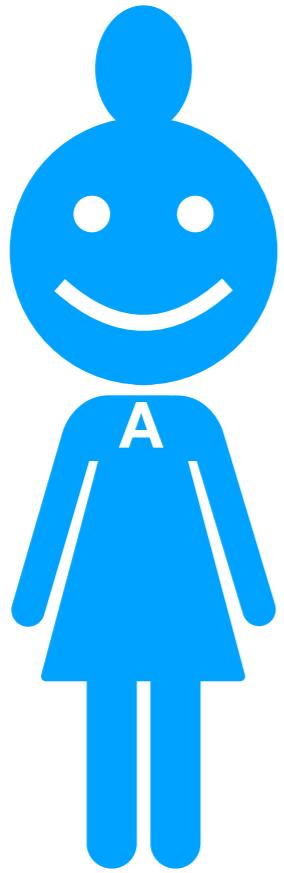


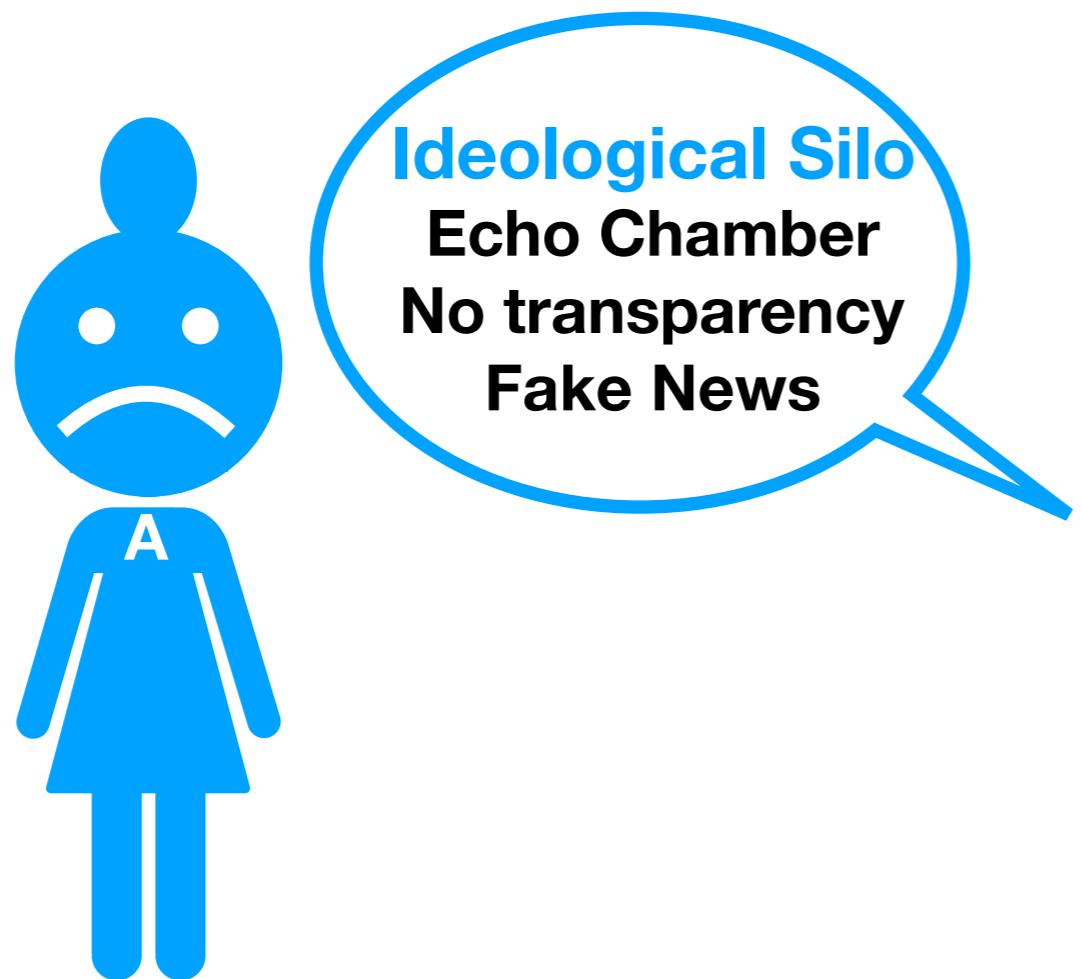
I am a responsible citizen!

I want make an informed choice!

I want to stop misinformation!

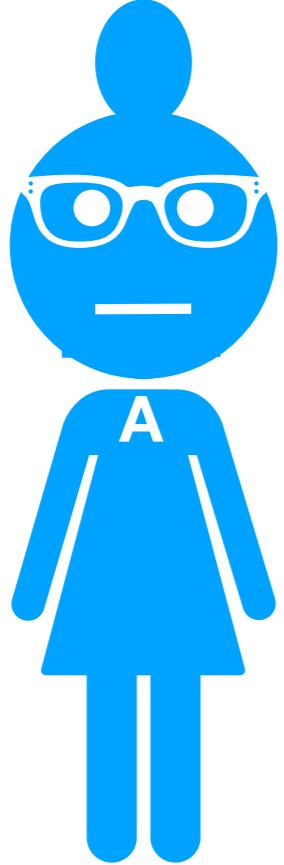


I don't feel good about my **Social Media** ...

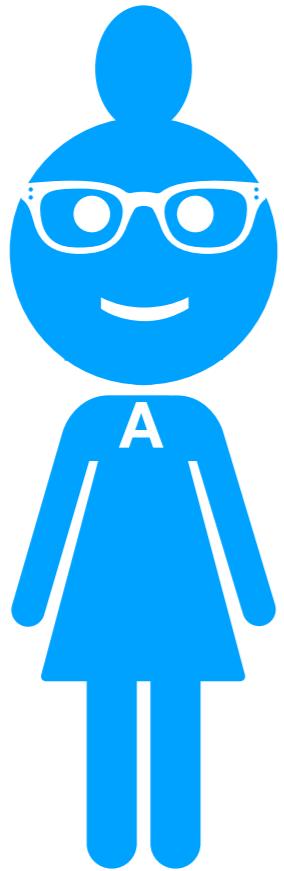


TODO: Back up the claim by citing the attenuation rate at facebook after CA incident

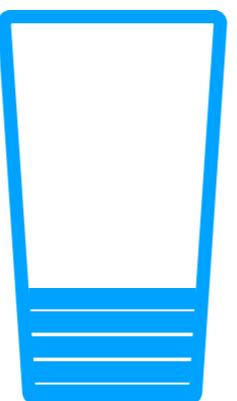
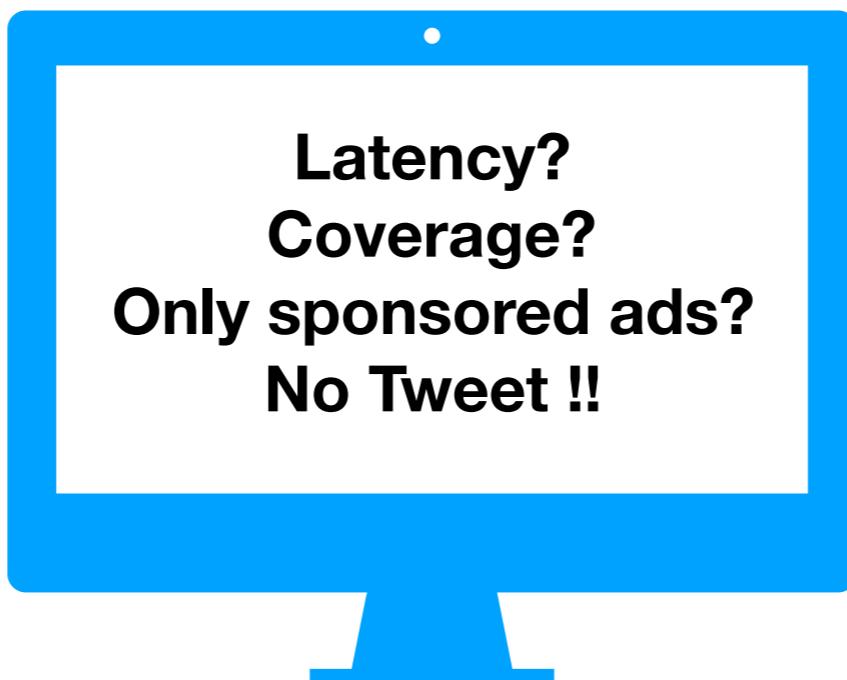
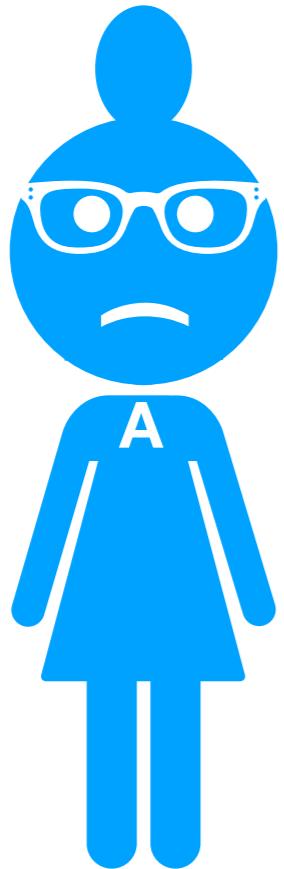
**Surely, I can't be the only one with this Information Gap?
there got to be something out there**



I found a great **content aggregator!**
Finally, I can see both side's campaigns!

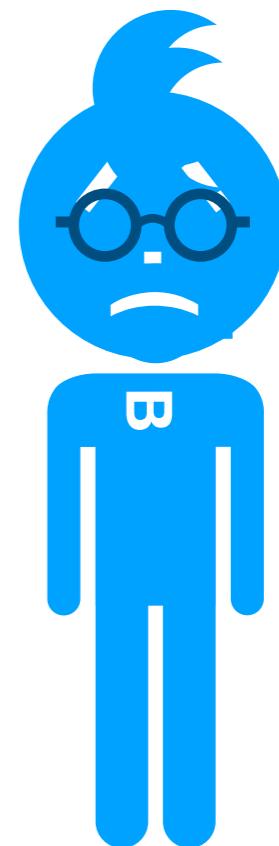
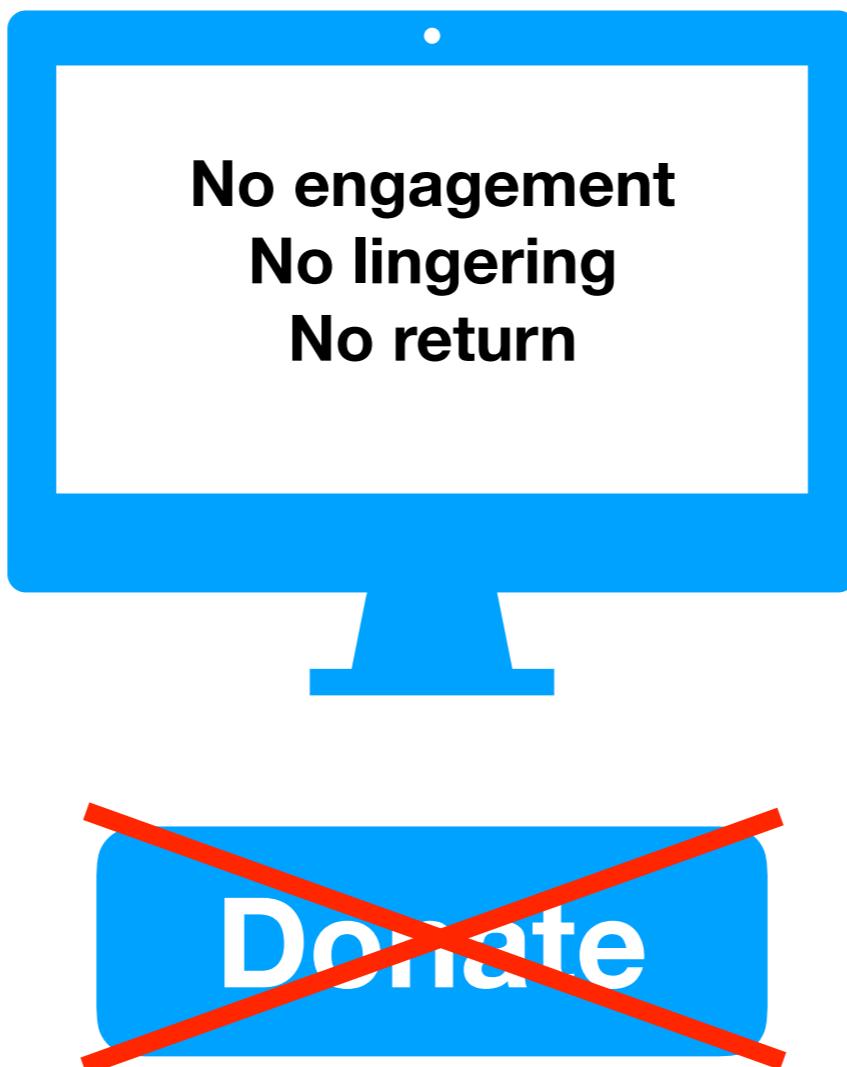
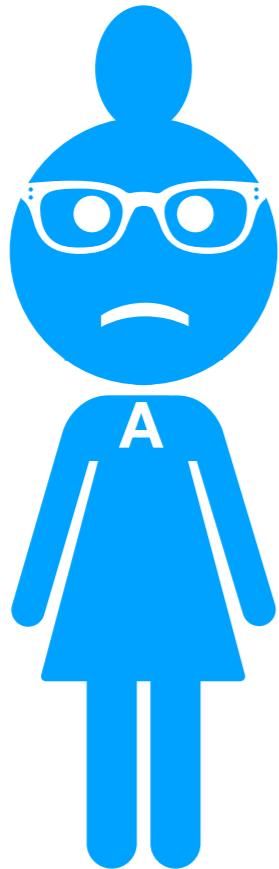


Hum, is that it? **No tweets?**

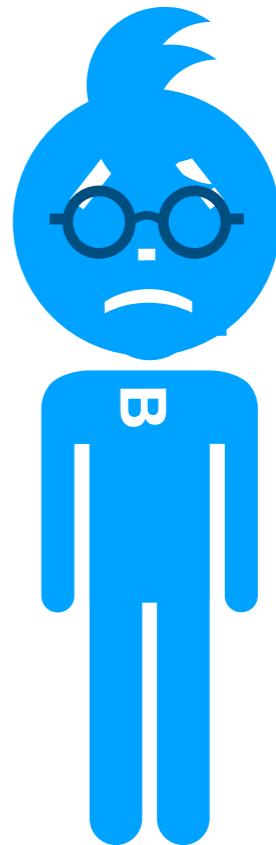
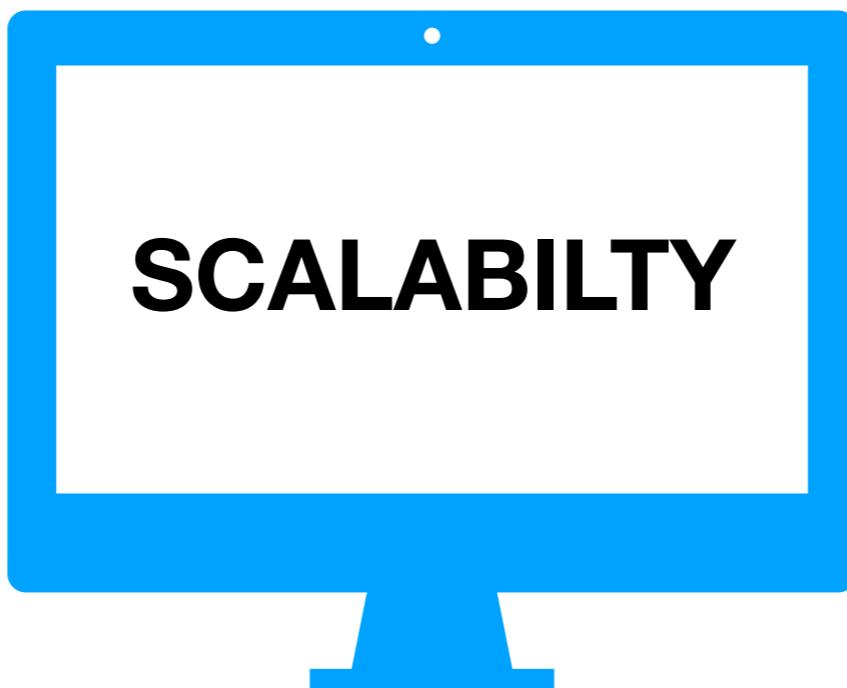


**Information
Gap
Glass 1/2 full**

Hey! thanks, but you can do better :-\



Actually, no, Bart can not do much better ...



Human power curation do not scale up

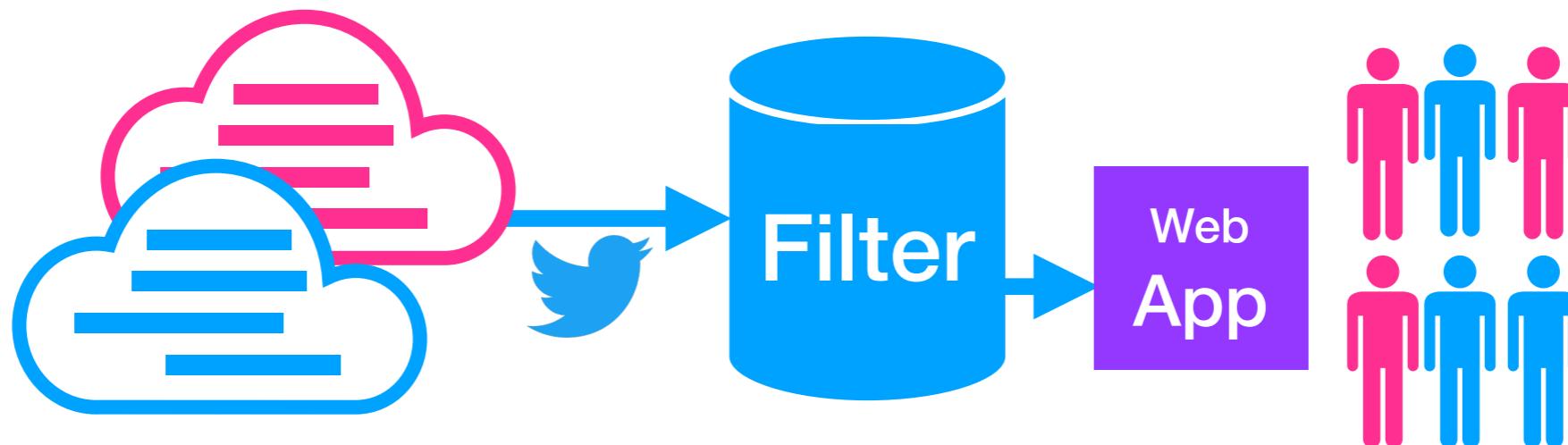
- Users are already aware of the information gap; There are some expert curated or cloud sourced **political ads aggregators**; **BUT** they are often massively **manual effort**
- Better solution: **automatically find political campaign ads using Machine Learning**



TODO: Back up the claim by citing the ProPublica project

Talking Point Sampler

A content aggregation site where user can interface with
political campaign Tweets from both sides



Find Political Campaign

Select a campaign topic and click "Submit"

Any Issues ▾

Submit

Find Political Campaign

Select a campaign topic and click "Submit"

Any Issues

- 2nd Amendment and Gun Control
- Reproductive Issue
- Senate, Texas
- Same-Sex Marriage
- Climate Change and Industrial Advancement
- Immigration and Human Rights

Find Political Campaign

Select a campaign topic and click "Submit"

Any Issues

Submit

Query (Keyword):

"2nd Amendment and Gun Control"

Retrieval Summary:

total row: 90 (14 showing)



Liberal



Conservative

"The #NRA strongly supports Judge Brett Kavanaugh's confirmation to the U.S. Supreme Court because he will protect our constitutional right to keep and bear arms. It's critical that all pro-Second Amendment voters urge their senators to confirm Judge Kavanaugh." –@ChrisCoxNRA

<div style="text-align: right; color: blue;">Liberal</div> <div style="border: 1px solid #ccc; padding: 10px;">  <p>Brady Campaign  @Bradybuzz</p> <p>We need young people to turn out to vote this November and we need to make sure that preventing gun violence is a key issue at the ballot box. If we can make that happen, we know we have been successful! -> bit.ly/2q2HuLf</p> <p>10:30 AM - Apr 3, 2018</p> <p>13,450 35 people are talking about this</p> </div>	<div style="text-align: left; color: red;">Conservative</div> <div style="border: 1px solid #ccc; padding: 10px;">  <p>NRA</p> <p>CONGRATULATIONS SUPREME COURT NOMINEE BRETT KAVANAUGH</p> <p>NRA NRA  @NRA</p> <p>#ScotusPick "On behalf of our six million members, the NRA strongly supports Judge Brett Kavanaugh's confirmation to the U.S. Supreme Court. We will be activating our members and tens of millions of supporters throughout the country in support of Judge Kavanaugh." – @ChrisCoxNRA</p> <p>6:24 PM - Jul 9, 2018</p> <p>13,1K 5,199 people are talking about this</p> </div>
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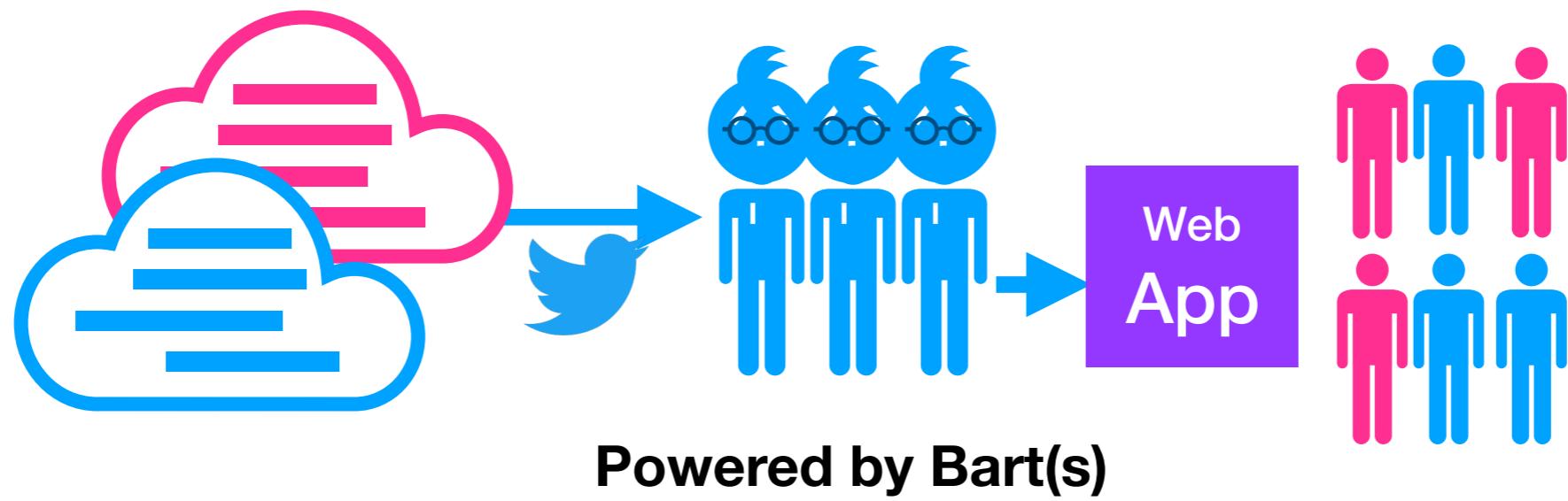
<div style="text-align: right; color: blue;">Liberal</div> <div style="border: 1px solid #ccc; padding: 10px;">  <p>Brady Campaign  @Bradybuzz</p> <p>@BetsyDeVos if we're going to talk about school safety, we NEED to talk about guns. (More than we need to talk about the threat of bears).</p> <p>6:55 AM - Jun 6, 2018 - Washington, DC</p> <p>13,450 316 people are talking about this</p> </div>	<div style="text-align: left; color: red;">Conservative</div> <div style="border: 1px solid #ccc; padding: 10px;"> <p>NRA NRA  @NRA</p> <p>We stand on the precipice of victory – but we have to get concealed carry reciprocity through the Senate. We could have no better champion than @JohnCornyn But we need you to reach out to your U.S. Senators and demand action. - @RepRichHudson #NRAAM #2A #NRA</p> <p>2:42 PM - May 4, 2018</p> <p>735 316 people are talking about this</p> </div>
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<p>Liberal</p> <div style="border: 1px solid #ccc; padding: 10px; background-color: white; margin-bottom: 10px;">  Brady Campaign  @Bradybuzz  <p>We continue to hear from teachers around the country who have made it clear- arming teachers with guns is not the right answer to prevent gun violence. -> on.freep.com/2wGHLcH</p> <p>1:15 PM - May 15, 2018</p>  <p>Poll: Michigan teachers don't want to be ar... The survey was given online to more than 1,000 members of the Michigan Education Association freep.com</p> <p> 33  17 people are talking about this </p> </div> <div style="border: 1px solid #ccc; padding: 10px; background-color: white; margin-bottom: 10px;">  NRA  @NRA  <p>HUGE #WIN FOR GUN OWNERS! "This is a critical issue for law-abiding #gun owners who want to exercise their right to self-defense outside the home. The #2A clearly protects the right to bear arms in public." – @ChrisCoxNRA nraila.org/articles/20180...</p> <p>3:37 PM - Jul 24, 2018</p>  <p>NRA-ILA Federal Appeals Court Confirms ... The NRA applauds a ruling by the 9th Circuit Court of Appeals that confirms the Second nraila.org</p> <p> 7,602  2,930 people are talking about this </p> </div>	<p>Conservative</p>
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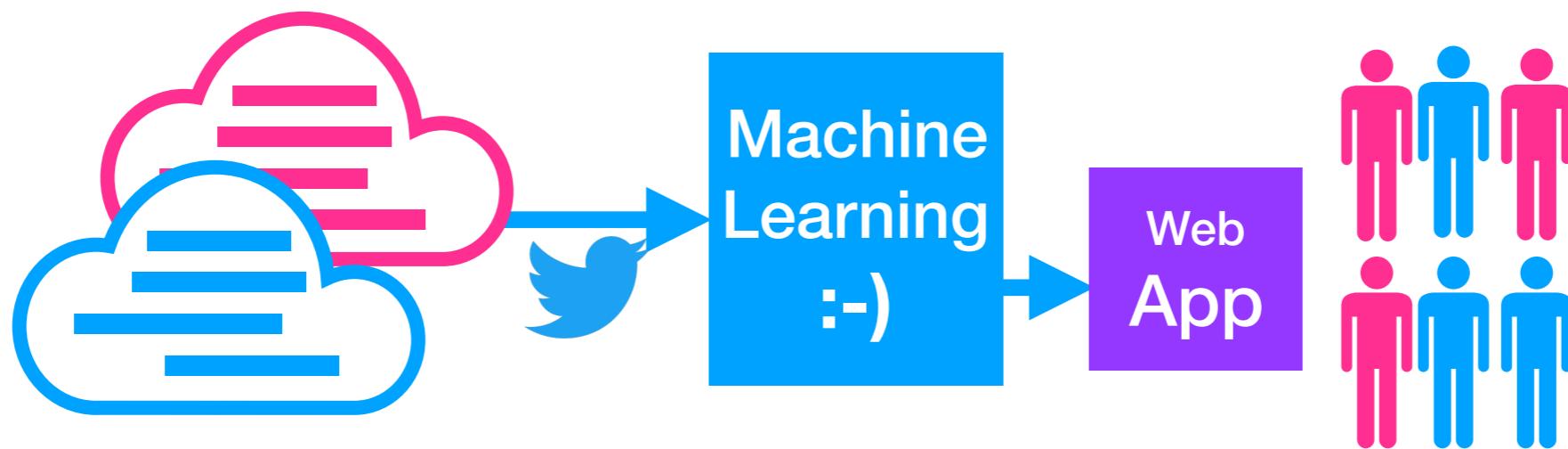
<p>Liberal</p> <div style="border: 1px solid #ccc; padding: 10px; background-color: white; margin-bottom: 10px;">  Brady Campaign  @Bradybuzz  <p>DISARM HATE</p>  <p>Today and every day we remember all of those who were shot and killed at #Pulse nightclub and the many more who were affected by the tragic event. Together we can prevent gun violence and #disarmhate.</p> <p>9:55 AM - Jun 12, 2018</p> <p> 168  91 people are talking about this</p> </div> <div style="border: 1px solid #ccc; padding: 10px; background-color: white; margin-bottom: 10px;">  NRA  @NRA  <p>"Be true to who you are, no matter who's watching. And never, ever stop fighting for the most important thing we have as #Americans... OUR #FREEDOM!" –@ChrisCoxNRA #HSLS2018 #ThursdayThoughts</p> <p>8:02 AM - Jul 26, 2018 · Washington, DC</p> <p> 731  274 people are talking about this </p> </div>	<p>Conservative</p>
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<p>Liberal</p> <div style="border: 1px solid #ccc; padding: 10px; background-color: white; margin-bottom: 10px;">  Brady Campaign  @Bradybuzz  <p>s AND we need</p> <p>...</p> </div>	<p>Conservative</p>
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What is different in TPS



What is different in TPS



Powered by TPS

Lets see the
detail

Political Ad Language Model for Tweet Filtering

Language Model = A type of ML model to **estimate probability of sentence occurrence**

PAML(“Support your proposition 1!”) >> PAML(“Look this cute cat”)

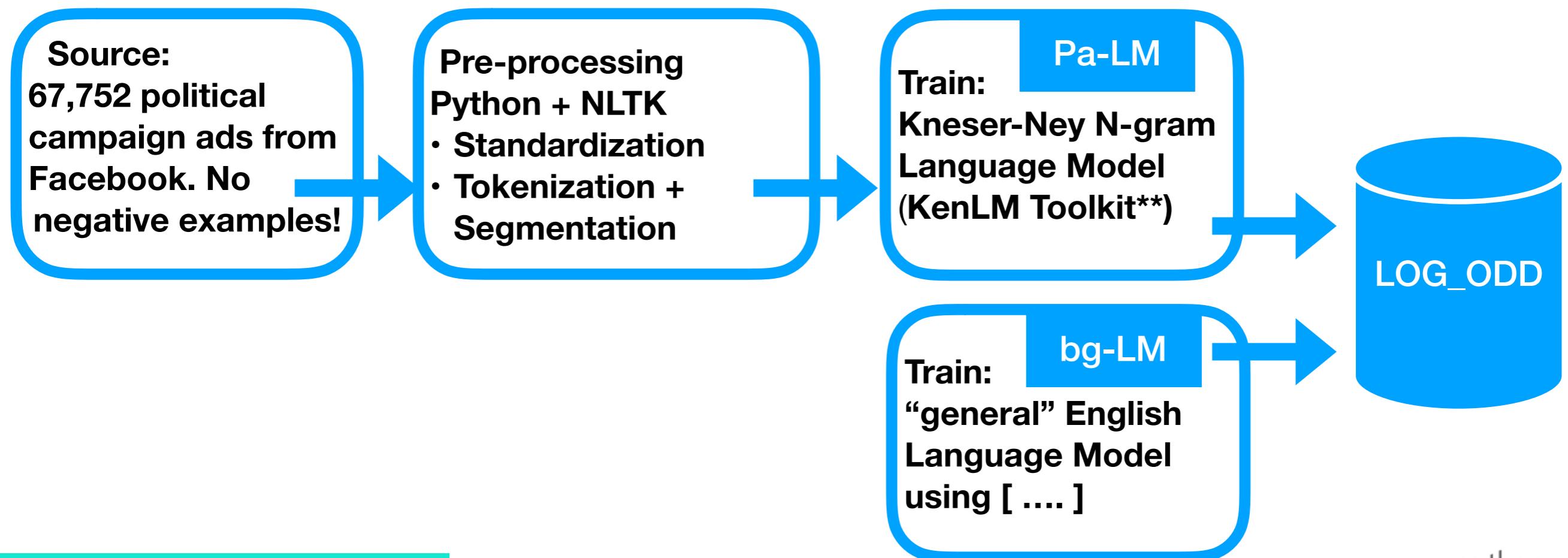
todo: If a tweet is actual political campaign, Political Ad Language Model will give very high probability

Why Language Model?

- It works on **text**; not rely on site specific meta data; can **scale across platform much easier**
- It can be trained **without negative example** (e.g., Unilateral classification)

TODO: Its a bit tricky to turn it into discriminative task such as filtering, but i will show you are trick

Training Pipeline



point out: its not tweet
no negative examples

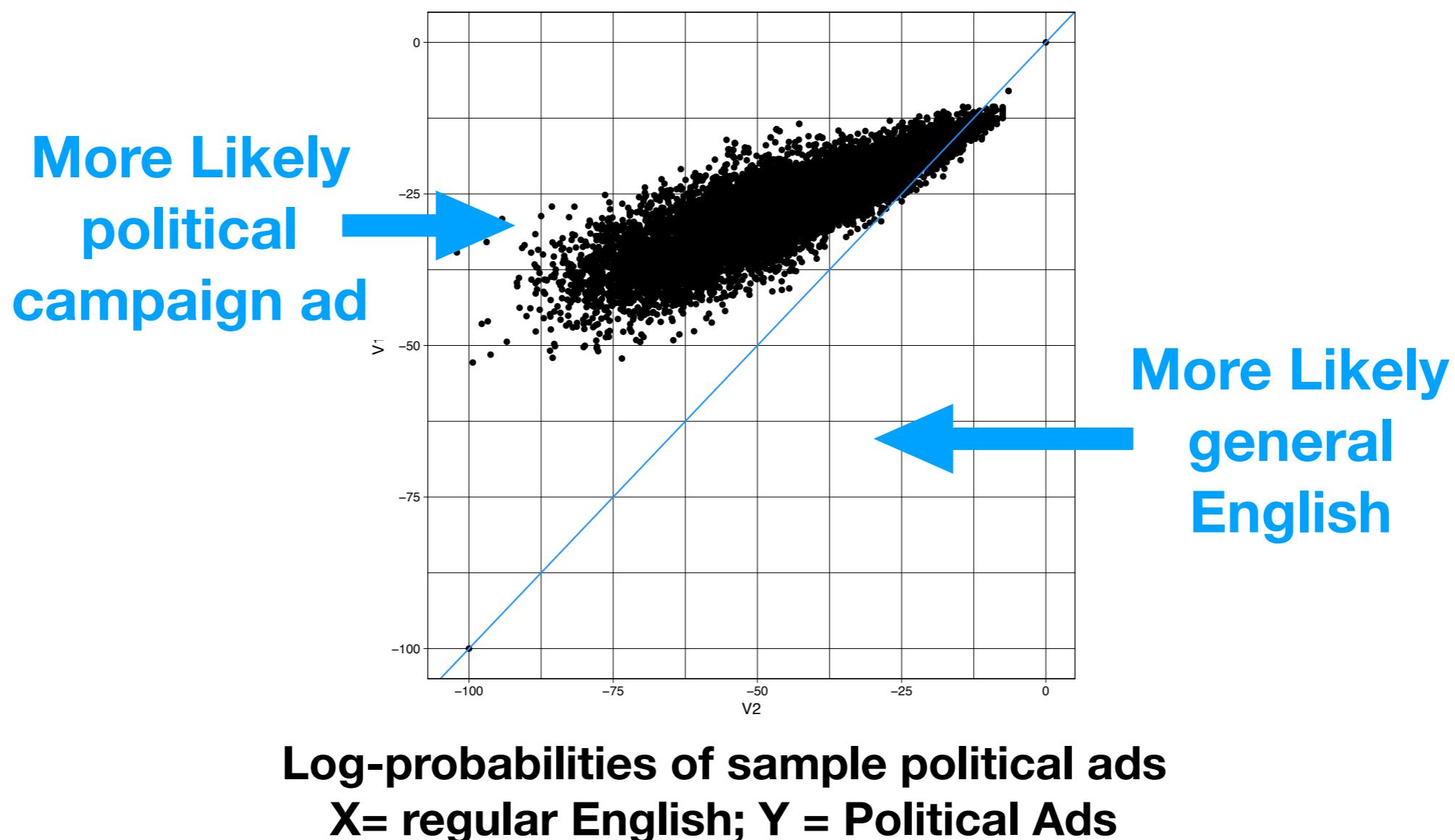
The trick i promised
If time, note on KenNL



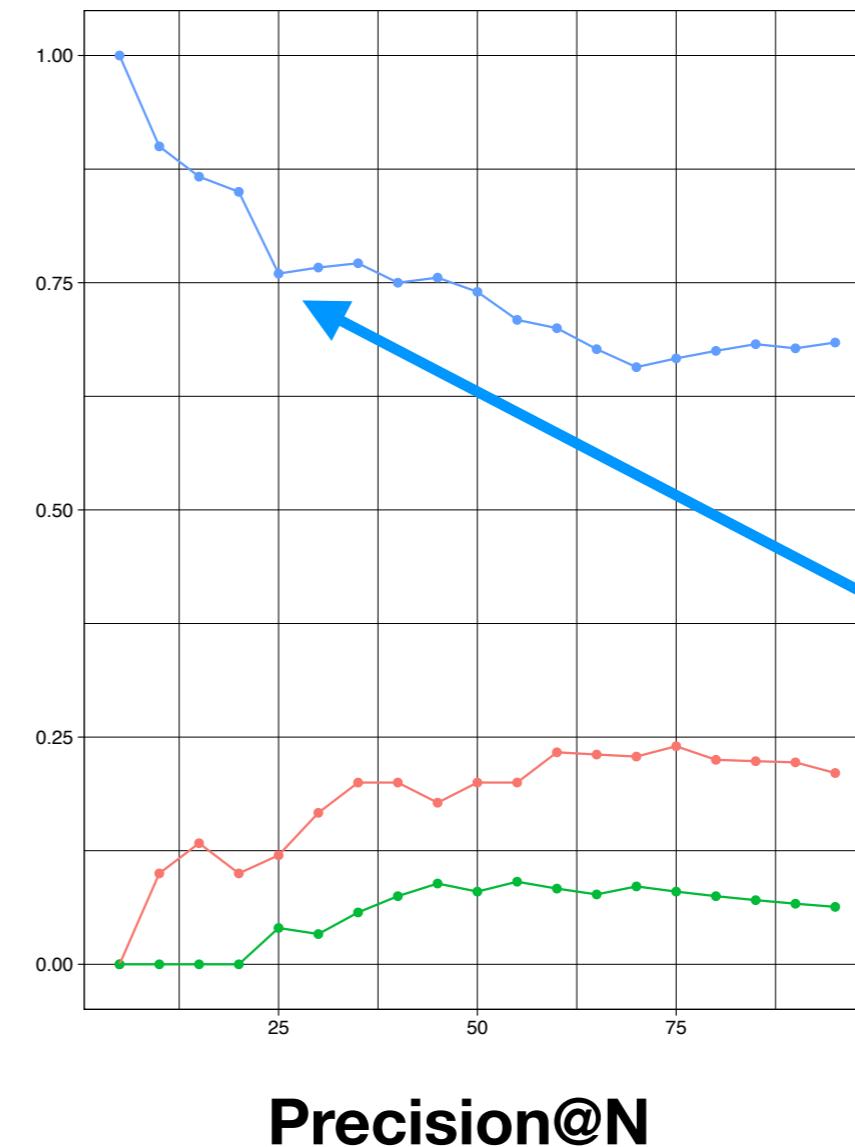
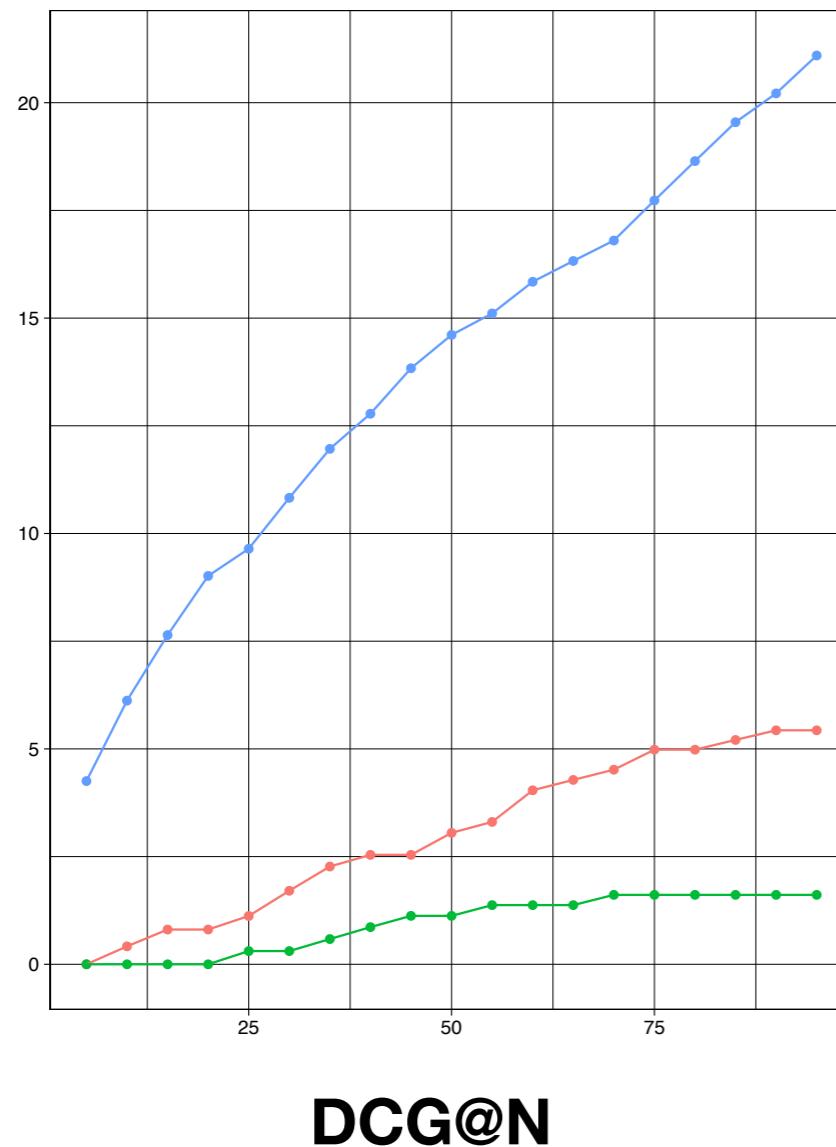
* <http://politicaladcollector.com>
** <https://github.com/kpu/kenlm>

Why should this work?

The more distinctive political campaign language is from regular English, the easier it is to identify them.



Does it really work?



**TalkingPoint
Sampler (TPS)
Random
Worst**

**At 20th position,
the TPS achieve
75% Precision
(e.g., 15 out of 20
are correct)**

Ty Yano, Ph.D

