#filterbubble

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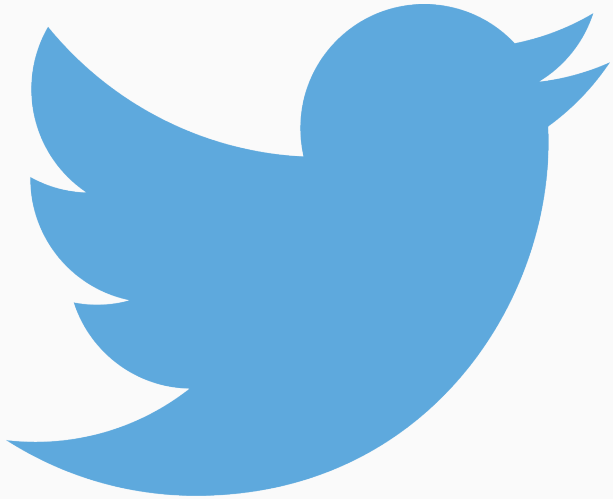
Filter bubble

Izolace od dostatečně širokého spektra informací.

- social netowrks
- preferential algorithms
- Eli Periser (2011)



Filter bubble

Issues:

- content **homogenity**
- objectivness loss
- **radicaliation**

Goals:

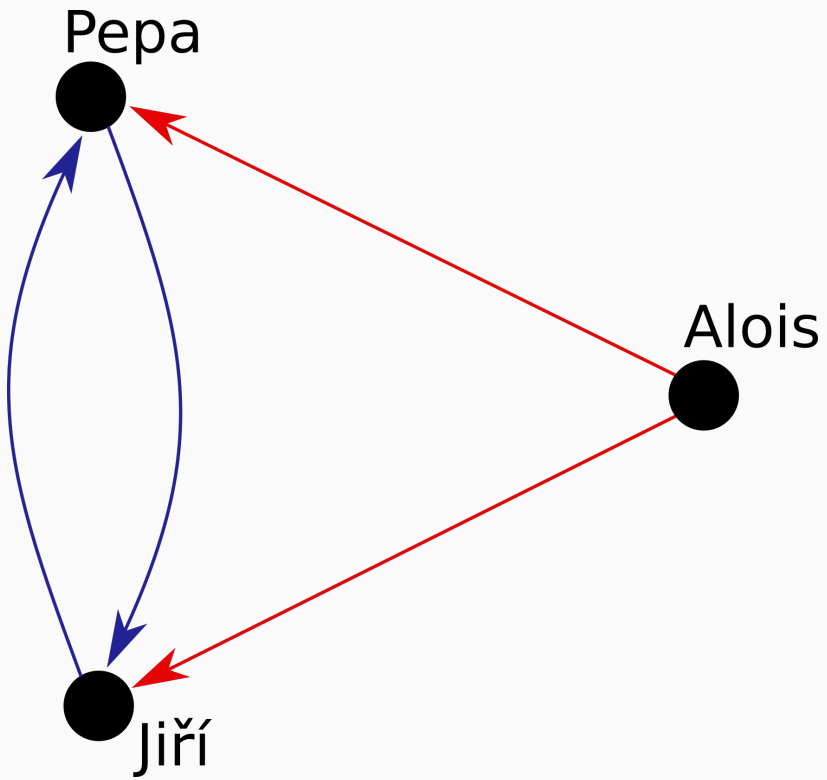
- method for filter bubble analysis
- quantitative approach
- fitler bubble **detection**

Methodology

1. data collection
2. studied groups selection
3. content affecting studied people
4. posts on given topic
5. sentimental analysis
6. filter bubble measures

Twitter

- social network
- news channel
- **following, followers**
- Twitter API



Methodology

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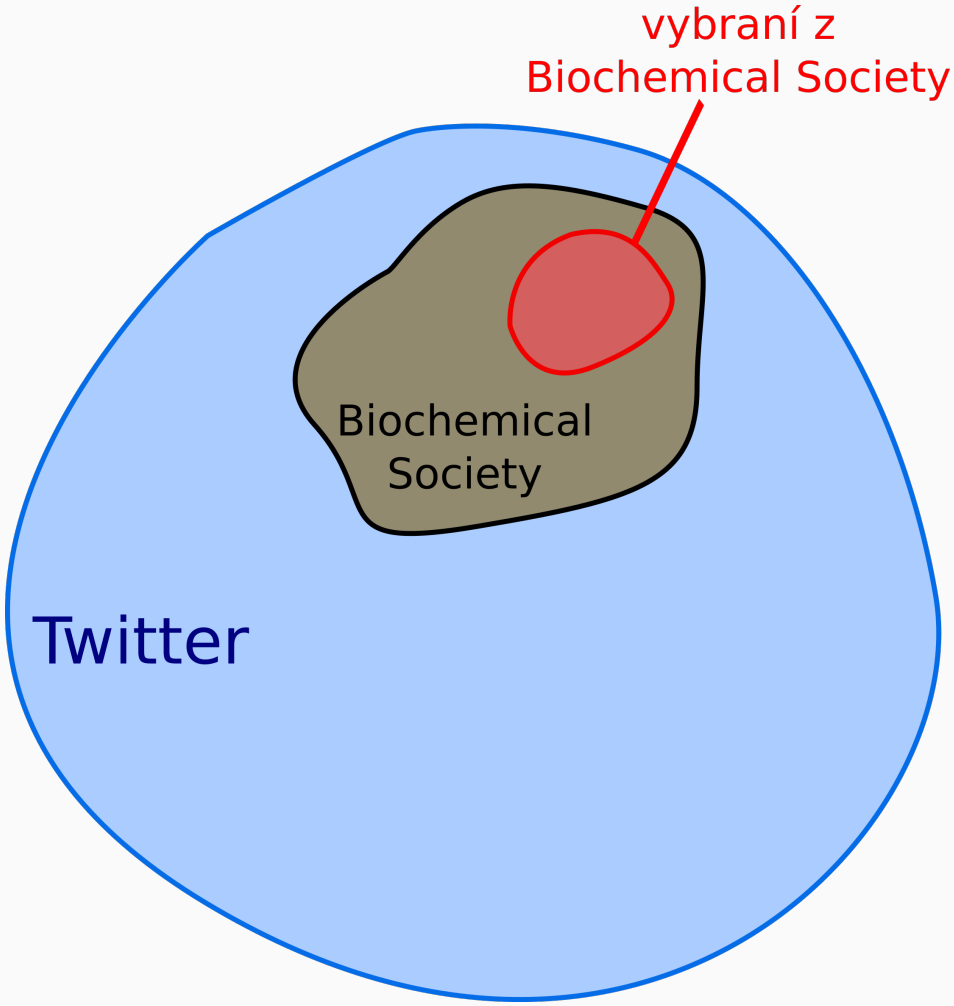
Výběr studované skupiny

- studied group
- **coresponding community**
- random sample from followers



Twitter → Biochemical Society → **studied people**

Methodology

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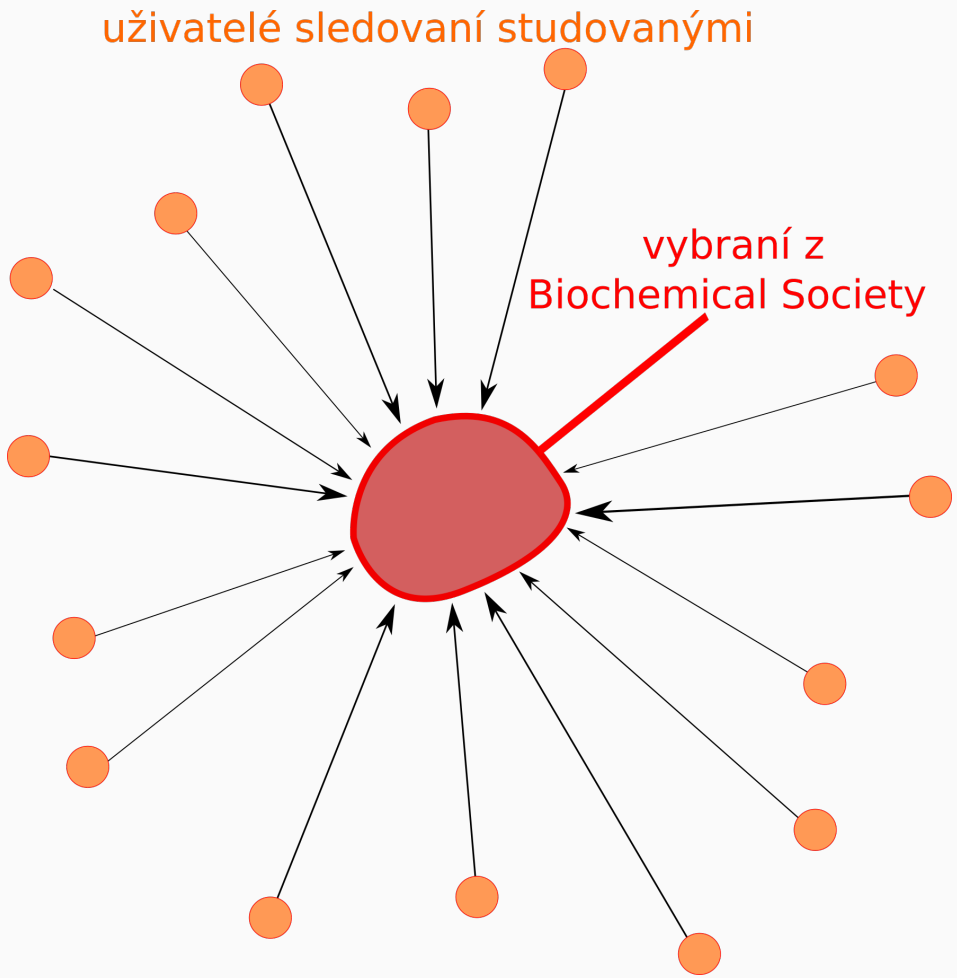
Tweets collection

- content affecting studied people
- content from **followed people**
- muttual twwets



Methodology

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Filtrace příspěvků

- posts with given keywords
- keyword: *Trump*

I had fish and chips for lunch. ✗

I'm glad Donald **Trump** is the president of the USA. ✓

The president of the USA is a gentleman. ✗

Methodology

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5. **sentimental analysis**
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Sentimental analysis

- **positive** vs. **negative** tweets
- classification
- machine learning, big data

Donald Trump is a terrible person.

(0.14)

Donald Trump is a great person.

(0.95)

Methodology

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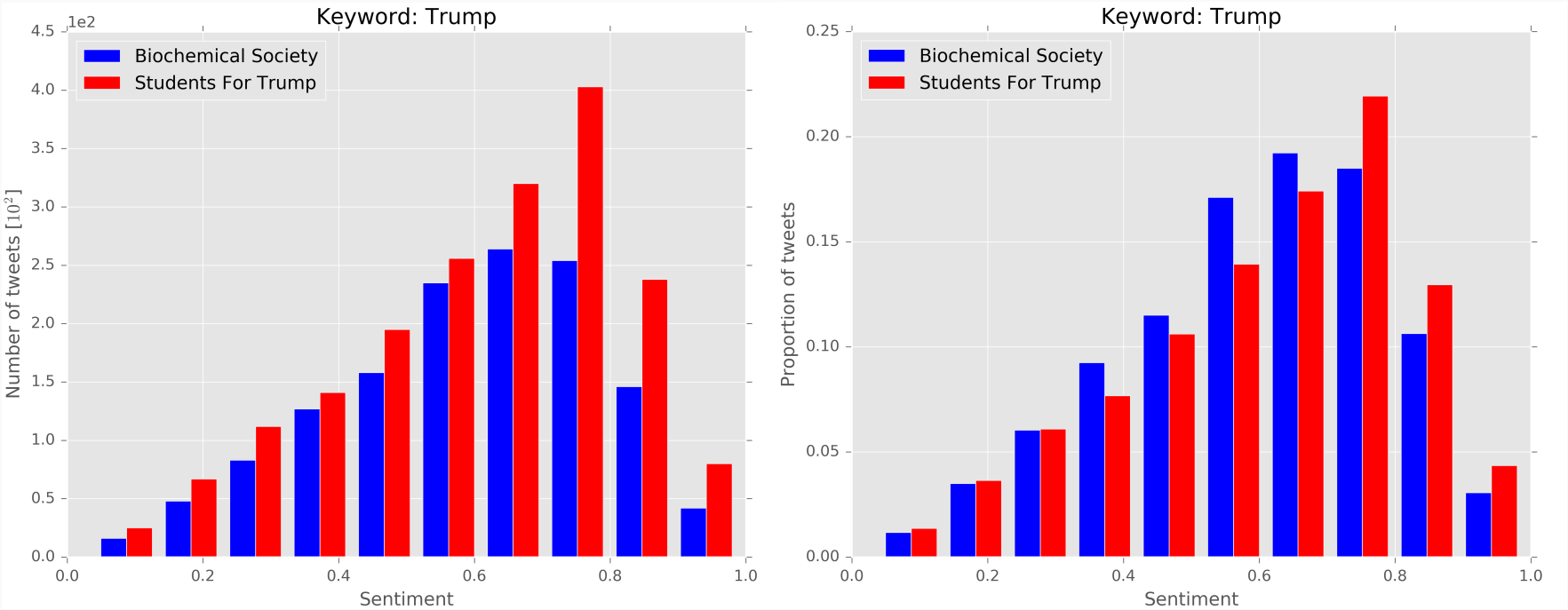
6. **filter bubble measures**

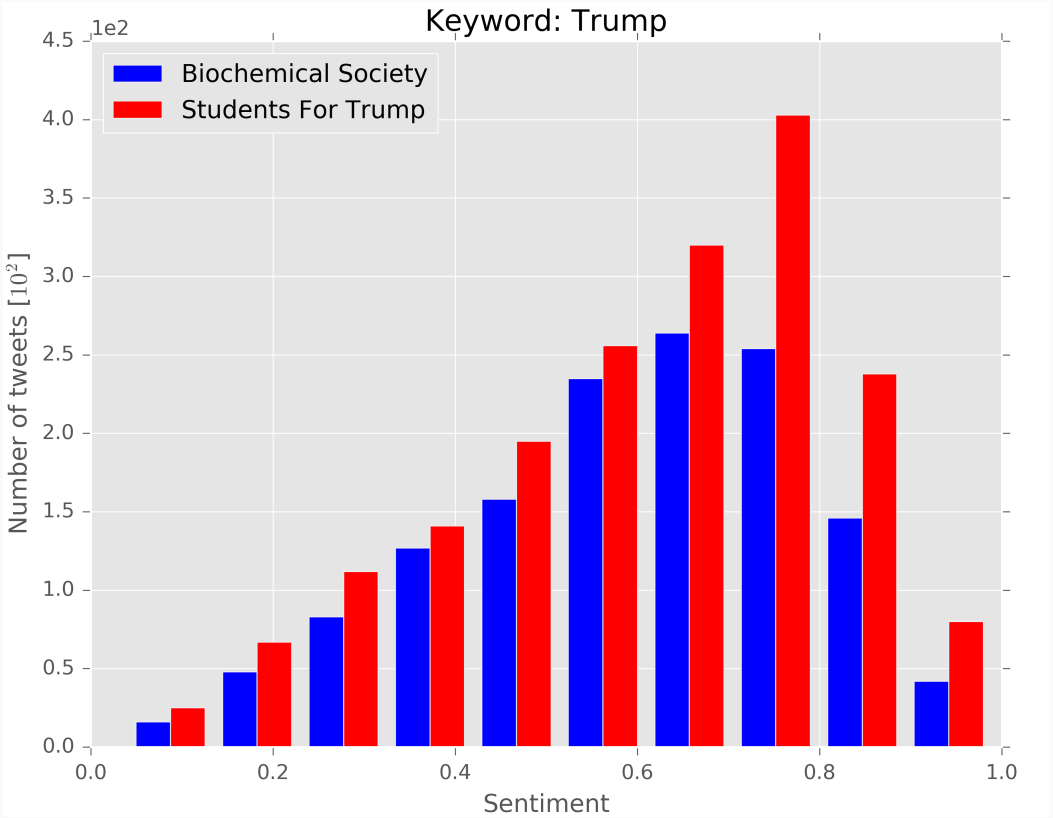
Keyword: Trump



Number of tweets histogram, keyword: *"Trump"*.

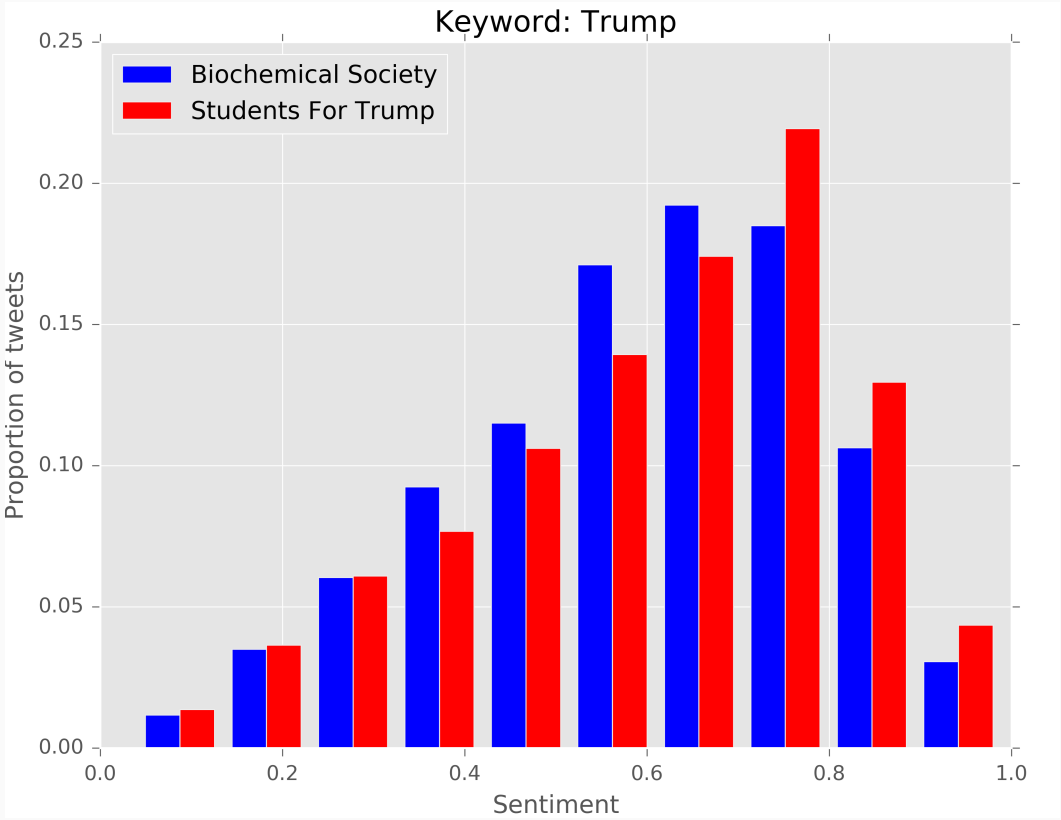
- *Biochemical Society*
- *Students for Trump*

Keyword: Trump



- **slight difference** in number of tweets
- *Students for Trump* slightly more positive

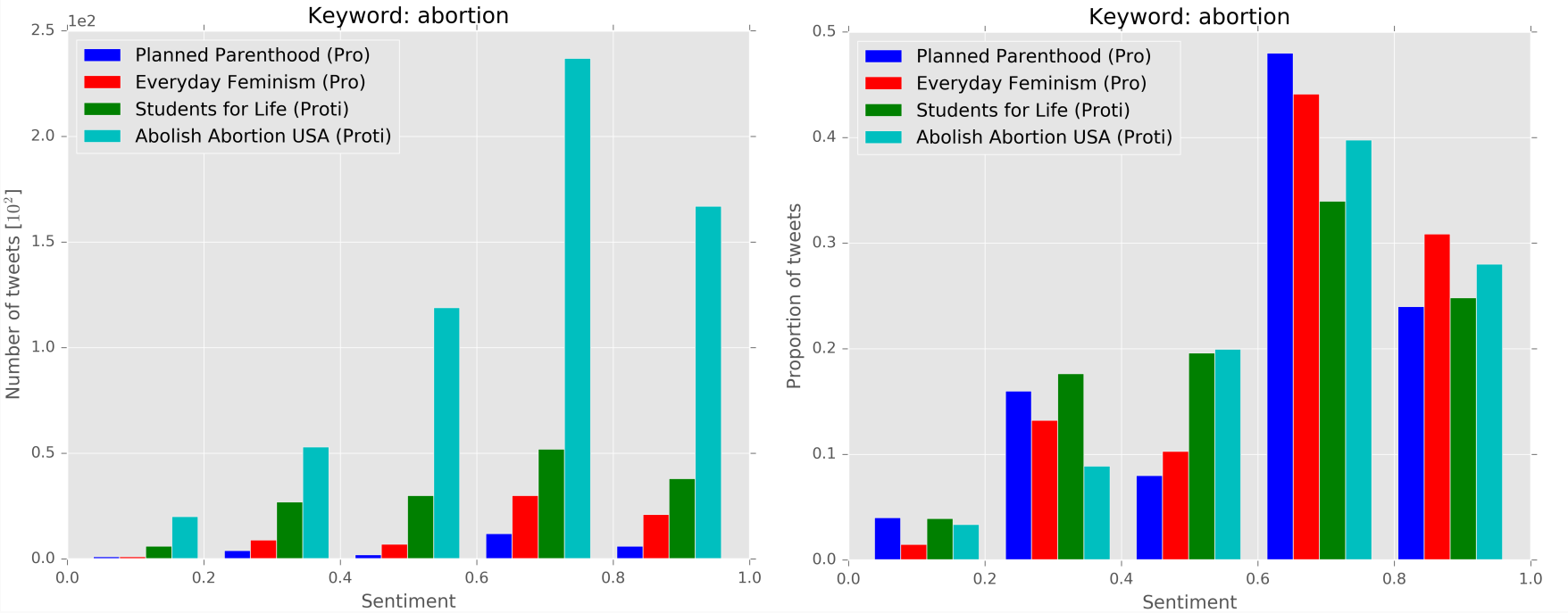
Keyword: Trump



Normalized histogram - sentiment proportion.

- *Biochemical Society* $\rightarrow$ sentiment < 0.5
- *Students for Trump* $\rightarrow$ sentiment > 0.5

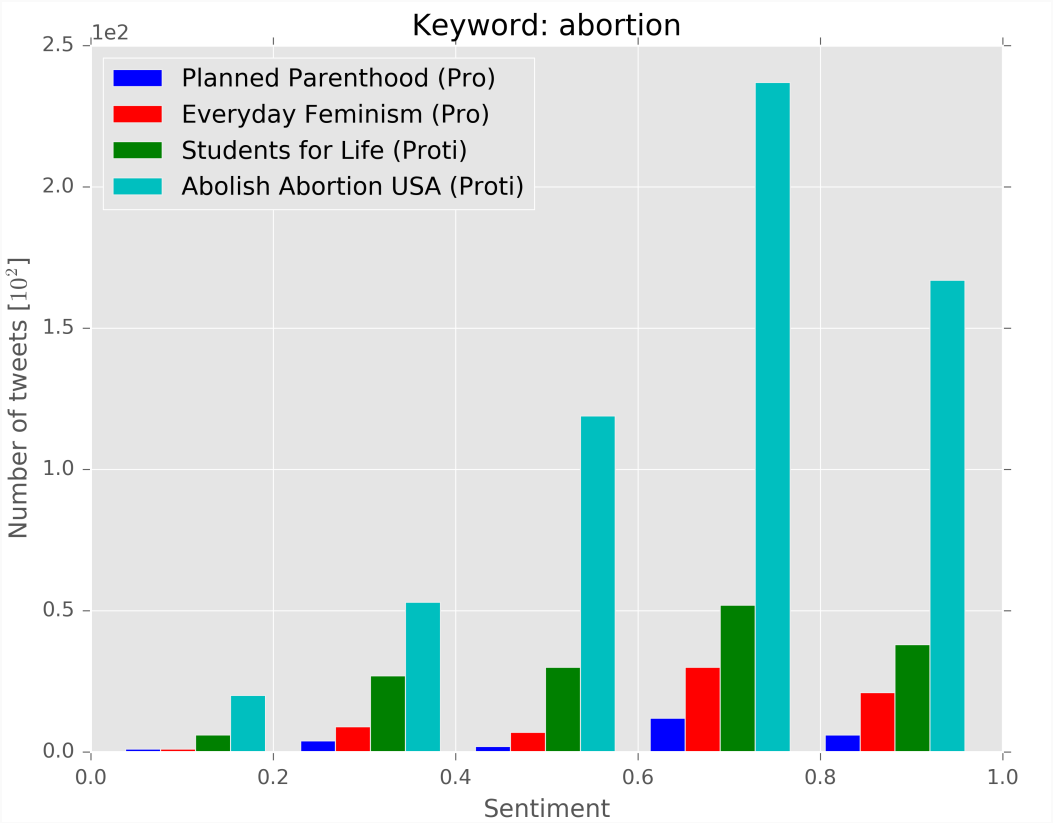
Keyword: abortion



Number of tweets histogram, keyword: *"abortion"*.

- *Planned Parenthood*
- *Everyday Feminism*
- *Student for Life*
- *Abolish Abortion USA*

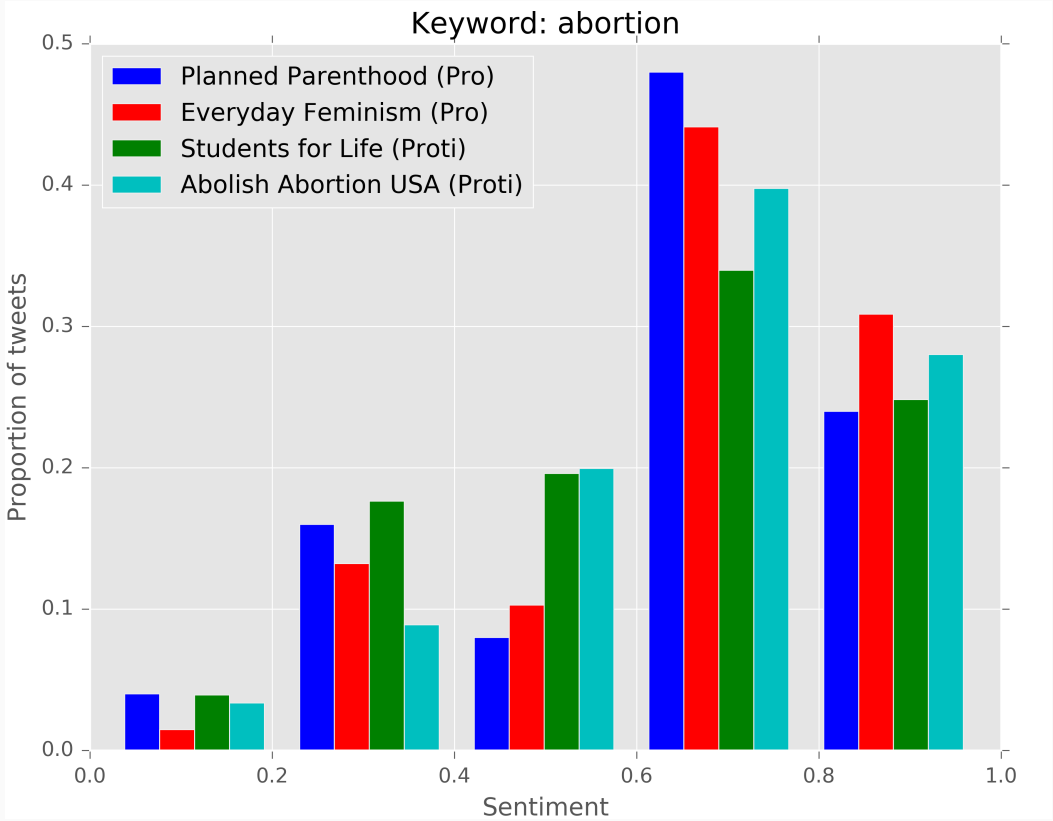
Keyword: abortion



- huge difference in number of tweets
- threat for objectivity

- **more activity** in groups against abortion

Keyword: abortion



Normalized histogram - sentiment proportion.

- against abortion $\rightarrow$ sentiment < 0.5
- for abortion $\rightarrow$ sentiment > 0.5

Conclusion

New method:

- large scale - **noise reduction**
- more **straightforward** than traditional research
- quantitative research

Measurements:

- Trump $\rightarrow$ low content homogenity
- abortion $\rightarrow$ **threat** for objectivity

Tweet examples

Everyday Feminism:

- "*We're proud of all of the abortion providers in this room - thank you for your brave; compassionate care. #Proud2Provide #LifesWork*" (0.9776)

Abolish Abortion USA:

- "*And look at the Planned parenthood abortion rooms.....887 babies killed a day and 300,000 dead babies a year....!!!*" (0.2255)