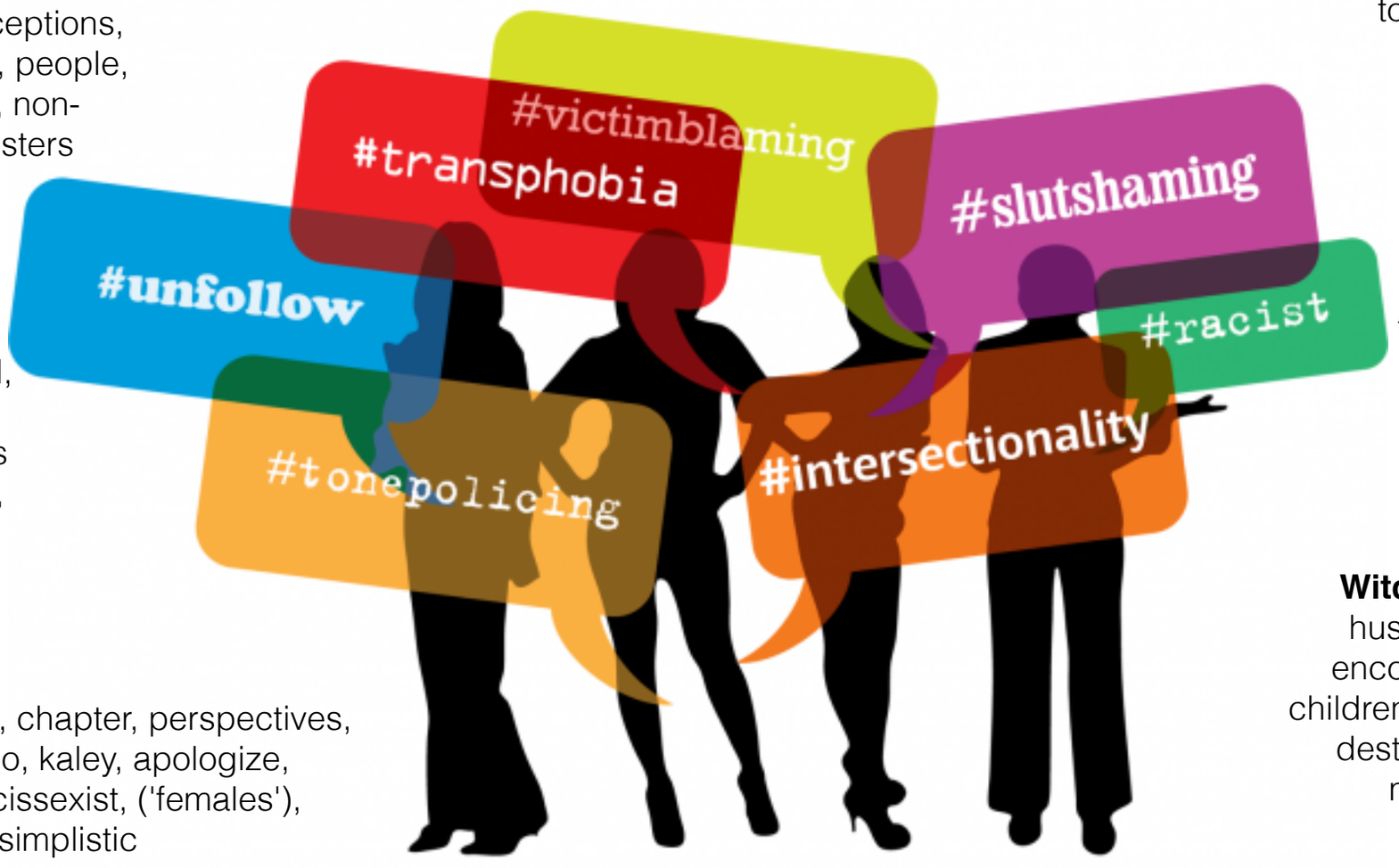
- •'do not rape a feminist it would fulfill her hot rape fantasies and let us be honest what kind of animal would want to make a feminist happy'

- New Feminism
    - 'disturbedfan132 i believe myself to be a feminist and tho i disagree with the new femfad they sometimes make points'
- Feminists hate men
    - rt lxlayyy being a feminist doesnt give you the right to talk bad about guys'
- Feminism is still needed
    - 'people who say we dont need feminism and everyone is already equal clearly arent aware of whats going on around the world'
- Feminism and new media
    - 'i have never said i was feminist bc i dont want all of you dragging me saying im only feminist on twitter or tumblr'

Smaller Clusters/LDA

Intersectionality? never, one, make, women, misconceptions, base, movement, black, people, feminist/misandriuc,, non-feminists, poster, posters

Humor as Defense? u, jokes, r, it's, don't, ,, joke!, seriously!, toxic!!, haha!



YesAllWomen: it's, women, equal, incomprehensibly,, and, still, acknowledge, #ineedfeminismbecause, @prowomanchoice:, men., #yesallwomen, 2015, want, tube

@NoToFeminism women, teaches, stupid, lol, entice,, enthrall, enchant,and, berate,, nag,, tradition, demand, how's, freeing,

Witchcraft?kill, woman, husbands, witchcraft,, encorauges, lesbianism, children,, capitalism, practice, destroy, leave, become, movement, need

Media Response: forced, chapter, perspectives, normal,, man's., cuoco, kaley, apologize, respects, interesting, cissexist, ('females'), extending, simplistic

Intersectionality: white, room, appropriation, responds,, feminist™, cultures, obligation, claiming, racist

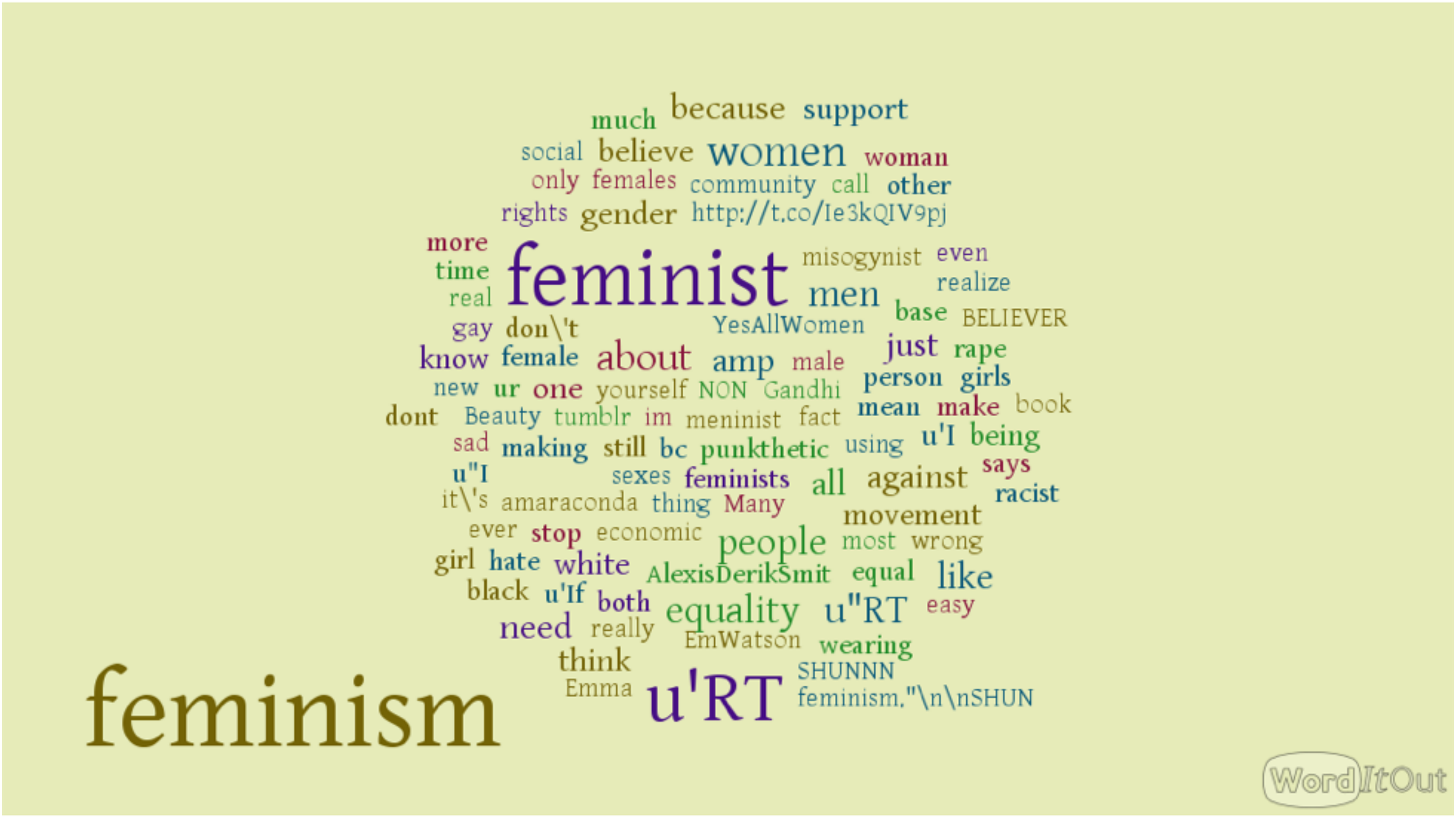
Trendy Feminism: equality, support, gender, believe, women, want, tumblr,, aspe…, "trendy"

Media Representation: people, annoying, "hollywood's, year", languages,, #girlsmatter, silent?,, acculturated

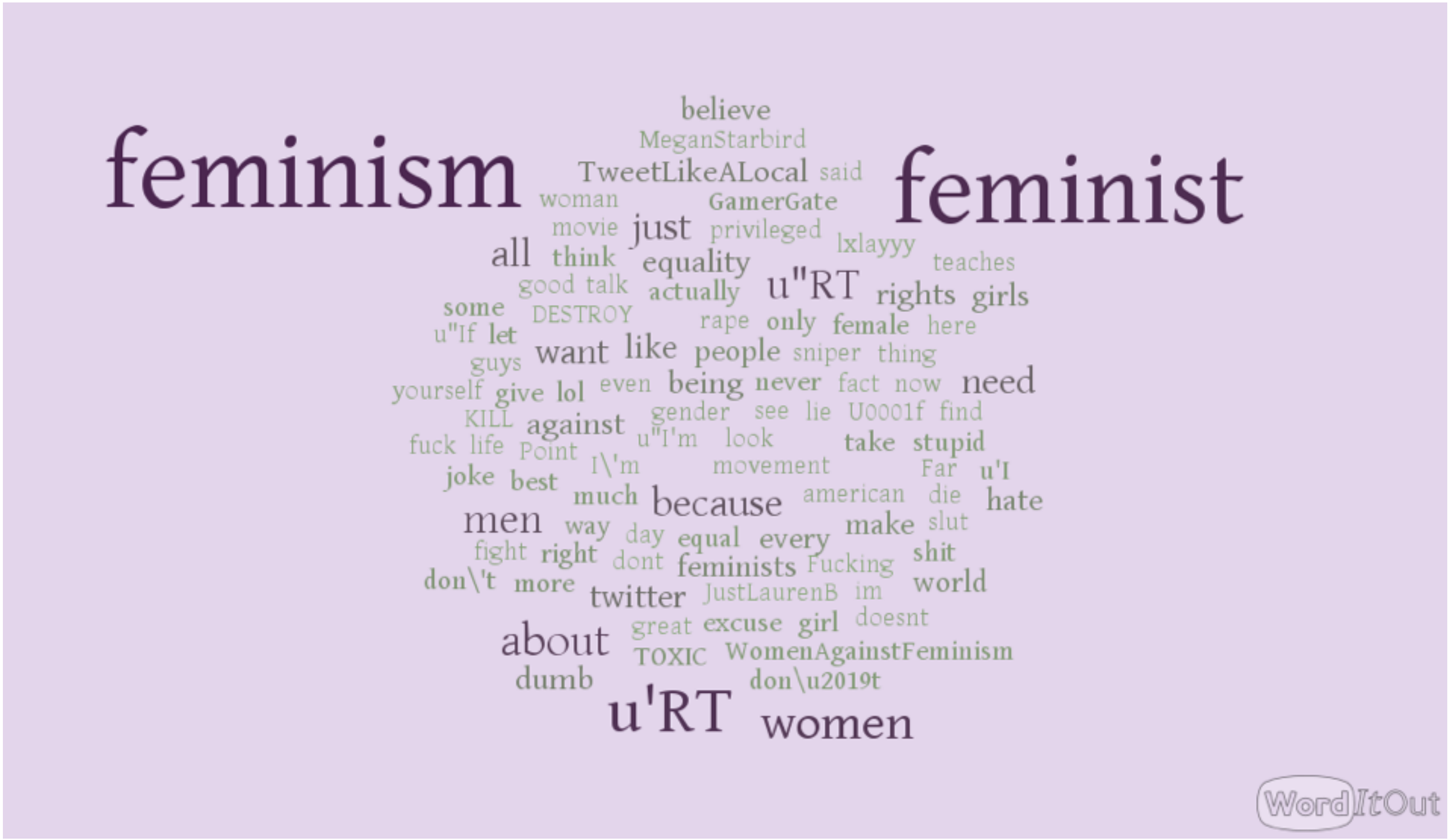
Anti-Feminist Pro-Equality Paradox:≠, calling, making, women...i, theory., #equalist, @victorialwalton, #stoptheimmaturity, #misandrist, #letsbereal

Discussion

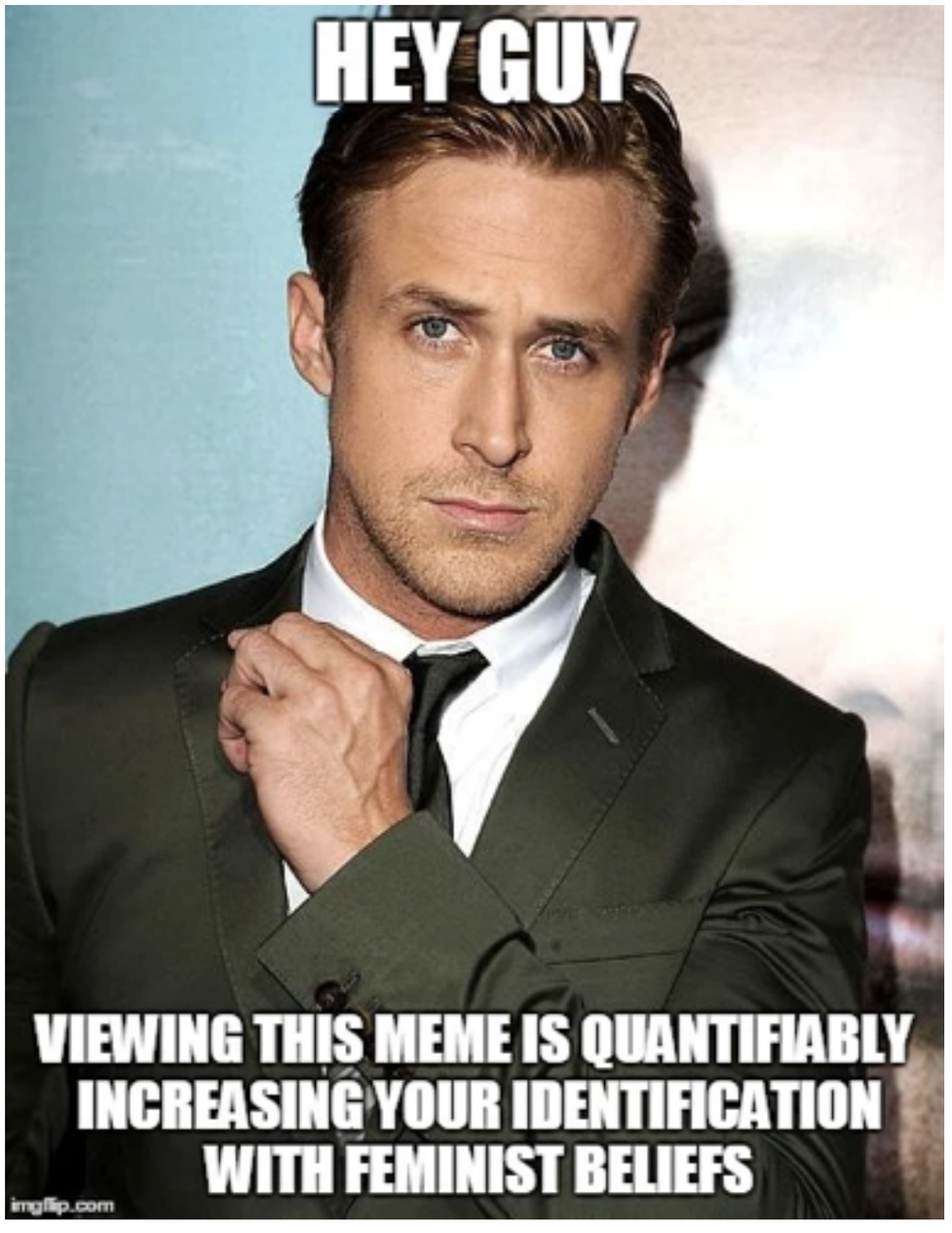
- Grade level of negative tweets consistently measured as at least a grade level below neutral/pro-feminist tweets
- Higher levels of profanity and misspelling in negative tweets



Word Cloud of Positive Tweets



Word Cloud of Negative Tweets

Improvements Required to Progress Beyond Pilot

- Constrained by small codified samples and the need to have both test and train sub-sets, accuracy could be improved by increasing number of codified tweets, ideally codified by multiple people to control for individual bias.
    - Sample size is 217 negative and 217 positive tweets to 30k uncoded tweets
- Goal: Have the script running constantly to display a stock market value of feminism on Twitter and how real time events affect it.
    - Be able to monitor twitter-verse for how events impact the public's view on feminism, what causes backlashes, measure impact of Beyonce, etc