Contextual Affective Analysis: A Case Study of People Portrayals in Online #MeToo Stories

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Background: The #Metoo Movement

2006: Tarana Burke coins phrase "Me Too." Burke is a survivor of sexual assault and wanted to do something to help women and girls of color who had also survived sexual violence.


Oct 15 2017: Actress Alyssa Milano reignites "Me Too" with the tweet "If you've been sexually harassed or assaulted write 'me too' as a reply to this tweet," and it quickly turned into a movement.

Oct 18 2017: Olympic gymnast McKayla Maroney tweets that she was sexually assaulted by former team doctor Lawrence G. Nassar.

... Jan 23 2019: An article published Wednesday online in the Atlantic contains new allegations against "X-Men" Director Bryan Singer,

I went on a date with Aziz Ansari. It turned into the worst night of my life

by Katie Way

https://babe.net/2018/01/13/aziz-ansari-28355
Maybe not end it
He did the right thing
With his response

it might affect his career, but that’s hardly the end of the world

Yeah I get that, and by all means still include his name in it, but there should have at least been a paragraph at the end generalizing it or something

The account I read did have something to that effect

There are a few versions out there

Because you’re going to get a lot of people who read this and say “this wasn’t that bad, it’s turning into a witch hunt”

Yeah you’re right
I read another article about that one
Might’ve confused the two

That’s probably why she’s staying anonymous

But if you think watching him win awards is bad, try reading articles attacking you

Yeah. See that's why it's ridiculous when women aren't believed when they make accusations. Like, no one would put themselves through that kind of criticism and interrogation as some sort of prank

My sense was he basically said he misunderstood her signals and apologized

People like me
And Kanav

Subject
iMessage

Subject
iMessage

Subject
iMessage
Natania

You people were being unsympathetic toward her without having actually read the account?! 

Mom

I read the account somewhere, just not this article

BUT THAT’S THE WHOLE POINT
Importance of Power and Agency in Narratives of Sexual Harassment

“The single most distressing thing to me about this story is that the only person with any agency in the story seems to be Aziz Ansari. The woman is merely acted upon.”, Bari Weiss, New York Times

Something inherently important about portrayals of power and agency: the type of response they elicit from readers

Importance of Power and Agency in Narratives of Sexual Harassment

“Victim” vs. “Survivor”

- [Even this distinction is problematic]
- Victim: Someone who underwent trauma; evokes pity
- Survivor: Someone who fought through trauma; evokes admiration

Tarana Burke described her goal in founding the #MeToo Movement as: “empowerment through empathy”

https://metoomvmt.org/

Affective Control Theory: valence, arousal, dominance

Three most important, largely independent, dimensions of word meaning are:

- Valence (positiveness–negativeness/pleasure–displeasure)
- Arousal (active–passive)
- Dominance (dominant–submissive)


Research Questions

The #MeToo movement has largely been viewed as “empowering” but journalists have a choice in how they portray people (victim vs. survivor)

In news articles about the #MeToo movement:
● Who is portrayed as powerful?
● Who is portrayed as sympathetic?
● Who is portrayed as having high agency?
● How do these portrayals differ across narratives and news outlets?
How do we measure power, agency, and sentiment?
Connotation Frames (Rashkin 2016)

She pushed him away

How do you think she feels about the outcome of this event?
Positive   Either Positive or Neutral   Neutral   Either Negative or Neutral   Negative   Can't have feelings

How do you think he feels about the outcome of this event?
Positive   Either Positive or Neutral   Neutral   Either Negative or Neutral   Negative   Can't have feelings

How the writer feels about she:
Positive   Either Positive or Neutral   Neutral   Either Negative or Neutral   Negative

Annotations on verbs for various traits from various perspectives

Translate verb scores to people scores

Connotation Frames

Contextual Affective Analysis

She pushed him

- [AGENT]
  - Sentiment = 0
  - Power = 1
  - Agency = 1

- [THEME]
  - Sentiment = 0
  - Power = -1
  - Agency = -1
What extensions do we need beyond existing annotations?

- How do we handle verbs without annotations?
  - Ignore them -- only include annotated verbs in analysis
  - Supervised learning / label propagation

- Each verb has a single annotation for each dimension

  *She pushed him away*
  *She pushed herself to work harder*

- Verbs have different connotations in different contexts
Generating Contextualized Lexicons

Given a corpus and a set of training verbs (with *uncontextualized* connotation frame annotations):

- Generate an uncontextualized representation for each training verb $v$:
  - Extract the ELMo embedding for every instance of $v$
  - Take the average of these token-level embeddings
- Train a classifier (logistic regression) using the uncontextualized training examples
- For every instance of any verb in the corpus:
  - Extract its ELMo representation
  - Use the trained classifier to predict a *contextualized* score for the verb
Full Pipeline

- Preprocess the corpus:
  - Perform coreference resolution, NER tagging, and parsing to obtain [entity, verb, relation] tuples:
    - "Grace pushes Aziz"
    - [Grace, push, subject]
    - [Aziz, push, object]
- Score verbs for power, agency, and sentiment in context
- Obtain a corpus-level score for entity $E$ by averaging the verb scores for every [$E$, verb, relation] tuples
Analysis of #MeToo Data
Data

- Gathered corpus of newspaper articles and blog posts containing the keyword 
  `#metoo` using NewsApi
- Two data pulls:
  - November 2, 2017 - January 31, 2018
  - February 28, 2018 - May 29, 2018
- Discarded 404 errors, videos, non-English articles and removed duplicates
- 27,602 articles across 1,576 outlets
- 3,132,389 entity-verb tuples
Who are the most powerful, sympathetic, and high agency people?

Most Positive: Kara Swisher, Meghan Markle, Frances McDormand, Oprah Winfrey, Jimmy Kimmel
Most Negative: Bill Cosby, Harvey Weinstein, Eric Schneiderman, Ryan Seacrest, Woody Allen

Highest Power: Eric Schneiderman, the #MeToo movement, Congress, Twitter, Donald Trump, Democrats, Jimmy Kimmel, Roy Moore
Lowest Power: Leann Tweeden, Andrea Constand, Kara Swisher, Uma Thurman, Matt Damon

Highest Agency: Judge Steven O’Neill, Frances McDormand, Russell Simmons, Congress, Donald Trump, The #MeToo movement
Lowest Agency: Kara Swisher, the United States, Hollywood, Meryl Streep, Hillary Clinton, Andrea Constand
Who are the most powerful, sympathetic, and high agency people?

- Male accused are portrayed with negative sentiment but with high power
- Female accusers are portrayed among the most least powerful entities
- Prominence of 3rd party commenters:
  - Lots of positive sentiment and often high-powered
- Prominence of abstract entities: the #MeToo movement, Congress, Twitter
  - High powered, sometimes high agency
How do similar people compare?

- Rose McGowan and Leeann Tweeden are both portrayed with positive sentiment but Rose McGowan has much higher power.
- Trump has higher power but Clinton has more positive sentiment.
- Politicians Al Franken and Roy Moore have more positive sentiment than Weinstein and Cosby.
Cross-outlet comparison: journalistic bias

- Al Franken (Democrat) and Roy Moore (Republican) were both politicians accused of sexual misconduct
- Sentiment portrayals do not fall along party lines
- Dailycaller.com articles present Al Franken as a scapegoat, forced out of office by other Democrats without a fair ethics hearing.

Left-leaning (Democratic): Vox.com, The Washington Post, Newsweek, NBC.
Centrist: Politico

http://dailycaller.com/2018/01/01/railroaded-the-real-reasons-al-franken-is-no-longer-a-senator/
https://www.allsides.com/
Returning to our motivating example: visualize media landscape through a power graph

Graph construction:
- All articles containing “Ansari”
- Keep only most frequent entities
- Edge from node A to node B suggests A is portrayed as more powerful than B
Returning to our motivating example: visualize media landscape through a power graph

Key points:
- Top left: focused on Golden globes
- Bottom Right: focused on Babe.net articles
- Journalists become powerful entities in the narrative: Caitlin Flanagan, Ashleigh Banfield, Bari Weiss, etc.
- Grace is generally less powerful than Aziz Ansari
Quick Detour: What about other domains?
Voldemort was unable to kill him
working behind the scenes to kill Harry
attempts to seize the stone and kill Harry
attempt to murder Harry
tried to murder Harry
Before Moody can kill Harry
arrives to kill Harry
Horcrux tries to kill him
allow Voldemort to kill him
Conclusions and Future Work
Conclusions

- We combine psychology literature and affective control theory with NLP connotation frames to develop contextualized affective analysis.
- We examine dimensions of power, agency, and sentiment media coverage of the #MeToo movement.
  - Female accusers are highly sympathetic entities but accused men are portrayed as more powerful.
  - Journalists / other 3rd parties commenting on events become powerful entities in the narrative.
Limitations and Future Work

● Our analysis is restricted to verbs:
  ○ What about other parts of speech? Adjectives? Apposition nouns?
  ○ Syntactic features, quoting patterns, location of mention in the article, etc.
● Power, agency, and sentiment are not binary attributes
● Random sampling of articles may not be entirely representative
● Can we measure impact of articles? How do readers respond to them?
● How can we incorporate the role of social media?
Ethical Considerations

- This work could be used to intentionally undermine social movements
- This work could be used to maliciously manipulate public opinion
- Our analysis of actual individuals could have unintended consequences on them and their reputations
  - Reiterating narratives of sexual harassment can be traumatizing
- Biases of researchers could have influenced results and analysis
Natania: Ok we've gotten to the root of the issue here— the reason that we can read the same story and Anju and I think "Aziz is a jerk" whereas our mom thinks "the woman should've been clearer" is that our mom has lower expectations for men.

Mom: Ok point- make the men learn. But meantime, women should be clear. If there's no grey area, why create one.

Natania: Haha I have way more experience.

M: Haha

Natania: 

Kanav: Agree. Case closed.
Thank you!