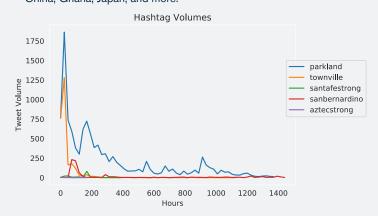
Getting People on the Ground

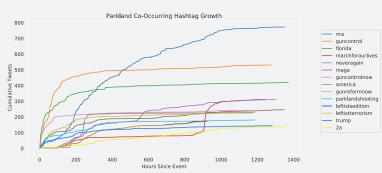
Coming to Understand the Success of #Parkland through a Timeline of Co-Occurring Hashtags

Sagar Kumar

Introduction

On February 14th, 2018 between 2:21 and 2:27pm, 14 high school students and 3 adults at Marjory Stoneman Douglas High School were shot and killed in one of the deadliest and most devastating school shootings in US history. In the midst of this horror, one student took to Twitter to inform the world what was happening. Almost immediately, this made Twitter the primary forum for discussion. reaction, and conversation about the event. The online conversation quickly turned into specific actions offline. The Women's March Youth organized the Enough! National School Walkout, held on March 14th - exactly one month after the shooting - as a form of protest. This spawned a similar school walkout marking the 19th anniversary of the school shooting at Columbine, On March 24th, 2018, the March for Our Lives, created and led by the students of Marjory Stoneman Douglas High School, was held as an international demonstration calling for stricter gun laws following the Parkland shooting with events held across the US, Europe, and cities in Canada, India, China, Ghana, Japan, and more.





References

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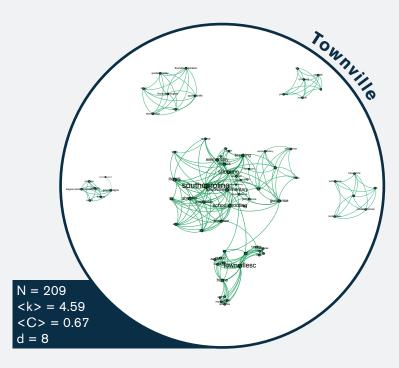
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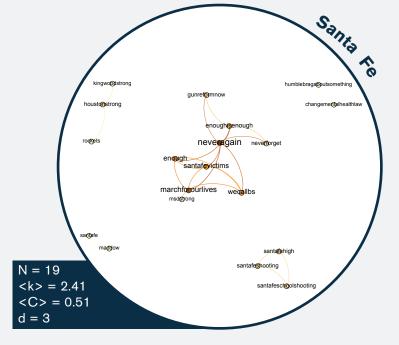
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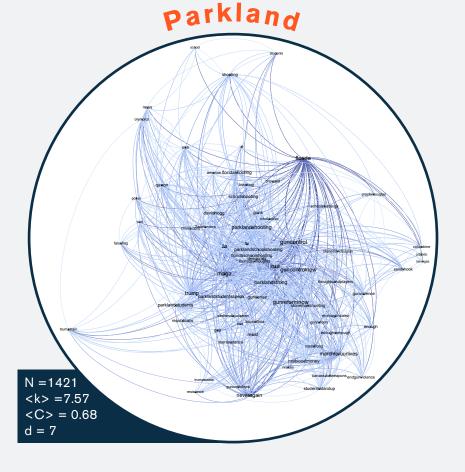
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What are people talking about?

Co-occurrence networks were created for each hashtag related to each (7) school shooting events.

 Co-occurrence networks act as a proxy for topics and provide insight into discourses and frames

Networks were created by drawing a links between any two hashtags – besides the one used to collect tweets - that occurred in a tweet together.

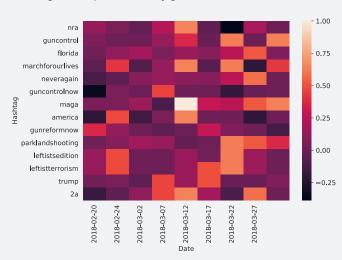
- #Parkland network is much larger than all other networks but is very highly connected with small diameter and virtually no spectral gap.
- Parkland network shows politically charged and polarizing hashtags such as #nrabloodmoney, #qanon, #crisisactors, #maga, #banassaultweapons, etc.
- These are not seen in other networks.

How much are people using these co-occurring tags, and when?

The cumulative number of Tweets containing co-occurring hashtags which were present in greater than 1% of all Tweets which included #Parkland were plotted as a function of time.

The graph shows a rough timeline of the focuses of the conversation as it evolved.

- Gun control immediately became the focus of the conversation
- #NRA remained a constant point of interest through the whole conversation
- Reactionary hashtags were relatively smaller throughout
- #maga, #trump showed early growth



How much influence is each co-occurring hashtag having on others?

Transfer Entropy is an Information Theoretic metric which allows us to understand causal relationships between multiple time series.

- At early times, the conversation was largely chaotic
- Around March 12th we see a transition where hashtags related to a broader conversation heavily driven
- #nra, #marchforourlives, #2a, and especially #maga
- After this point, the conversation becomes more ordered with hashtags clearly driving and clearly being driven
- Disproportional influence from smaller hashtags #maga, #leftistsedition, #leftistterrorism.

