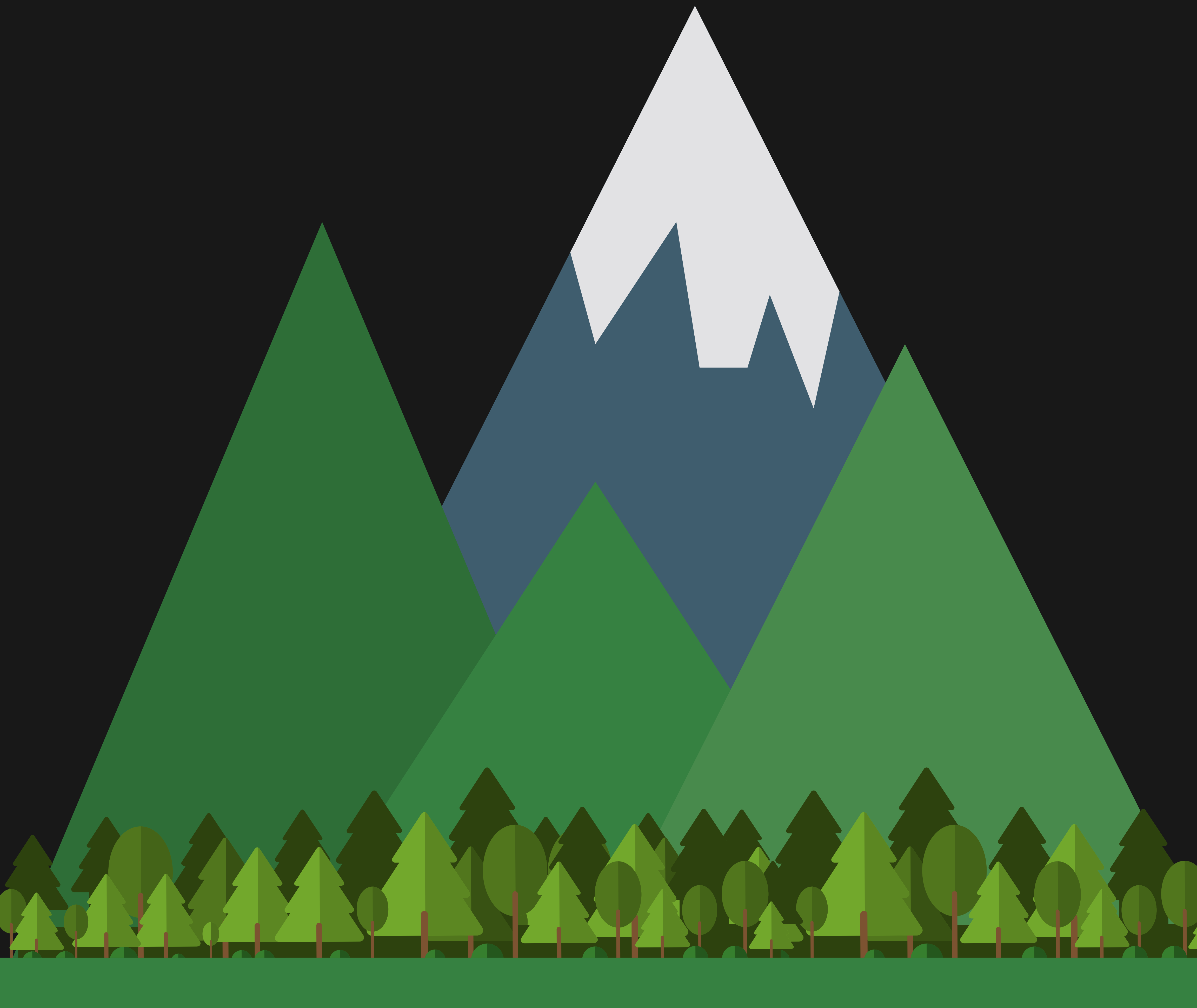ADPR5750 | Social Media Analytics

Sierra Club

Kevin Nguyen | Jed Chizner | Garrren Griffin

SEE > Suite
Grady College of Journalism
and Mass Communication
UNIVERSITY OF GEORGIA

SIERRA CLUB

Content Index

Executive Summary + Goals

This report outlines the analytics of Sierra Club, an environmental non-profit organization that reports climate solutions, builds movements, and helps to solve the climate crisis through powerful strategic planning with those who advocate with this organization. While exploring these platforms, we will look at these four categories: Earned, Owned, Competitor Analysis.

Our primary goal of this analysis is to identify successful and non successful tweets posted by Sierra Club and determine ways to improve upon that and recommend suitable solutions that will earn the greatest engagement to grow its audience.

Key Performance Indicators (KPI)

We use the engagement on Twitter to assess the organization, Sierra Club and its performance. We Specifically looked at likes, retweets, mentions, total engagement volume, and other interactions within Twitter to better understand its performance and make actionable insights and recommendations to the organization.

Research Questions

- **WHAT TWEETS GENERATE THE MOST ENGAGEMENT WITH AUDIENCE?**

- **WHAT EFFECTS DO HASHTAGS HAVE ON AUDIENCE ENGAGEMENT/ WHICH ARE MOST EFFECTIVE.**

- **WHAT THEMES REACH THE MOST AUDIENCE?**

Recommendations

Increase engagement levels for posts that have informational links.

Continue using Informational links related to the topic in the tweet, but use scenery associated with the information (e.g. landscapes, locations)

Posts containing a link to an informational source were used a lot (n=68) but received the lowest levels of engagement (Average of 7.62 RTs). Posts using scenic image-types received the highest level of engagement (M=13.59 RTs) and the least used (n= 22).

Increase engagement levels for posts that use affiliated organization mention types.

Continue mentioning affiliated organizations in your post, but use a hashtag associated with the related institution (e.g. #nopoisonpills, #protectcapubliclands) and infographics as media content.

Posts that mention affiliated organization were the second largest use of mentions (n=27) but received one of the lowest levels of engagement (Average of 8.93 RTs). Post using the slogan hashtag-type received one of the highest levels of engagement (M=10.85 RTs. Post with infographics attracted a larger level of engagement (M=9.32 RTs).

Increase levels of engagement for posts that only use text.

Continue using text as a media type, but pair the text media with related image media-type (e.g Scenery, People,) and Videos (e.g. Protest, Movements)

Posts that only contained text were used the most out of all media types (n=251) but were engaged with the least by the audience (Average of 9.63 RTs). Post using a video media-type received one of the highest levels of engagement (M=11.05). Post using image media-type received the highest level of engagement amongst media types (m=13.45).

Recommendations

Increase reach to other affliated organization.

We recommend that Sierra Club use their platform to reach out to the community concerned with the implementation of the Build Back Better Act passed.

Sierra Club already discusses the issues related to air pollution that causes climate change, and its impact on public health, but Sierra Club should include more discussion on creating high-quality jobs, and make long overdue investments in communities overburdened by pollution. Sierra Club should implement the use of topics such as jobs, infrastructure, and investments.

Within the broader conversation about environmental justice, a key issue for Sierra Club, 21.1% (n =13k) of users discussed the Build Back Better Act. Within the conversation, the sentiment aligned with post discussing the Act were used in a more positive way, talking about the benefits the act can have.

Use their media platforms to reach communities in the interest of impacts on EV's

We recommend that Sierra Club use their platform to reach out to the community concerned with interest in the positive impacts of electric vehicles on the environment.

Sierra Club should implement conversations on the issues related to impact electric vehicles can have on the environment and climate change, the evolving landscape of EV and the negative impact of fossil fuels.

In the grand scheme of environmental justice, a majore issue for Sierra Club, 13.7% (n=8441) of users discussed electric vehicles. A majority of the sentiment around the conversations including EV is negative. The conversations often focus on the negative aspects of fossil fuels rather then the positives of electric vehicles.

Recommendations

Use their media platforms to reach communities in the interest of concerns with fracking.

We recommend that Sierra Club use their platform to reach out to the community concerned with fracking and its effect on the environment.

Sierra Club should discuss more often the issues related to fracking, 'Big Oil', and the effects it can have on groundwater, pollute surface water, impair wild landscapes, and threaten wildlife. Sierra Club should discuss the possibilities for the future in relation to oil and the positive changes that can be made.

Within the broader conversation about environmental justice, a key issue for Sierra Club, 6% (n=3721) of users discussed fracking and extraction of oil from the ground. Within the conversation, the sentiment was extremely negative as the conversation focused on how detrimental fracking can be and the immediate impact it has on the environment.

Another recommendation we are making to The Sierra Club is to assist in bringing more female users into the conversation surrounding EV's.

At 73% across all platforms, the male audience is overwhelmingly the majority of users within the online discourse of this topic. Bringing Sierra Club's female audience into this discussion would not only help engagement, but would also promote more positive sentiments, because of the increase in engagement from Sierra Club's like-minded followers.

Sierra Club could accomplish this by highlighting female entrepreneurs, engineers, and other professionals within the electric vehicle industry. Highlighting these individuals will help to bring female followers into this specific topic of discussion, increasing engagement and the amount of people in the conversation who are promoting ideals similar to those of Sierra Club.

Recommendations

We recommend that Sierra Club reach out more to users promoting negative sentiments towards electric vehicles, and engage more in the online discourse between people for and against the expansion of the electric car industry.

In every theme we analyzed within the electric vehicle topic, there were large quantities of negative posts, many of which were detailing the concerns people have regarding electric vehicles. Across all platforms and themes, 72% content had negative sentiment. While many of these tweets were geared towards the negative effects the current, fuel-powered car industry has on the environment, others had sentiments against the Sierra Club's beliefs.

If Sierra Club were to engage with this audience more, and acknowledge and explain the facts behind the concerns about electric vehicles, this would help to bring in engagement from users regardless of their sentiments towards electric vehicles, and put Sierra Club more at the forefront of the conversation.

We recommend that Sierra Club takes advantage of the fact that the sentiment surrounding the legislation around electric vehicles is the most positive when compared to other themes. They should apply this information by increasing their engagement with the topic of EV legislation, including tweets outlining certain laws and bills, as well as increased involvement in the online discourse surrounding this topic.

With 135.68K mentions in this category, there is an established interest within the online community, which we believe The Sierra Club could further engage with, and by doing so, receive increased engagement with their own posts as well.

Recommendations

We recommend that Sierra Club takes advantage of the fact that the sentiment surrounding the legislation around electric vehicles is the most positive when compared to other themes. They should apply this information by increasing their engagement with the topic of EV legislation, including tweets outlining certain laws and bills, as well as increased involvement in the online discourse surrounding this topic.

With 135.68K mentions in this category, there is an established interest within the online community, which we believe The Sierra Club could further engage with, and by doing so, receive increased engagement with their own posts as well.

Sierra Club Owned Data

SIERRA CLUB

The DataSet

For this data set we used Brandwatch as our main source of data insight and information collected
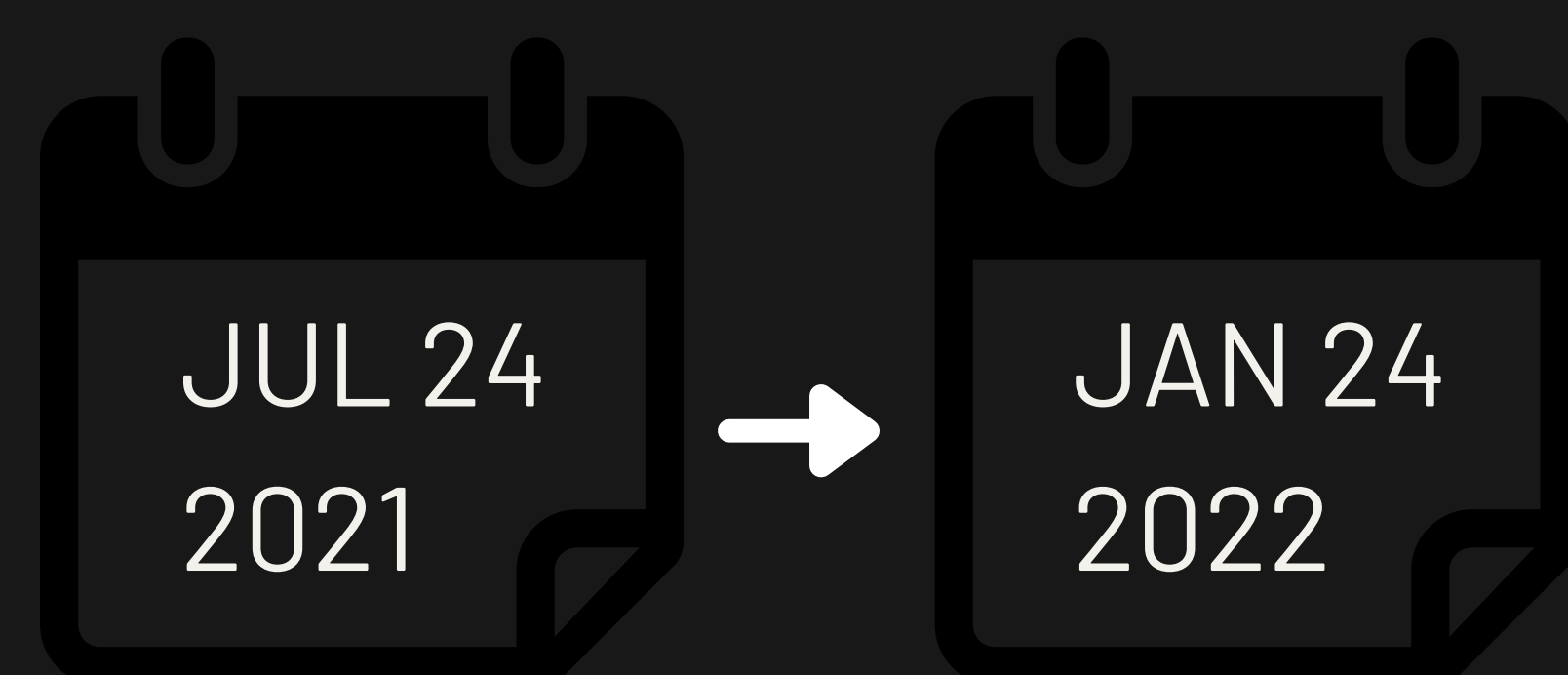
1903

tweeted recorded on Twitter

TOP IMAGE CONTENT:

PEOPLE

EDUCATION

WILDNERNESS

POSTER

WORD CLOUD

trucks
voting #buildbackbetteract country
investments Biden work
bill environmental protect #cop26
change #buildbackBetter EPA
week people Join
future communities Senate
clean energy today climate justice Build
Electric jobs energy industry
Read
historic fuel action clean Act gas air emissions
big public oil time US rights
health pass
state vote fossil pollution climate change
climate action crisis support coal
Sierra Club water Congress vehicles
environmental justice

This data was recorded on a 6 month period to report sufficient data on Sierra Club. We are able to analyze top word, hashtags, top image content to get a better understand of what Sierra Club is and their conversation.

AVG Retweet by Theme
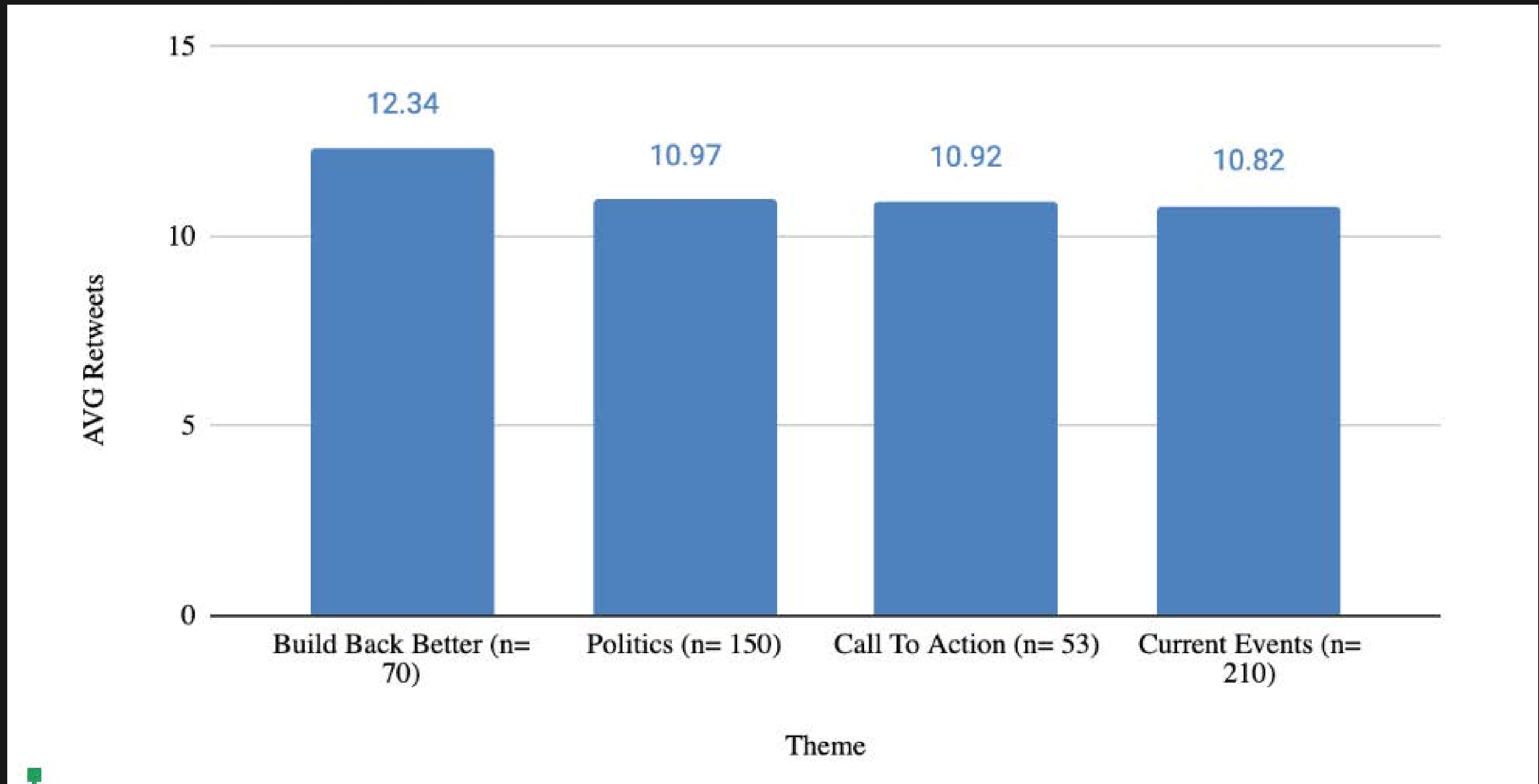
Post Theme	Total Posts in Category
Build Back Better	70
Politics	150
Call to Action	53
Current Events	210
Other (Not Pictured)	37

When dividing tweets by theme, it shows that the amount of retweets is fairly consistent, however, there is a noticeable difference between tweets including mention of the Build Back Better plan and the other categories. These tweets are being shared more on average than other Sierra Club posts.

AVG Retweet by Media Type
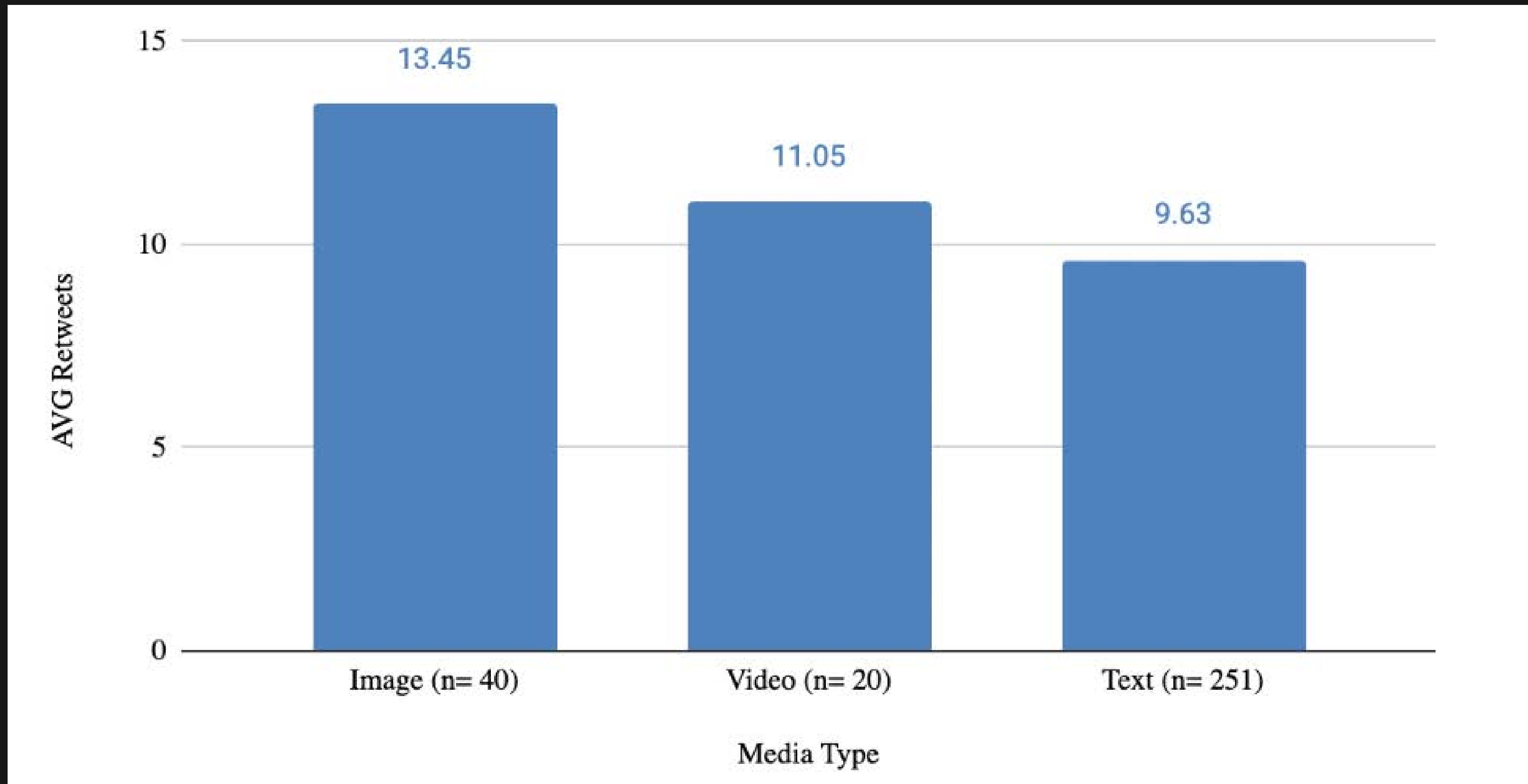
Media Type	Total Posts in Category
Image	40
Video	20
Text	251
Other (Not Pictured)	1

Looking into the media types, it shows that when there is just text in the tweet, whether there is no attached media or a link to an article, there are less average retweets than when images or videos are included with the tweet. This shows that Sierra Club's followers are more likely on average to retweet a post that includes attached media, especially images.

AVG Retweet by Media Content
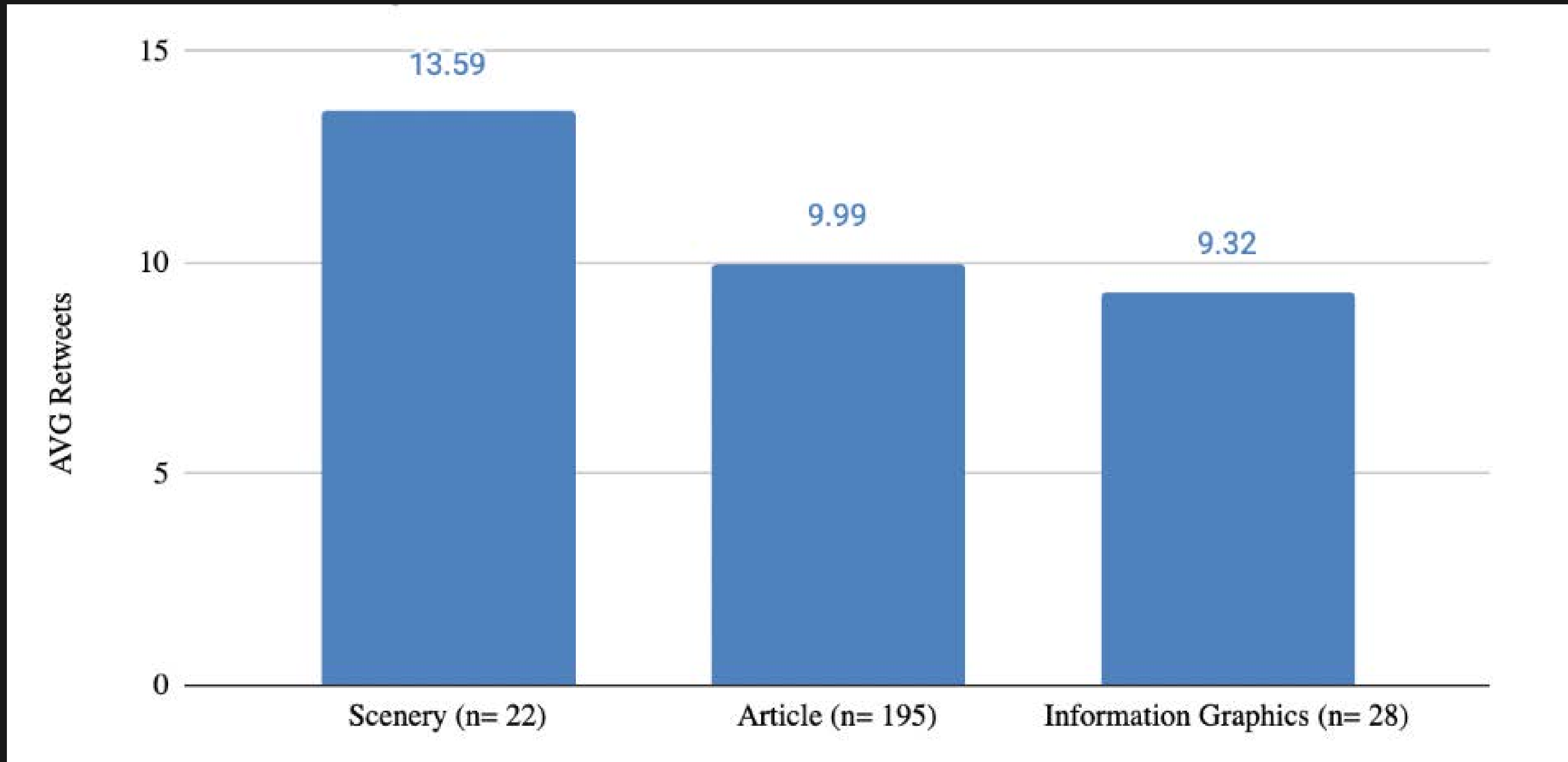
Media Content	Total Posts in Category
Scenery	22
Article	195
Informational Graphics	28
Quotes (not pictured)	11
None (Not Pictured)	56

Within the tweets that contained media, the posts that had a form of scenery were retweeted at a much higher frequency than tweets with articles or infographics. Tweets that had media other than scenery were retweeted at similar rates.

AVG Retweet by Hashtag Type
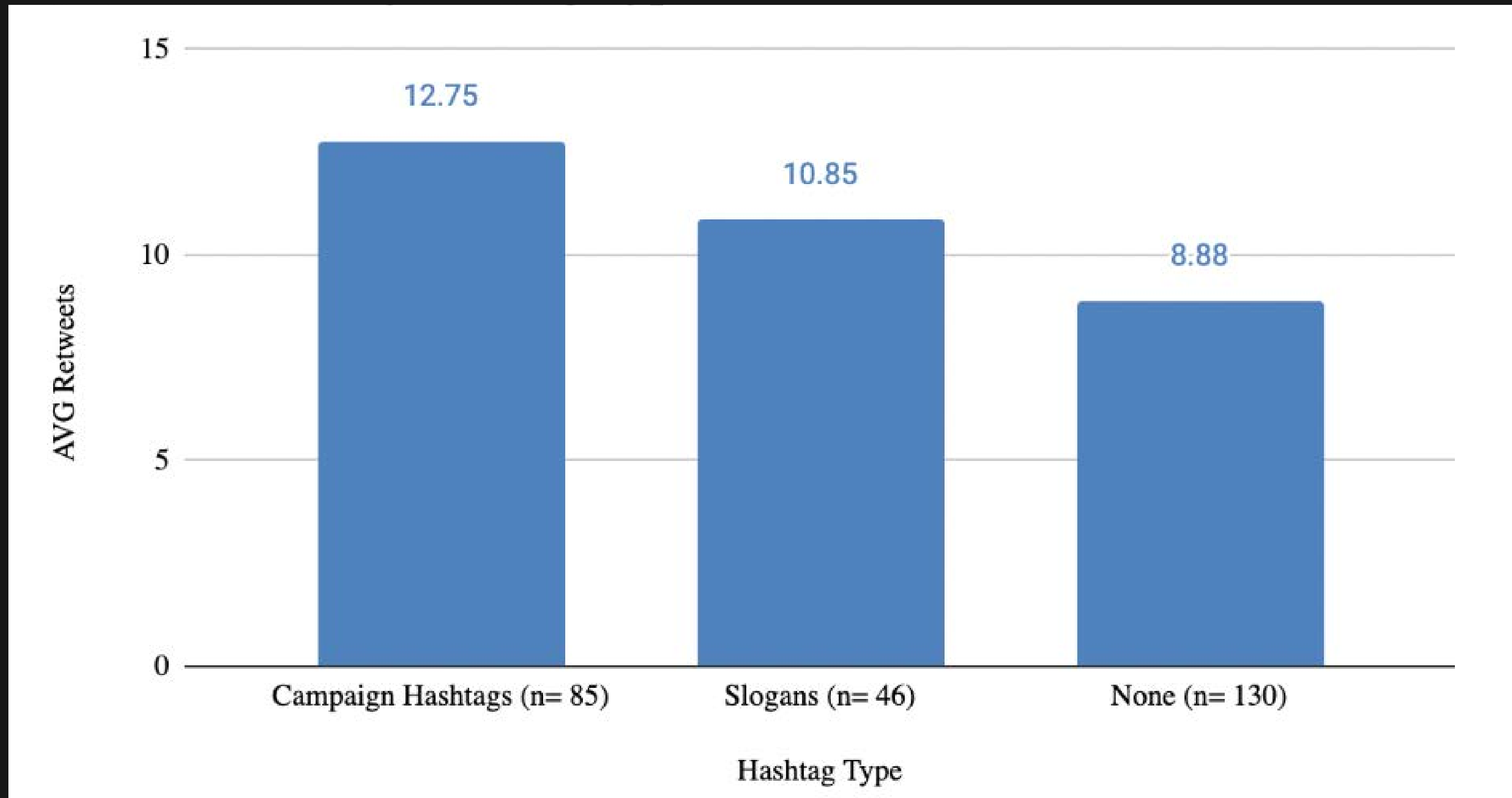
Hashtag Type	Total Posts in Category
Campaign Hashtag	85
Slogans	46
No hashtag	130
Holiday Hashtag (not pictures)	4
Other Hashtags (Not Pictures)	47

When examining the different types of hashtags, two categories that were often used were hashtags for certain campaigns (ex: #buildbackbetter) and slogans (ex: #protectourvote). On average, tweets that included hashtags referring to a certain campaign got more engagement than slogan hashtags, but both categories were retweeted more on average than tweets without any hashtags.

AVG Retweet by Mention Type
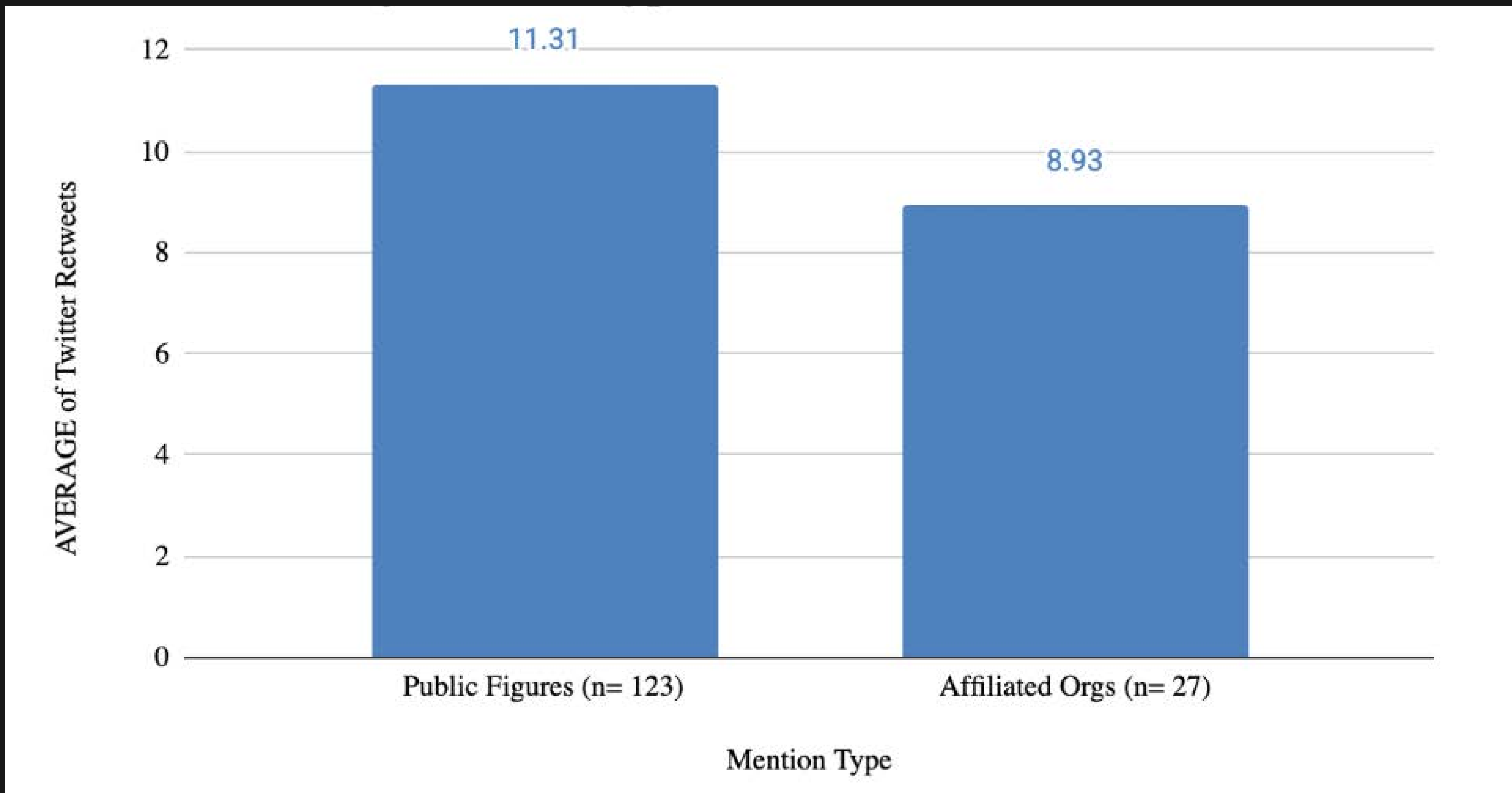
Mention Type	Total Posts in Category
Politicians	123
Affiliated Figures	27
Other Non-Profits (not pictured)	13
Other Hashtags (Not Pictures)	149

In the tweets where a mention was present, the tweets including mentions of Politicians, such as the President of the United States, State Senate, and Congress men and women, received the most retweets when compared to the second most frequent mention: affiliated organizations.

AVG Retweet by URL Target Type
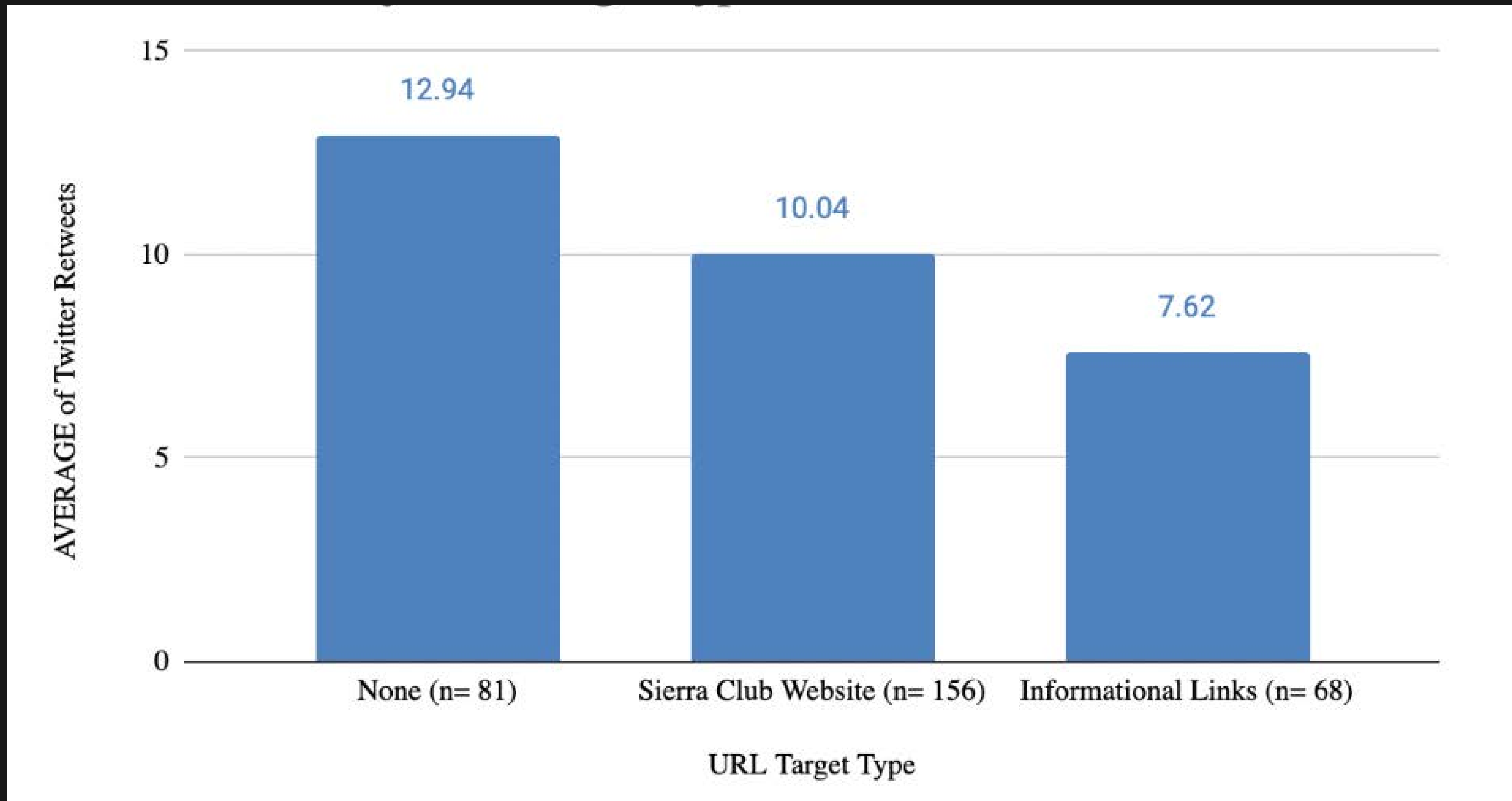
URL Target Type	Total Posts in Category
No URL	81
Sierra Club Website	156
Informational Links	68
Donational Links	7

In tweets with a URL, the ones that engaged the audience most efficiently were tweets with links to Sierra Club's own website, while links to information on other websites did not get as many retweets. However, tweets with no links received more retweets on average than tweets with links present.

Sierra Club Organization + Comparable Insights

SIERRA CLUB

Executive Summary + Questions

This report outlines using earned data within the organization insight and the comparable insight for Sierra Club. By using the tool Brandwatch, we were able to gain a plethora of information regarding the organization Sierra Club's online presence. We examined data, both from Sierra Club's social media presence, as well as comparable organization's activity, over the six month period between July 1st, 2021 and January 1st, 2022.

We examined these datasets with the following questions in mind:

- What themes drew the most interaction from Sierra Club's audience?
- What events/discussion topics brought about the most activity from users associated with Sierra Club or related organizations?
- How does the social media activity of related organizations compare to that of Sierra Club's, and in what ways do these organizations' content differ?

EARNED
DATA

ORGANIZATION

Total Mentions

61.49k

Unique Authors

25.85k

Date Range

Date: July 1, 2021 - January 1, 2022

KEY HASHTAG THEMES

Listed on the left shows the most typed hashtags that were mentioned in any twitter tweets.

KEY THEMES

On the left represents the topic wheel of the main topics an theme discussed in the organization data.
- Protecting - Climate Crisis - Climate Action
- BuildBackbetterAct -FossilFuel

Spike Analysis
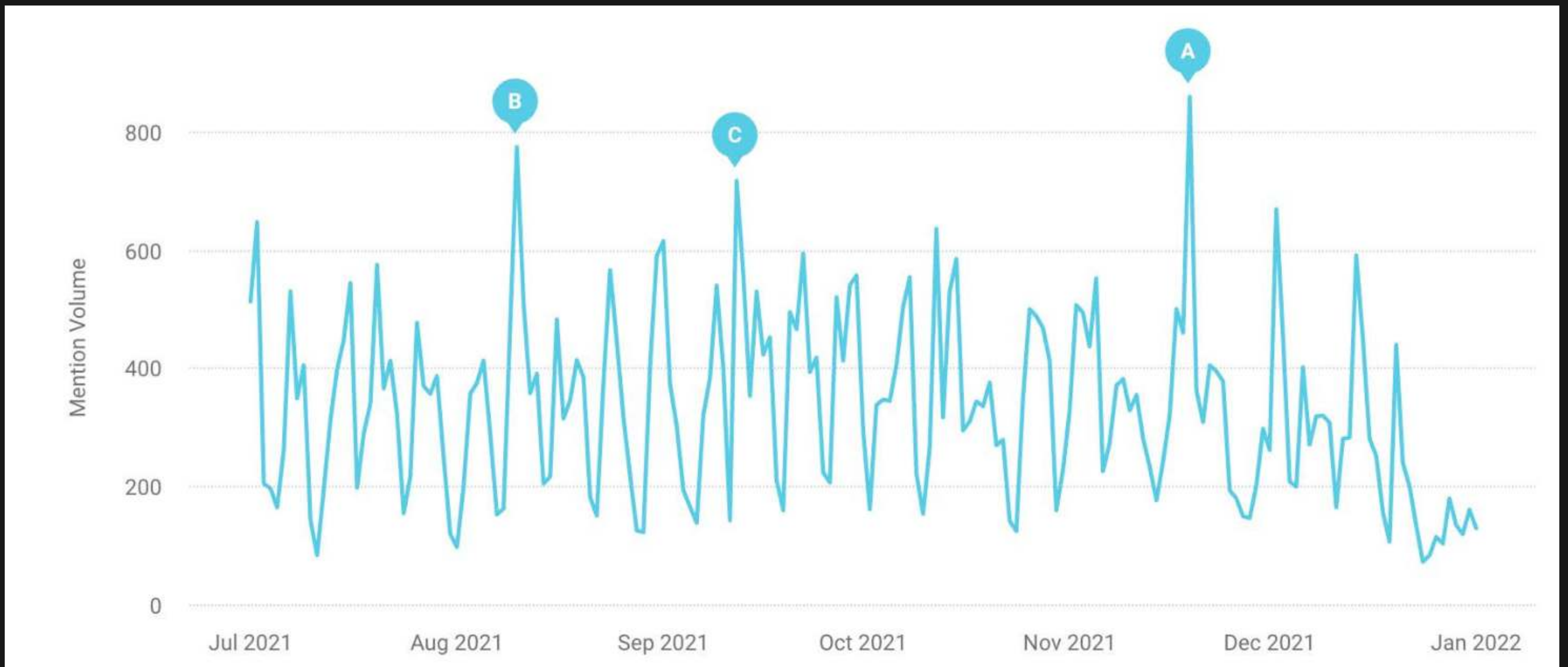
A. On November 19th, volume was up by 165%. This spike was due to the US House of Representatives passing the Build Back Better Act, a mainstay focus of Sierra Club's social media activity. The highest activity seen on this day was a thread of infographics posted by Sierra Club describing the details of the Act, and how it would become a reality.

B. On August 10th, volume was up by 139%. This is due to a proposed amendment from Alaskan Senator Lisa Murkowski, which would prevent congress from repealing a Trump-era oil & drilling program in the Arctic Refuge. Sierra Club engaged with this topic with a tweet including, "RT to tell senators: Vote NO on Murkowski Amendment 3137." The tweet received 148 retweets, and further engaged twitter users to discuss the topic.

C. On September 12th, volume was up by 121%. This was due to a huge push from Sierra Club's twitter account to demand big climate solutions be included in the budget for the then upcoming fiscal year, which starts in October. There were two tweets specifically that reached higher amounts of retweets than average. These tweets detailed ways in which congress could include these climate solutions in the budget.

Geographics

TOP COUNTRIES

United States
Canada
United Kingdom
Australia

0   10,000   20,000   30,000   40,000

TOP PROFESSIONALS

Executive
Artist
Teacher & Lecturer
Journalist

0   500   1,000   1,500   2,000   2,500

TOP INTEREST

Politics
Environment
Family & Parenting

0   2,500   5,000   7,500   10,000   12,500

49%
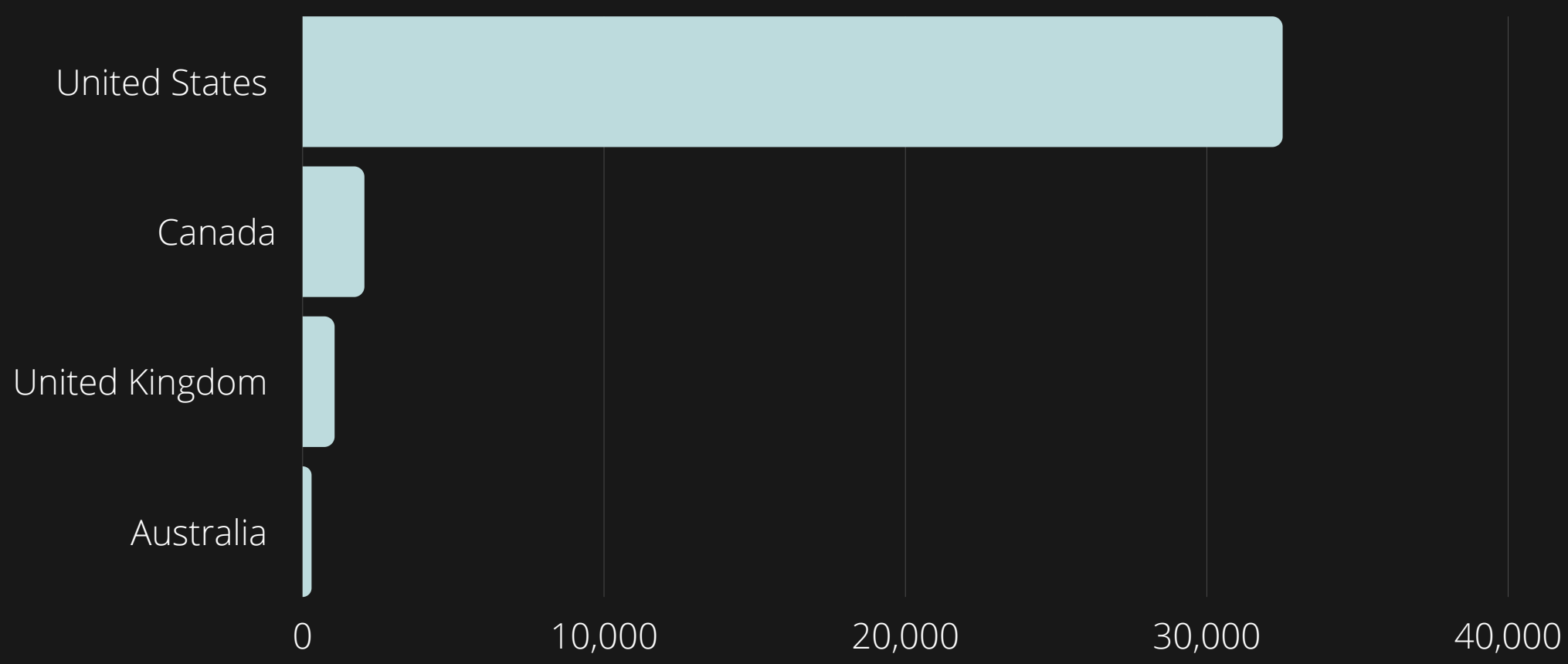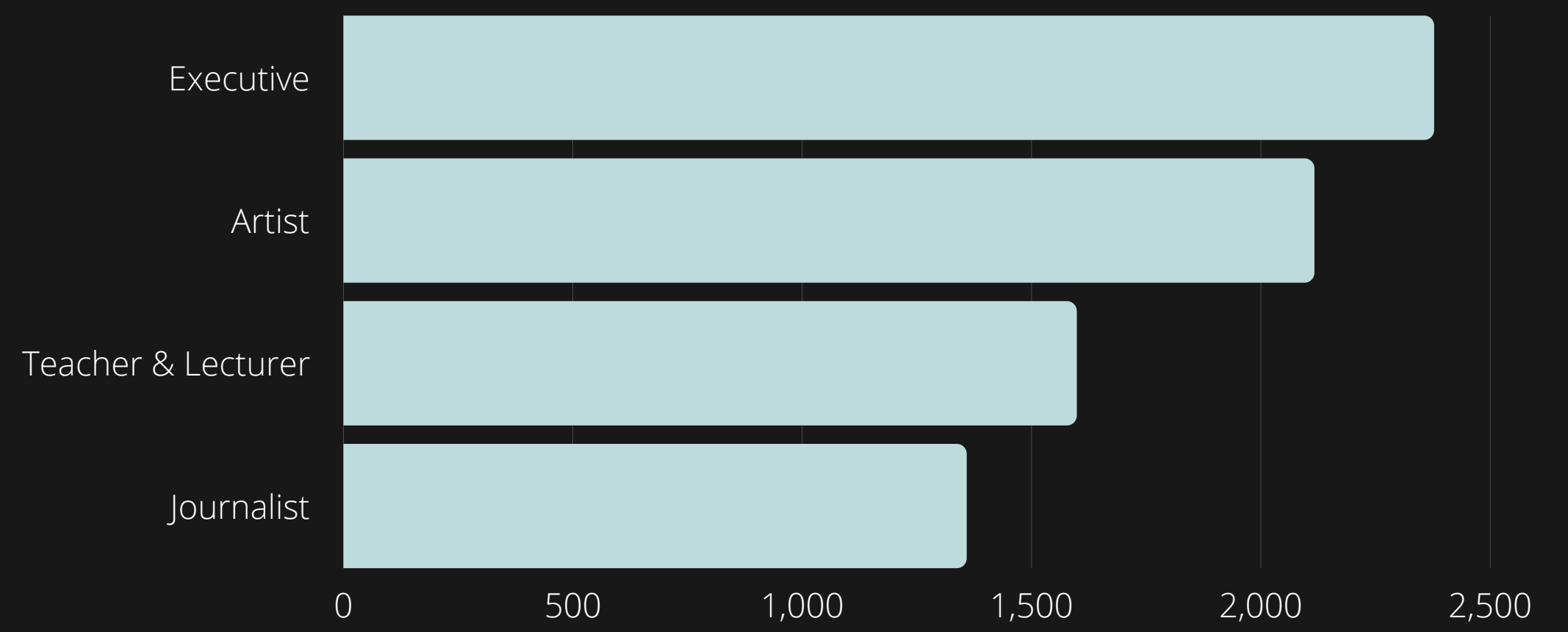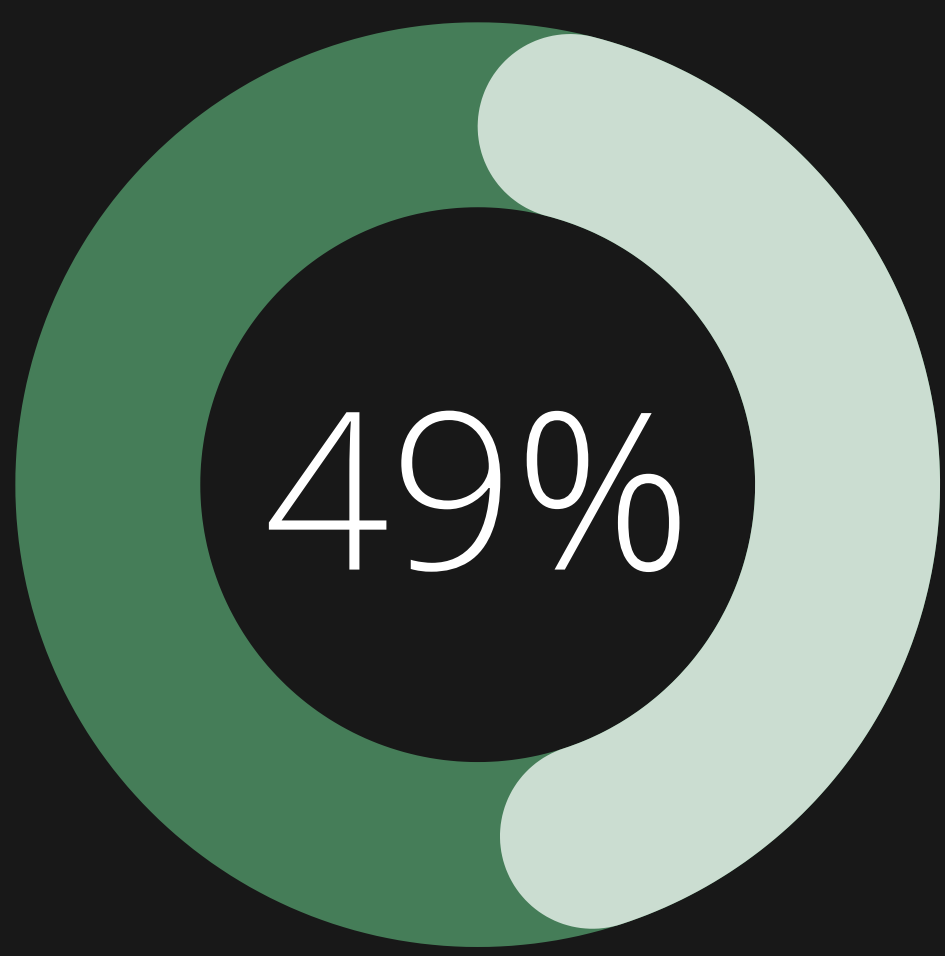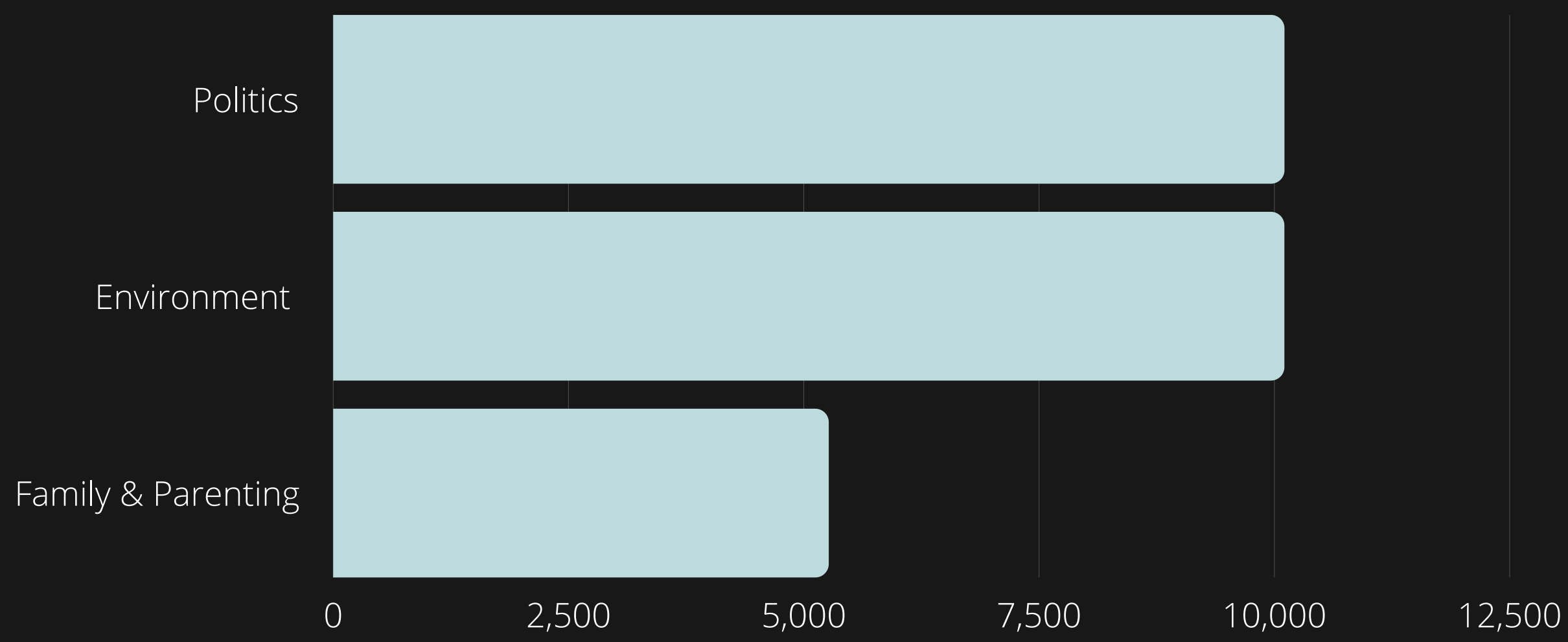
49% Males | 51% Females

17,738   18,491

Based on Brandwatch, on Twitter accounts, the majority of post tweets related to the organization, Sierra Club are slightly more females 53/47. The top interest assocaited with Sierra Club come from politics mainly from the #BuildBackBetter movement and below that is environmental and protecting the world. The top countries are United States with over 30,000 followed by Canada, United Kingdom, and Austraila.

Sentiments

The Twitter post with positive sentiment include the expressions of gratitude toward Sierra Club about their work in the environment, their advocacy, and leadership. The posts with negative sentiment include conversations about the effects of destructive effects fossil fuels, harmful mining, and climate change

By gender

MALE Sentiment FEMALE

Anger 10%
Disgust 11%
Fear 9%
joy 48%
Sadness 22%

Anger 6%
Disgust 11%
Fear 9%
Joy 53%
Sadness 21%
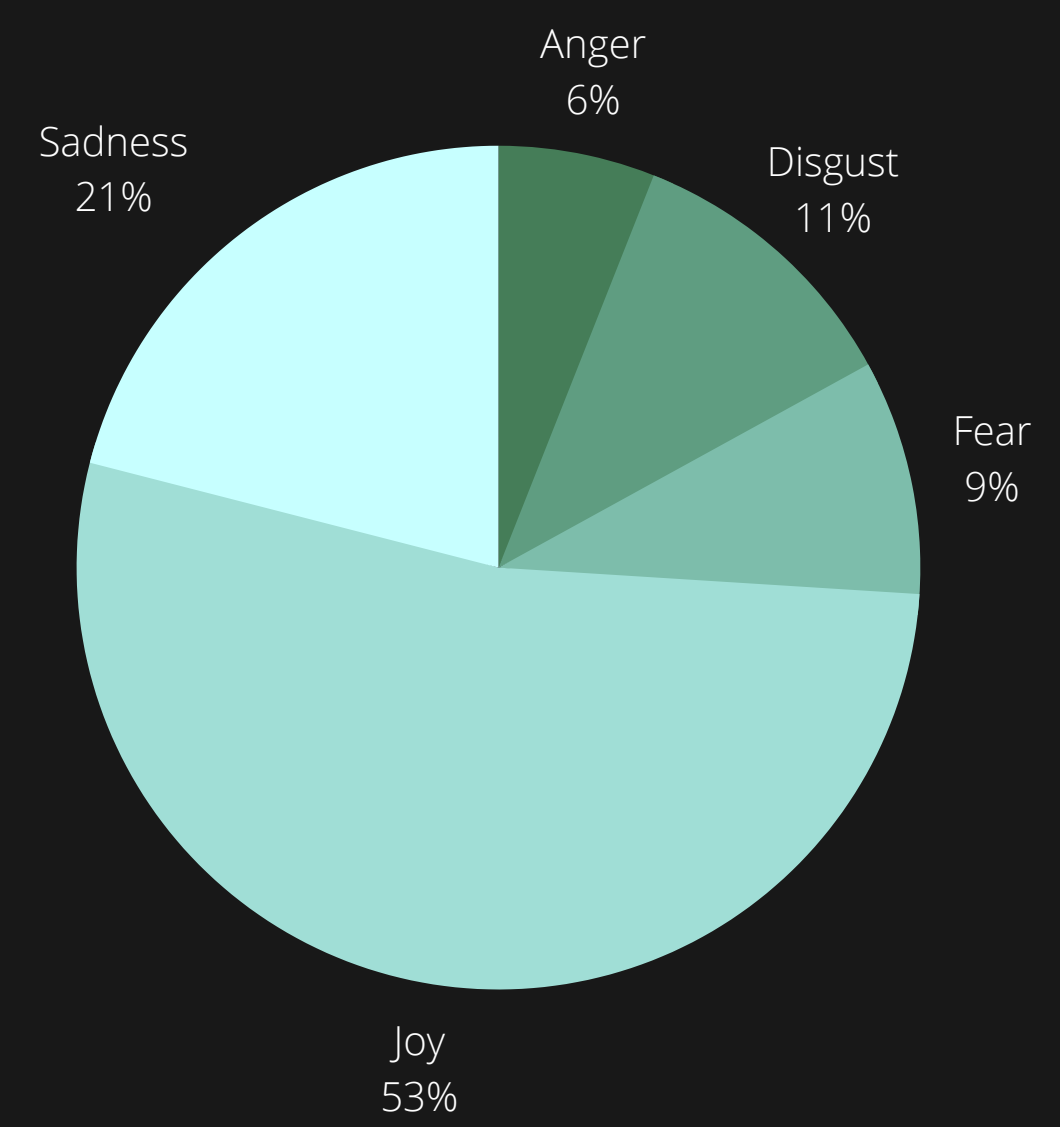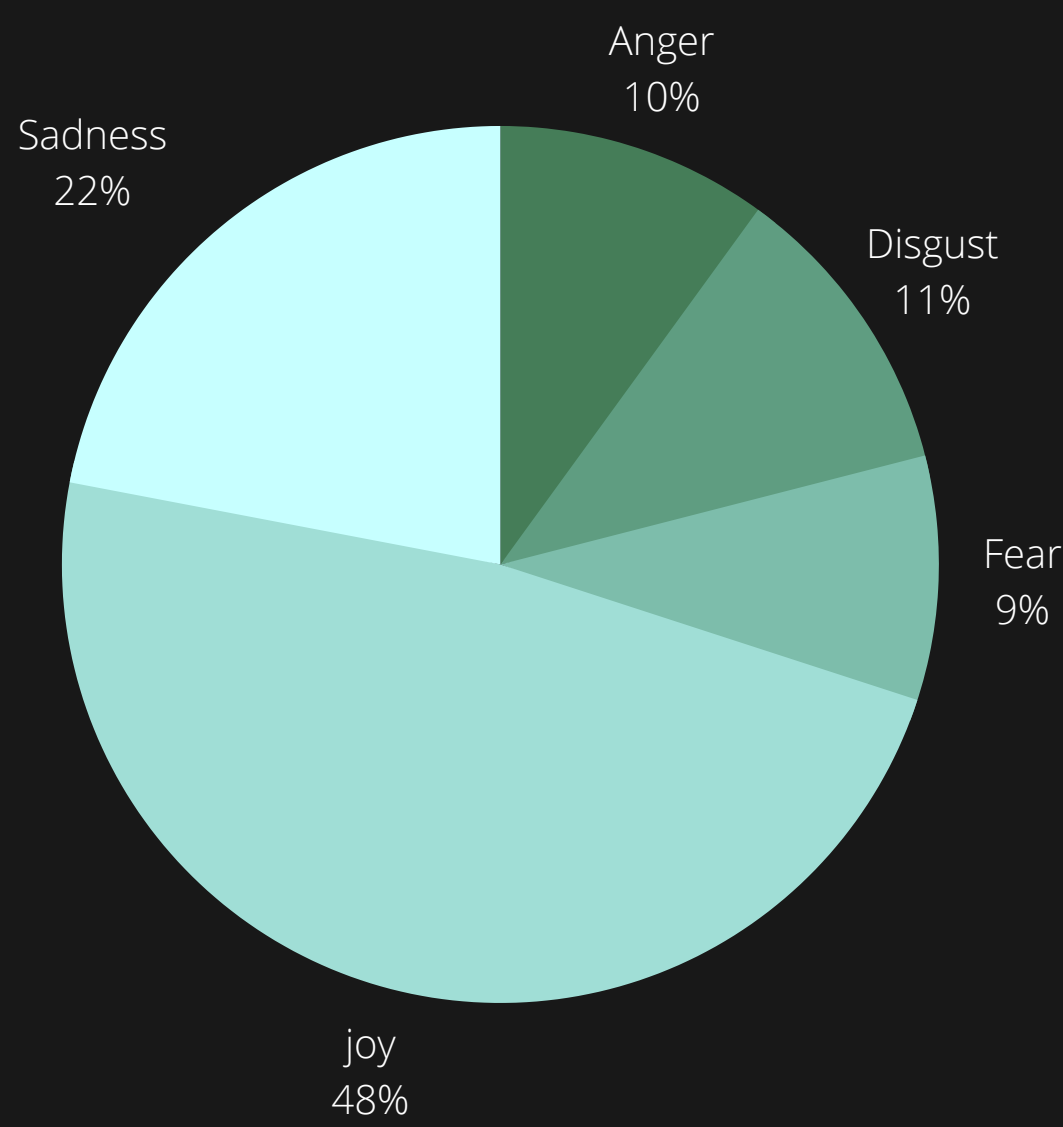
Above shows the male and female sentiment in and around the conversation of sierra club. Men tended to have more angrier sentiments then women and women tended to have more joy.

87%   87%

Opposition to nuclear energy was mainly discussed by men. Males took up 82% of the conversation.

Conversations about livestock grazing were discussed by 87% women and only 13% men.

Theme Analysis

FEMALE 56%

MALE 44%

Total Mentions

12.87k

Unique Authors

6,049k

▪ NEUTRAL ▪ NEGATIVE ▪ POSTIVE

SENTIMENT

0% 25% 50% 75% 100%

▪ Joy ▪ Sadness ▪ Fear ▪ Disgust ▪ Anger ▪ Surprise

EMOTIONS

0% 25% 50% 75% 100%
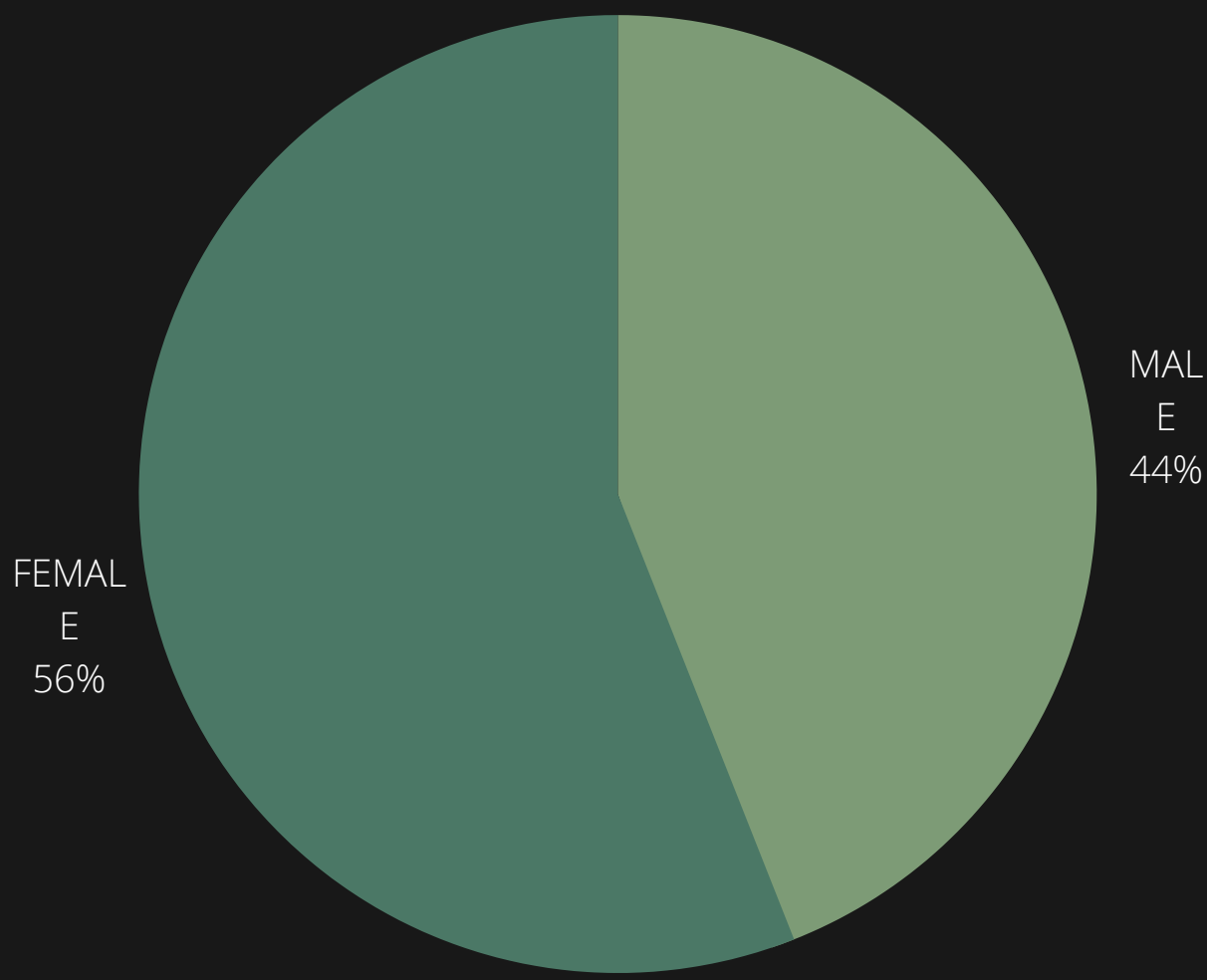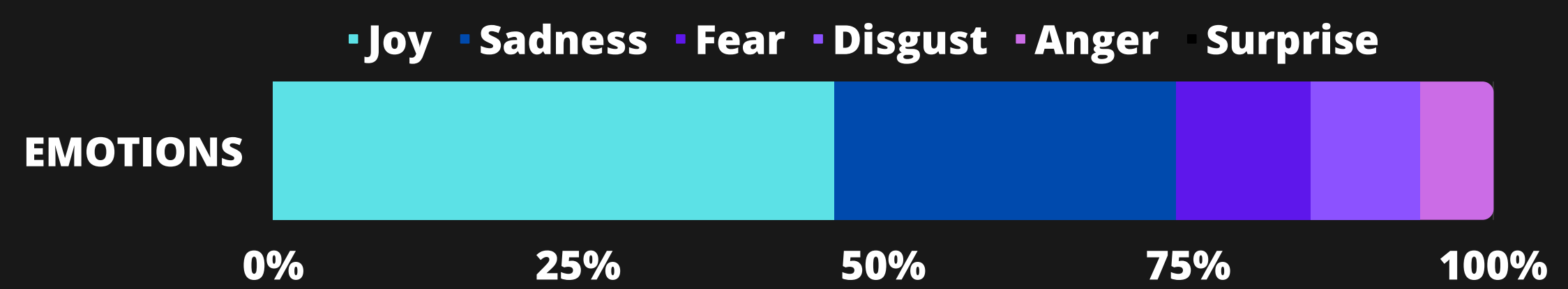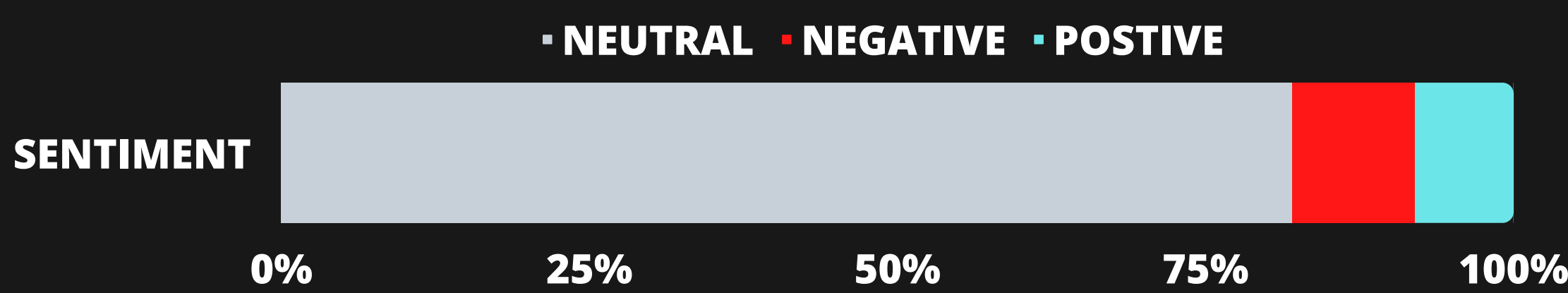
Mark Ruffalo | @MarkRuffalo | 48968 Tweets | 94339 Avg. Reach
A husband, father, actor, director, & a climate justice advocate with an eye out for a better, brighter, cleaner, & more hopeful future for all of us.

In theme #1 of our organization data set, Build Back Better is extremely prevelent amongst the data set. The theme encompassed 21.1% of total mentions. The Build Back Better Act will improve access to health care and thus, the tweets discussing the theme mention things such as President Biden, clean environment, and clean water. The theme is is mostly met with a neutral snetimate, but there is more negative sentament then positive. The authors of these mentions are 56% female and 44% male. The emotion attached to these mentions are mostly negative emotions, such as fear, anger, and sadness.
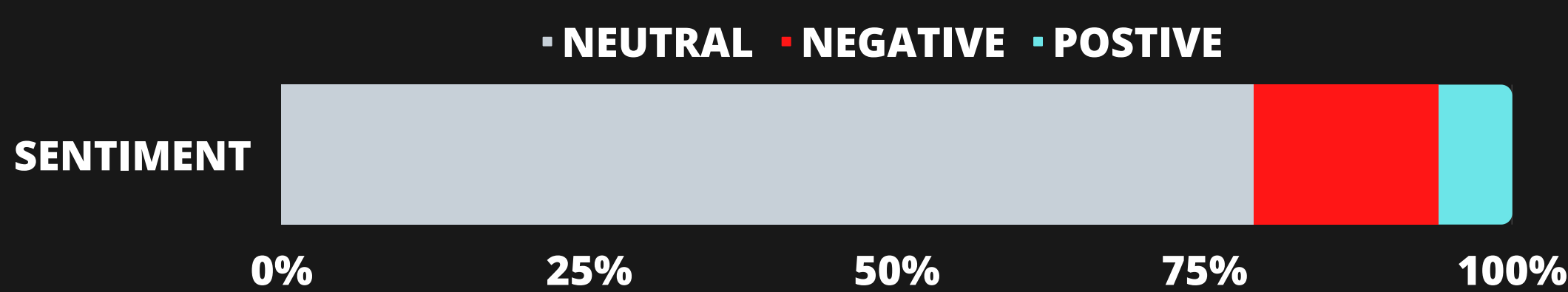
![Sierra Club logo] **SIERRA CLUB**

Theme Analysis

Female 46%

Male 54%
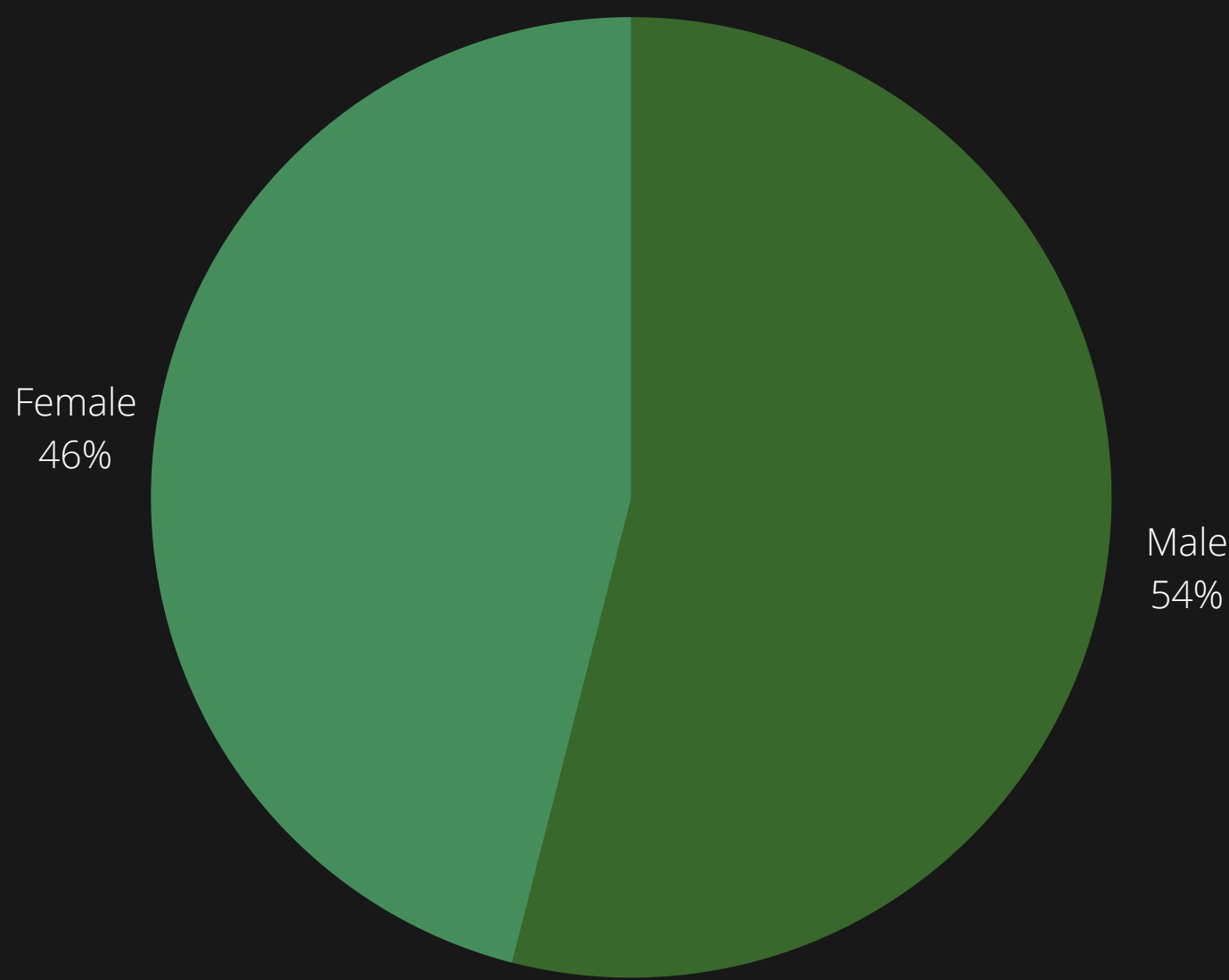
Total Mentions

7,714k

Unique Authors

4,450k

• NEUTRAL • NEGATIVE • POSTIVE

SENTIMENT

0%   25%   50%   75%   100%

• Joy • Sadness • Disgust • Anger • Fear • Surprise
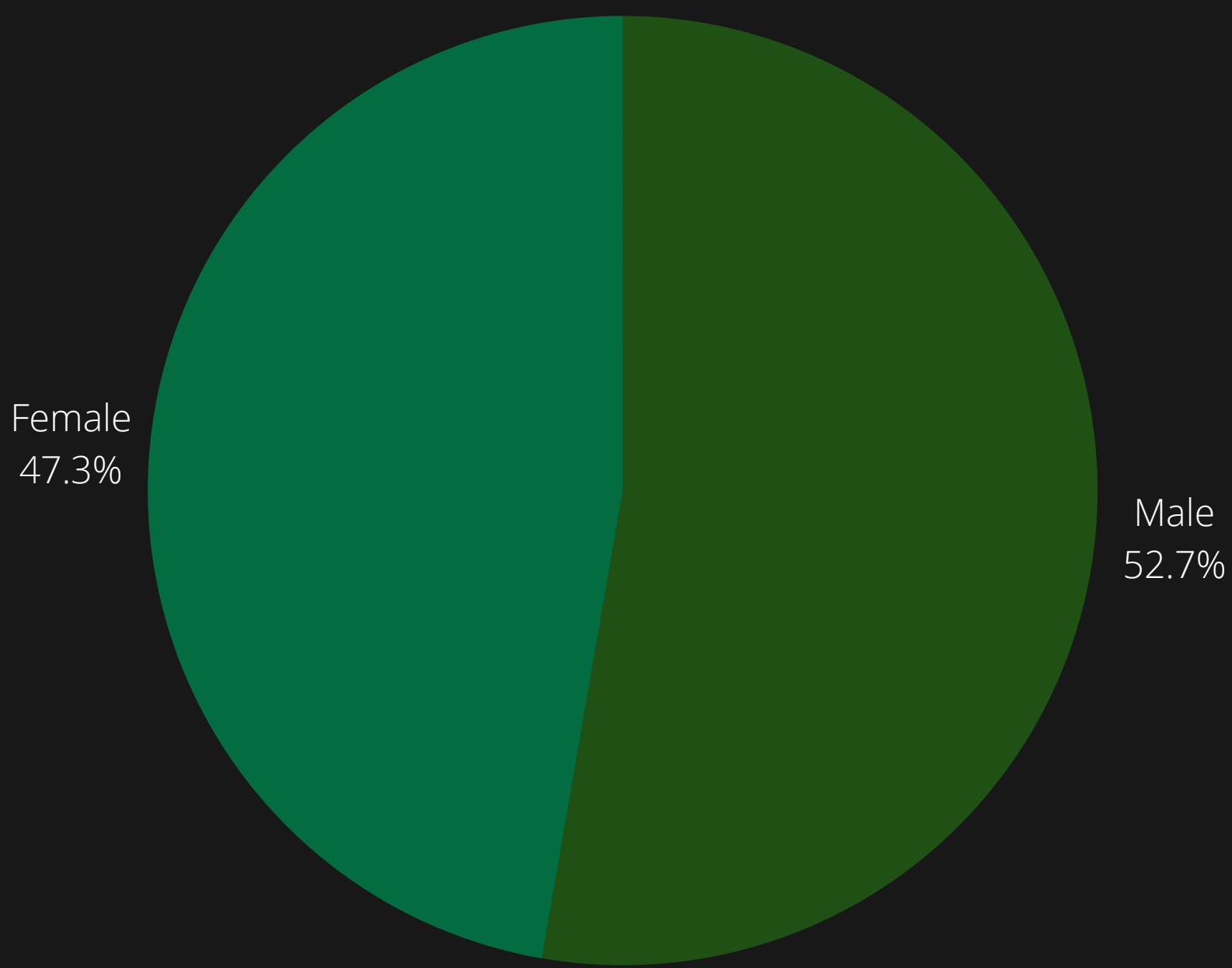
EMOTIONS

0%   25%   50%   75%   100%
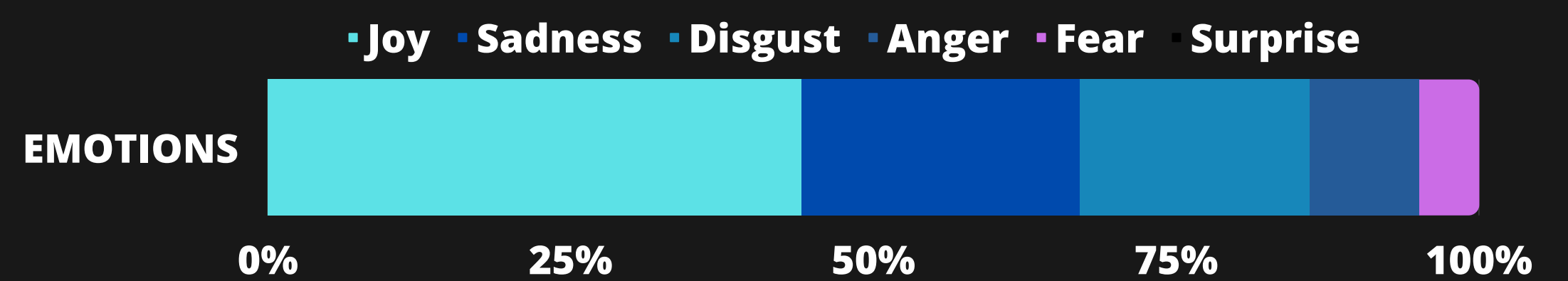
Larisa Mǎnescu   Y'all means ALL! | @LarisaManescu | 1211 Reach Comms @SierraClub, Clean Transportation for All. @PWUnion1 forever. She/Her. Views my own.

In theme #2 of our organization data set, Energy accounted for 12.6% of the total mentions. These mentions included discussion about clean energy, energy taxes, and natural gas. The sentiment about this theme was relatively split but the emotion were more negative. The negative sentiment was often discussing fossil fuels and the investments in the. The positive discussed projects that were working to ban fossil fuel. The authors were 46% female and 54% male.

Theme Analysis

Female
47.3%

Male
52.7%

Total Mentions

12.87k

Unique Authors

6,049k

NEUTRAL **NEGATIVE** **POSTIVE**

SENTIMENT

0%   25%   50%   75%   100%

Joy **Sadness** **Disgust** **Anger** **Fear** **Surprise**

EMOTIONS

0%   25%   50%   75%   100%
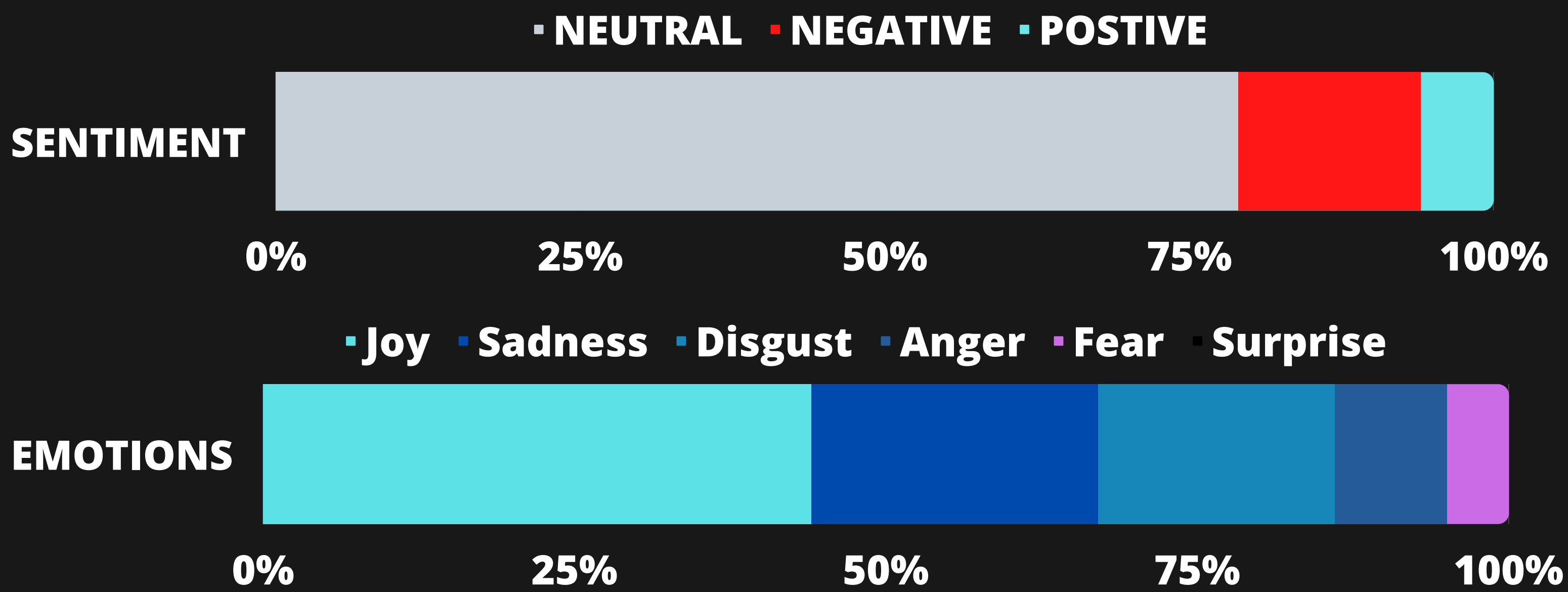
In theme #3 of our organization data set, Clean Cars accounted for 13.7% of total mentions. Within these mentions, the content being discussed Electric vehicles, transportation pollutions, and air pollution. The sentiment for this theme was more negative than positive. Some of these negative sentiments come from discussion of negative effects of pollution from transportation. The positive sentiment discusses electric vehicles and there impact on th enevironment.

Theme Analysis

Female
54%

Male
46%
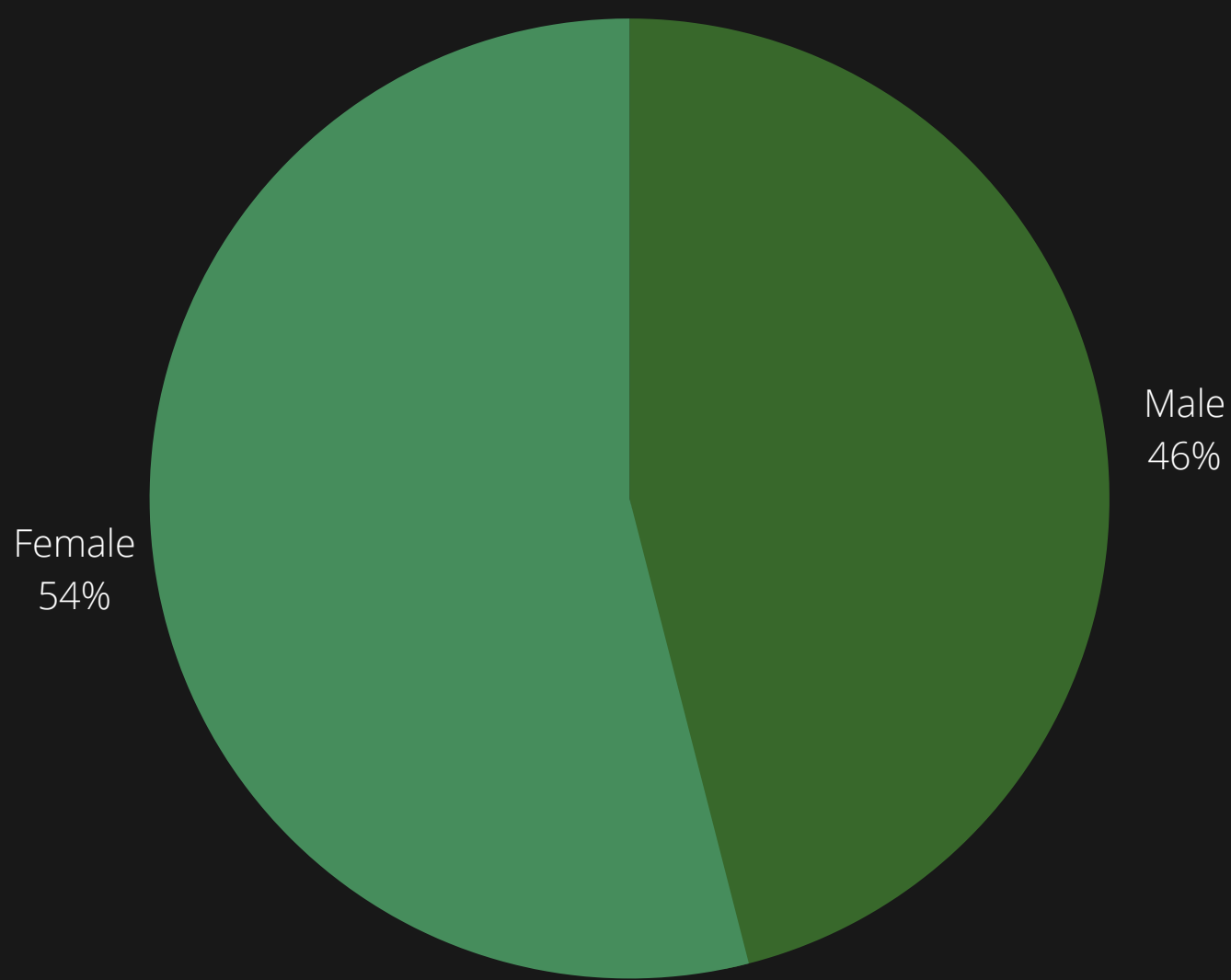
Total Mentions

3,692k

Unique Authors

2,224k

SENTIMENT

0% 25% 50% 75% 100%

EMOTIONS

0% 25% 50% 75% 100%
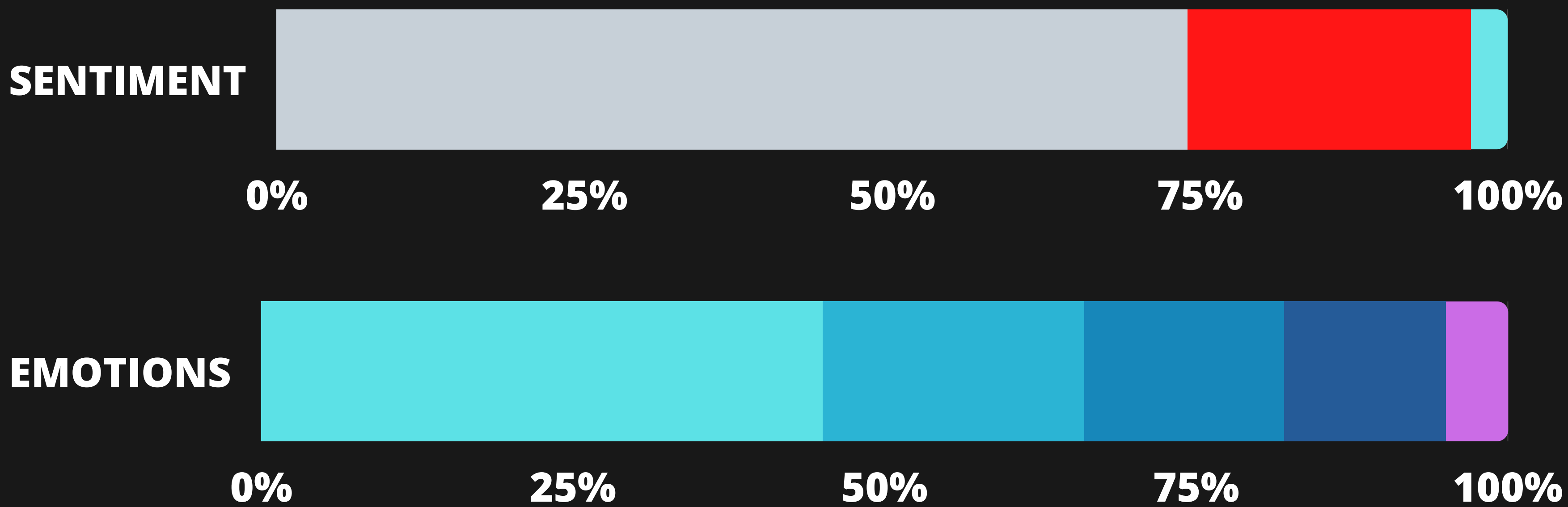
In theme #4 of our organization data set, Fracking accounted for 6% of the total mentions in the data set. In this theme, the things often discussed involved oil wells, fracking and pipelines. The negative sentiment in this theme focused on pipelines that would threaten clean water, oil spills, and ecological disasters. The positive sentiment focused on progress in the fight against big oil and fracking.

EARNED
DATA

Comparable
Organization

In order to gain a greater understanding of how Sierra Clubs posts perform in comparison to their competitors, we analyzed data from Sierra Club social media (mainly Twitter) as well as from the following similar organizations

1) Earth Justice (@EarthJustice)

2) NRDC (@NRDC)

3) 350 Dot Org (@350)

4) The Nature Conservancy (@Nature_org)

Earth Justice 21.1%

NRDC 22%

350 Dot Org 11.7%

Sierra Club 25%

The Nature Conservancy 20.2%
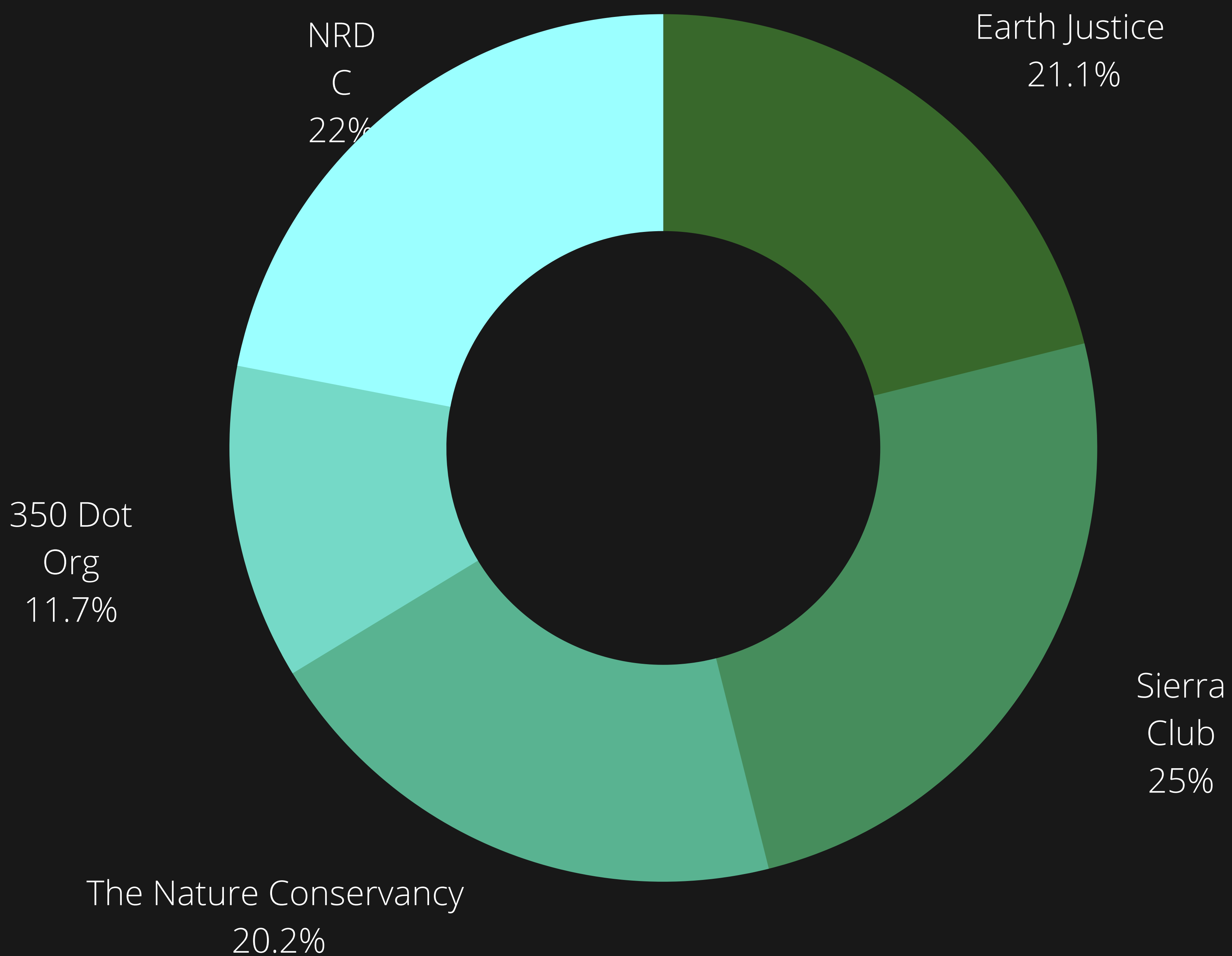
Spike Analysis
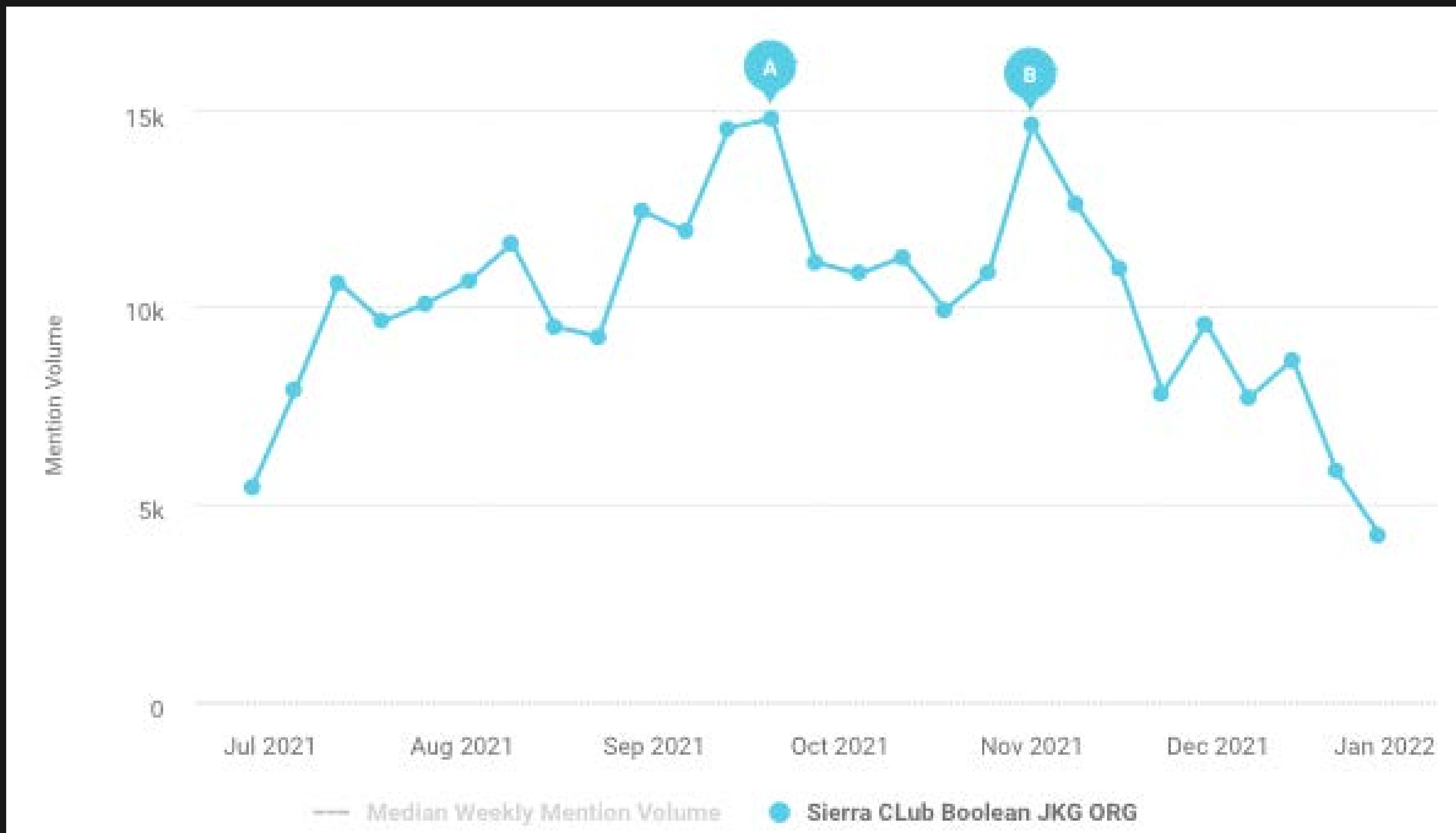
A. The post ranging from September 13 - 26, 2021 experienced a volume that was 39% higher than usual. On those days, post that included related topics experienced a total mention of 14,765. This was mainly driven by a famous celebrity, Camila Cabello mentioning congress to take action in protecting people & places. This post received 1,738 retweets, over 10k likes and reached over 1,000,000 people. This was spiked by the organization NRDC.

B. These post ranging from November 1-7, 2021 experienced a volume 37% higher than usual. This was driven by a post made by Aaditya Thackeray. This post mentioned reached 49,8468 , over 5k likes, and received 731 retweets. This was spiked by the organization NRDC

Top Hashtags

SIERRA CLUB

#BUILDBACKBETTER
#BUILDBACKBETTERACT
#STOPLINE3 #CLEANERCARS
#CLIMATEACTION #CLIMATECRISIS #CLIMATECHANGE

EARTH JUSTICE

#FREEDOM #JUSTICE #RIGHTS #ENDANIMALCRUELTY
#TREES #ENDINJUSTICE

THE NATURE CONSERVANCY

#NATURE #COP26 #CLIMATECHANGE
#NATUREPHOTOGRAPHY #CLIMATEACTION

350 DOT ORG

#CLIMATECRISIS #CLIMATEEMERGENCY #COP26
#CLIMATE #FOSSILFUELS

NATURAL RESOURCE DEFENSE COUNCIL

#OFFSHOREDRILLING #CLIMATECHANGE
#CLIMATECRISIS #ENERGY#NRDC

These hashtags that each competiive organization use correlates with the usage of each hashtags and the popularty of each. Most the hashtags mention in each organization has special cause that demonstrates what each organization are fighting against.

Sentiments
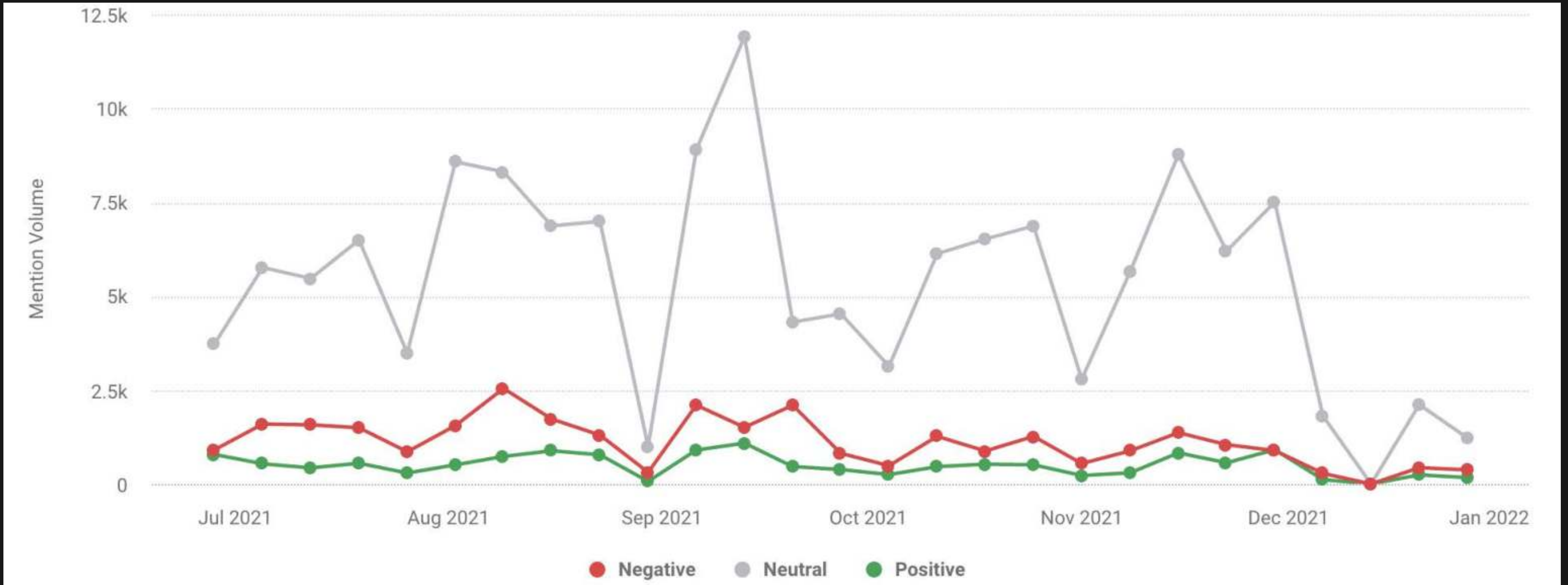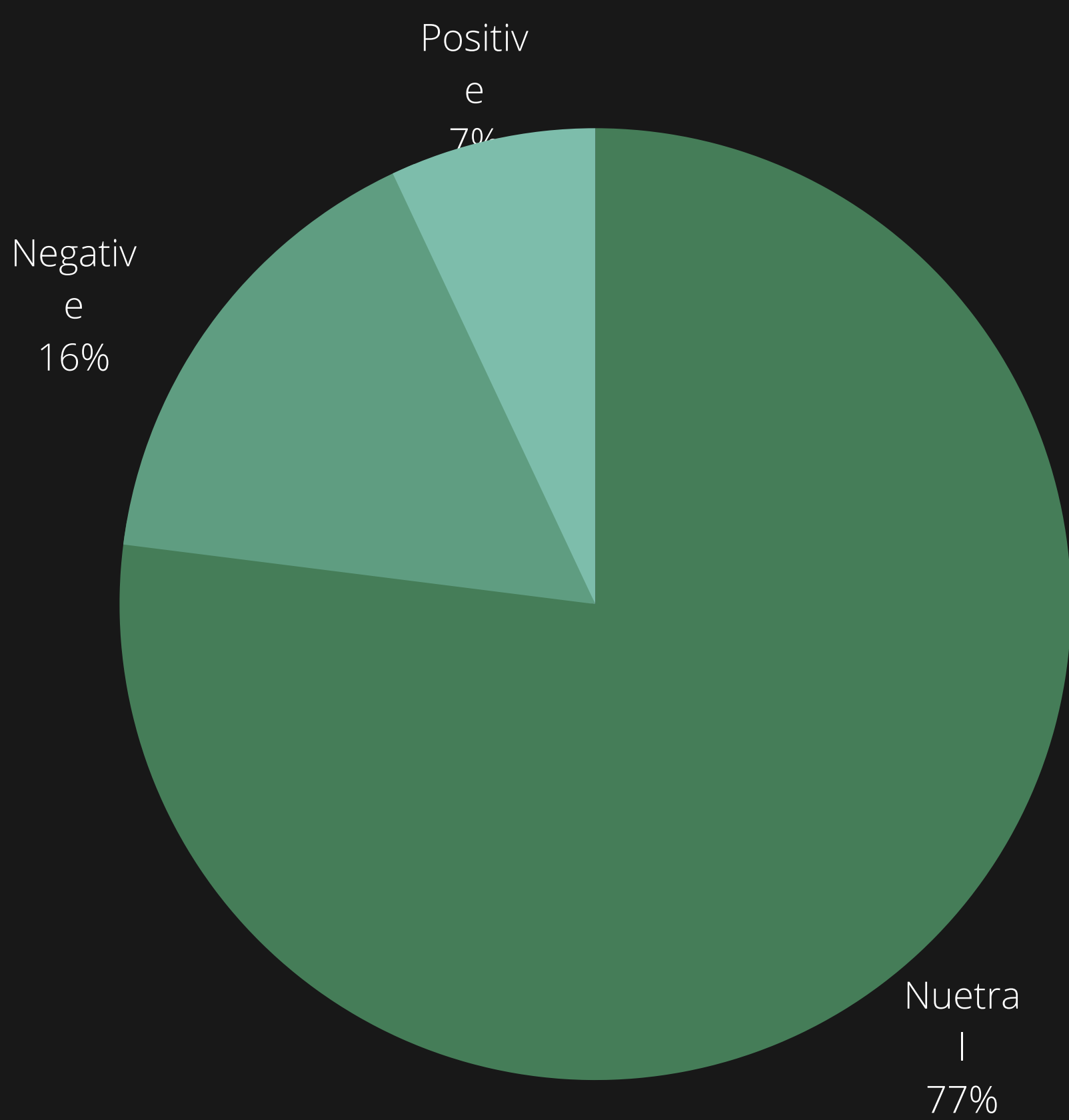
The negative sentiment throughout the conversations of comparable organizations often discussed the consequences of oil and gas drilling and the racial disparity in people surrounding power plants and the higher risks of premature death from power plant pollution.

The Positive discourse discussed the positive impacts of passing the Build Back Better Act and the use of legal action to protect the environment.

Topic
Conversation

SIERRA
CLUB

Executive Summary

This report outlines the analysis of the topic of conversation surrounding electric vehicles. By using the tool Brandwatch, we were able to gather a profusion of data that could give us insight to details about what is being discussed, who is discussing this topic, and how they tend to feel about the topic. Using Custom Classifiers, we trained Brandwatch to classify posts into themes, by manually assigning a small number of posts into buckets, allowing BW to learn what they have in common, and apply it to the rest of the dataset. We ended up using the same metrics to characterize each theme with in the topic of electric vehicles. We examined data, both from Twitter, as well as cross platform social media, over the six month period between July 1st, 2021 and January 1st, 2022.

We examined these datasets with the following questions in mind:

- What themes drew the most interaction within the topic set?
- What key information can we gain through these sub-topics?
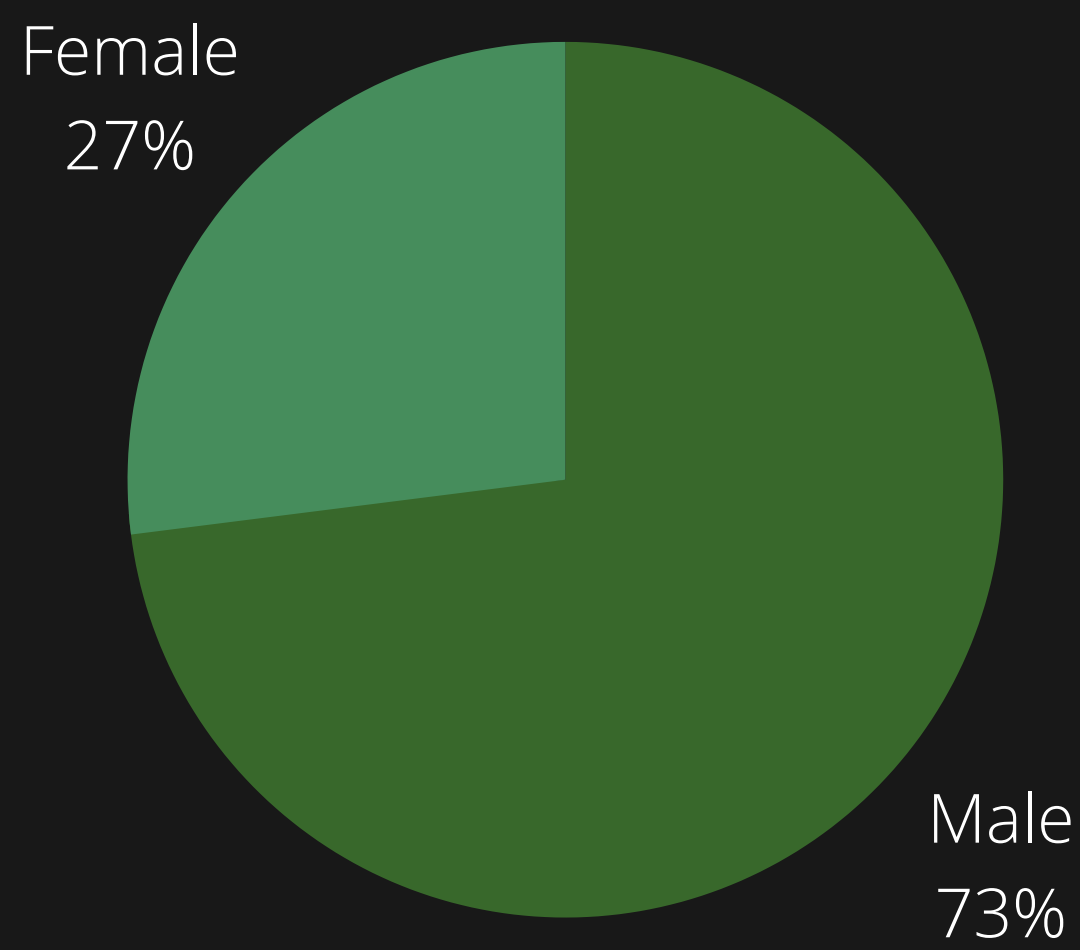
Cross Platform

Topic Data Analysis
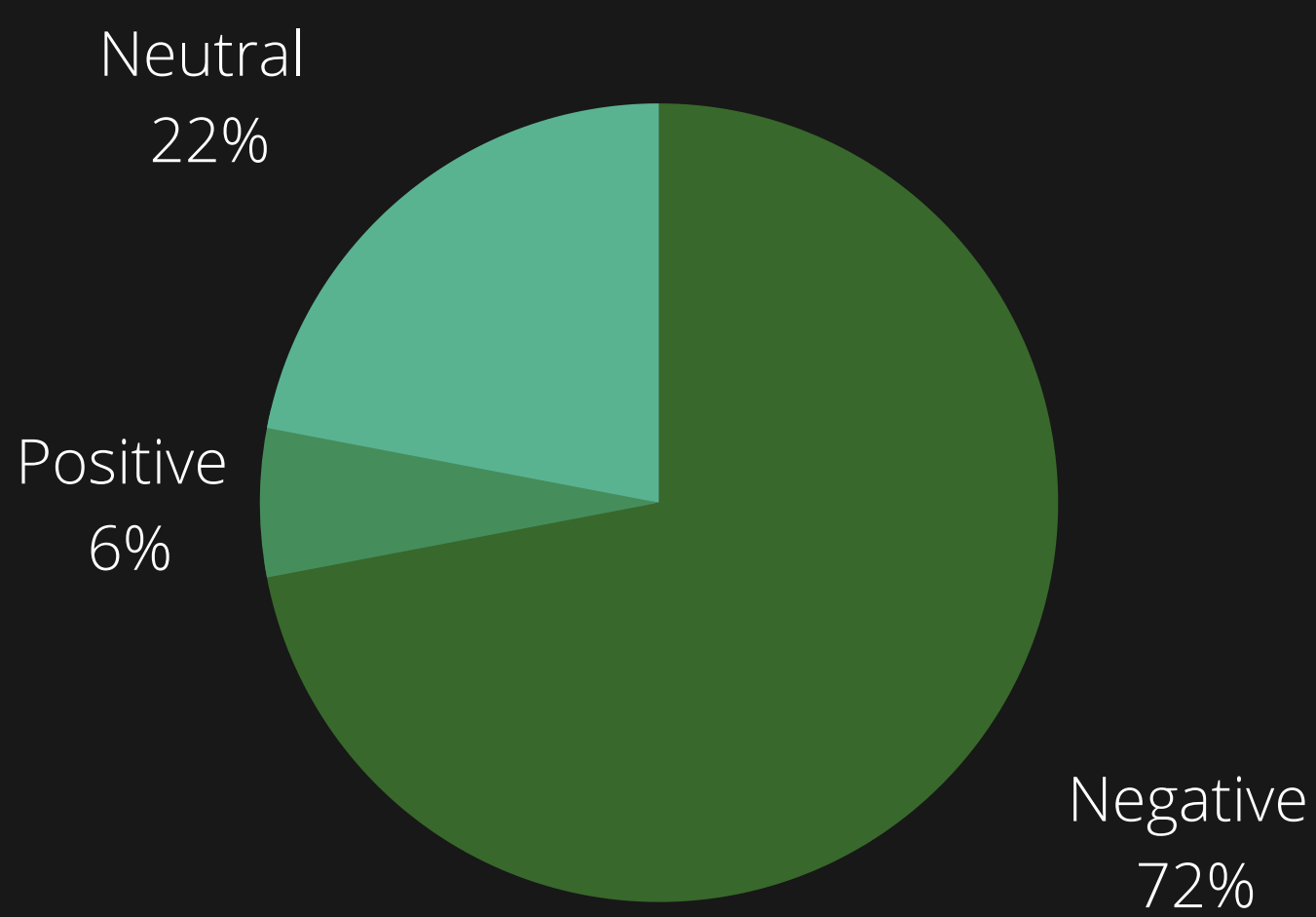
Total Mentions

670.23k

Unique Authors

334.45k

Date Range

Date: July 1, 2021
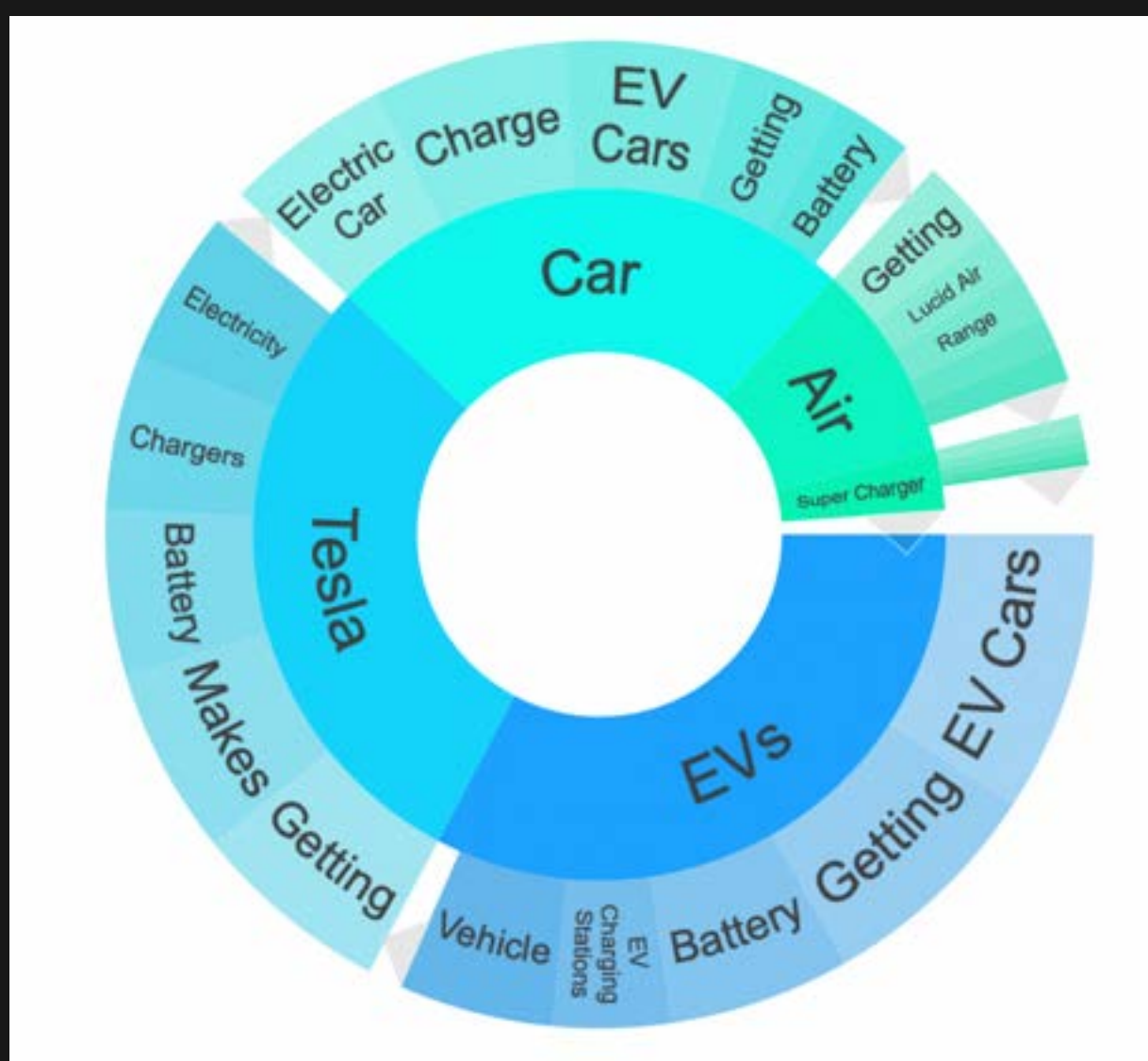- January 1, 2022

Female
27%

Male
73%

Gender Breakdown for all Platforms

Among all platforms including Reddit, Tumblr, and Twitter, the gender split is more favored to males at 73% compared to females which stands at 27%

Neutral
22%

Positive
6%

Negative
72%

Sentiment Breakdown for all Platforms

Among all platforms including Reddit, Tumblr, and Twitter, the sentiment for negative is at its highest with 72% negative setiments.

Topics Wheell for all Platforms

Among all platforms for the topic wheel, the most talked topics is car, Tesla, EV's, air, and super charge.
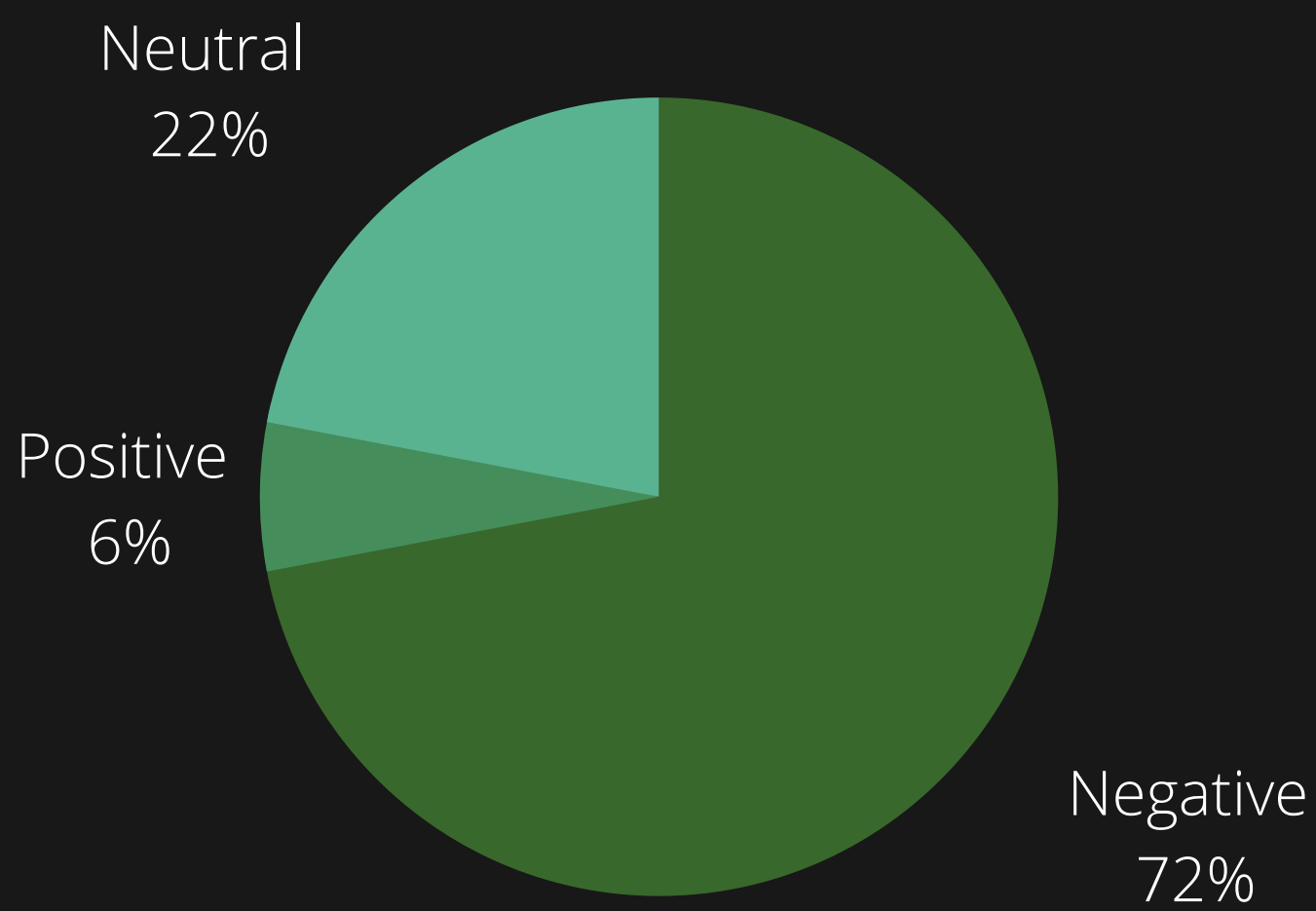
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Date Range

Date: July 1, 2021
- January 1, 2022

Female
27%

Male
73%
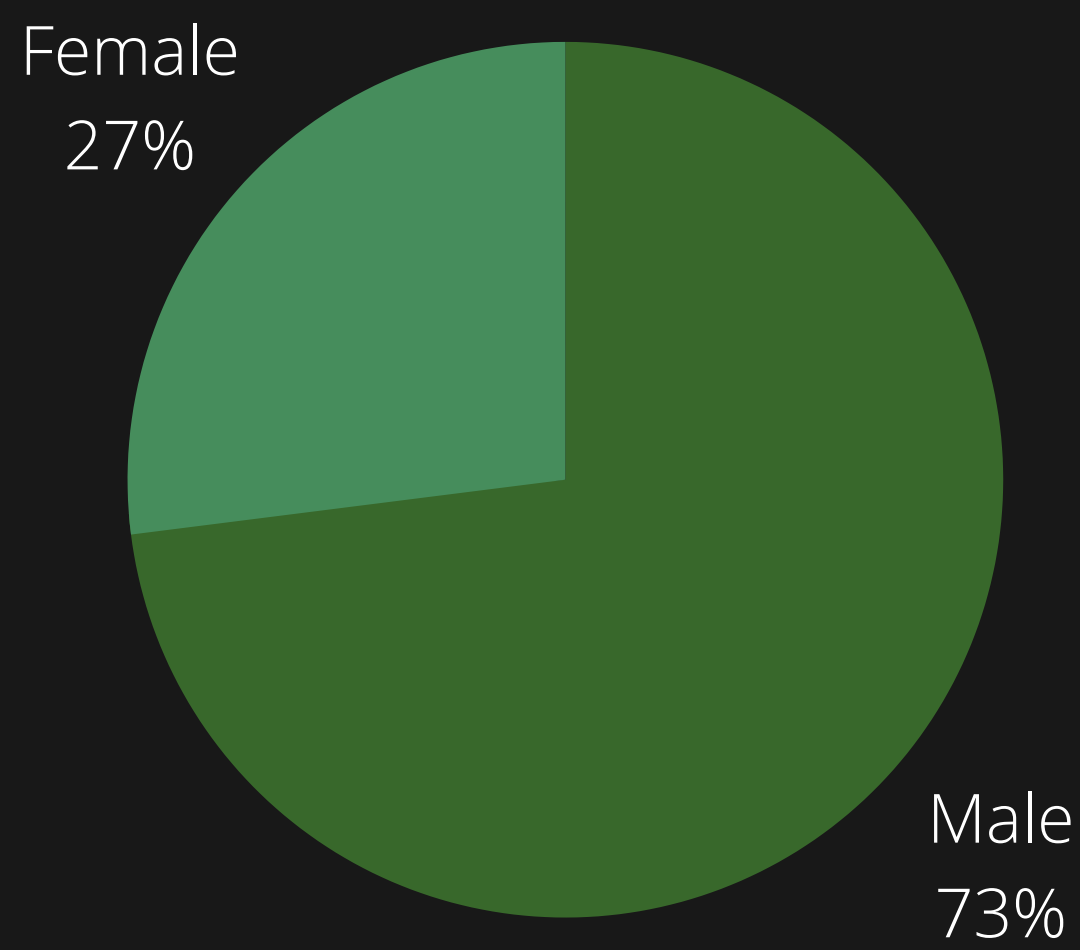
Total Mentions: 152.91k
Unique Authors: 65.53k

Neutral
22%

Positive
6%

Negative
72%

Total Mentions: 497.98k
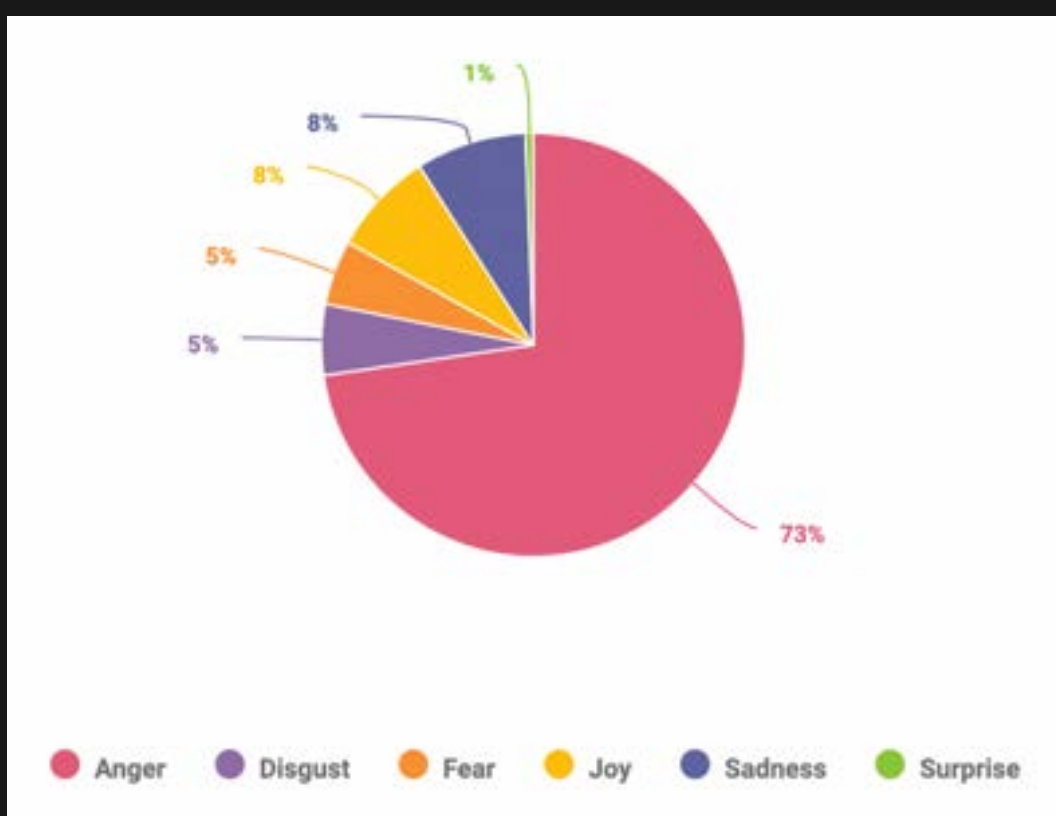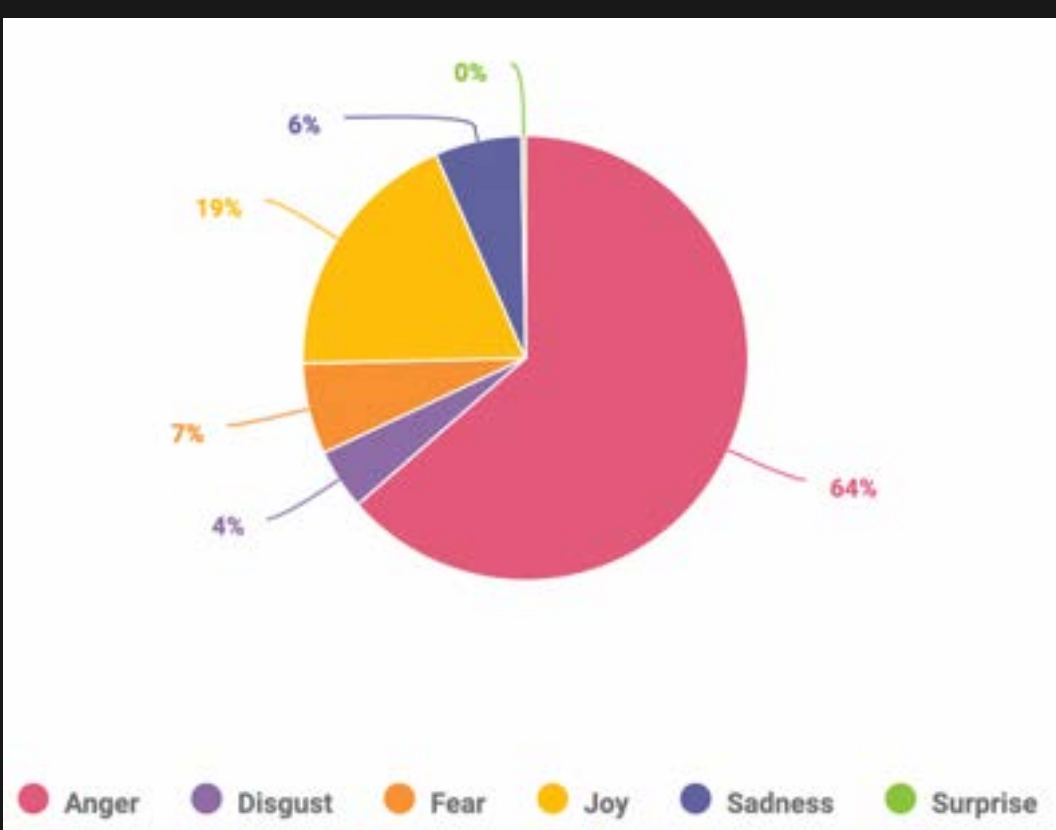Unique Authors: 263.75k

N/A

Tumblr

Total Mentions: 19.34k
Unique Authors: 6,290

Cross Platform Sentiment & Emotions Across Platform

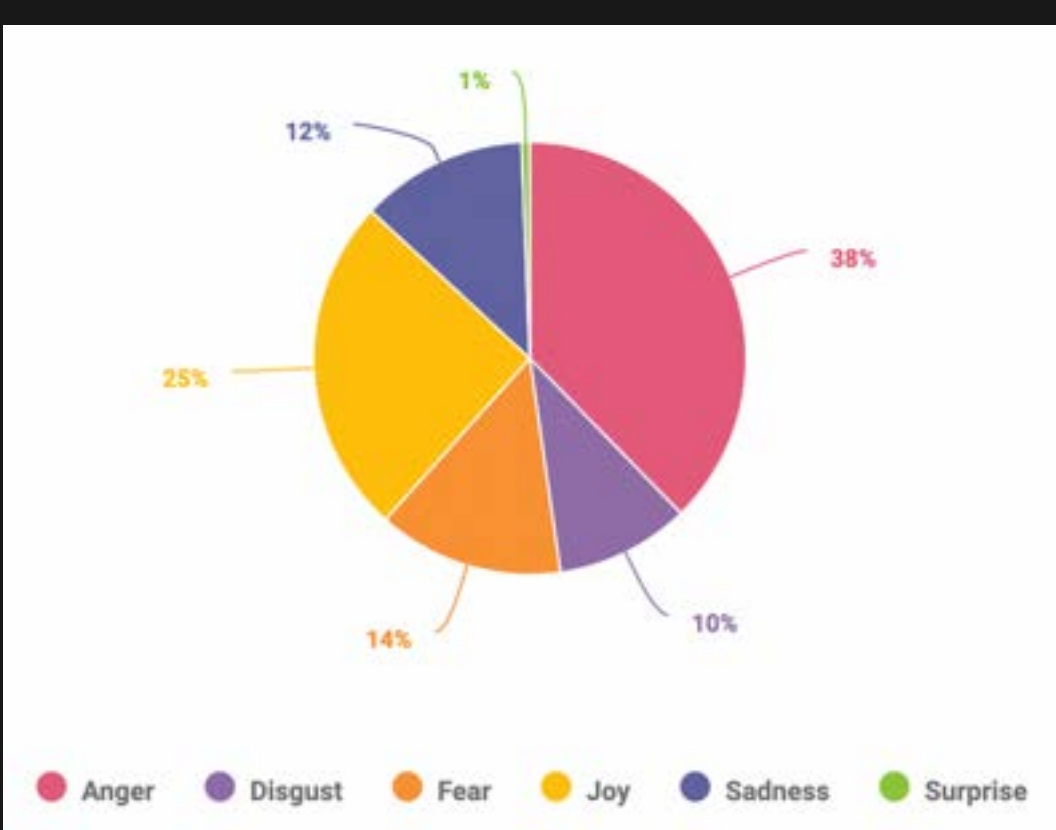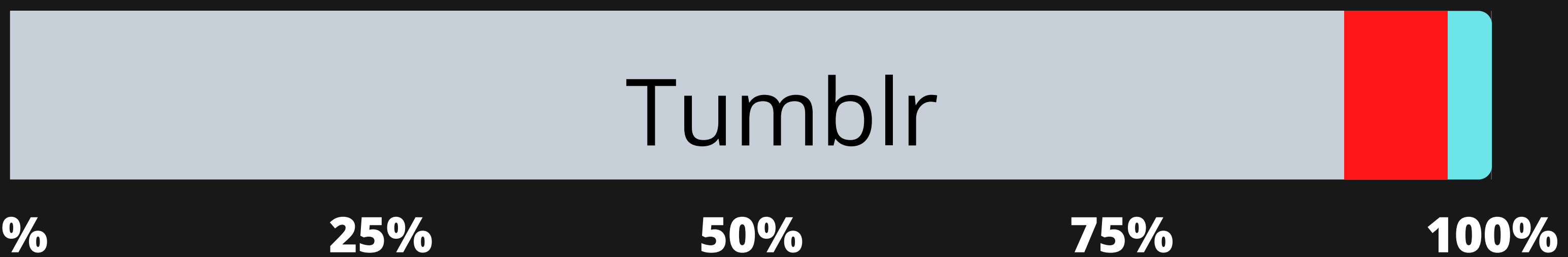**SENTIMENT**

Reddit

0%   25%   50%   75%   100%

The sentiment across all platforms for Reddit is the highest at 67% and with over 70% anger emotions with very little positive emotions.

SENTIMENT

Twitter

0%   25%   50%   75%   100%
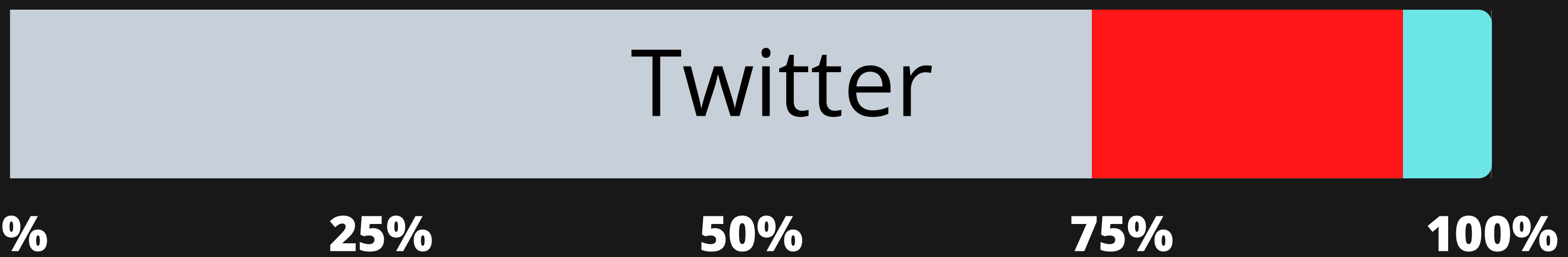
The sentiment across all platforms for Twitter is the highest at 73% and with 64% anger emotions with very little positive emotions.

SENTIMENT

Tumblr

0%   25%   50%   75%   100%

The sentiment across all platforms for Tumblr and has the least anger emotions compared to other media platforms at only 38% anger emotions.

Narrative Sentiments Across All Platforms

VictoryDay_Hope (Lee) @VictoryDay_Hope — 30 Oct
COP26 in Glasgow. 20 **Tesla** cars brought to ferry then 50 miles back and forth. Gleneagles has one **charging** station. Malcolm Plant Hire contracted to supply diesel and generators to recharge the Teslas overnight. Talk about take the piss. 😡

JKG EV CLASSIFY: Charging Station

SamiZayn (Sami Zayn) @SamiZayn — 14 Aug
RT @GoodPoliticGuy If every person on earth just recycled, stopped using plastic straws, and drove an **electric car**, 100 corporations would still produce 70% of total global **emissions**.

JKG EV CLASSIFY: EV Production

The negative conversation across all platforms mainly discuss the issues with electric vehicles and its way moving into the society causing many negative reactions with its effects. Authurs with negative sentiment mainly spoke on the lack of infrastructure for EV to make the impact on the environment they are meant to.

LucidMotors (Lucid Motors) @LucidMotors — 15 Nov
The longest range car of the year. The fastest **charging** car of the year. The most advanced **electric car** of the year. And this is only year one. #LucidAir @MotorTrend
https://t.co/KGCp8Mdy9b

JKG EV CLASSIFY: Legislation

ArvindKejriwal (Arvind Kejriwal) @ArvindKejriwal — 13 Dec
I'm glad Delhi is emerging as the **EV** capital of India with a 9% share of EVs. Delhi is doing everything possible to reduce its contribution to **pollution**.

JKG EV CLASSIFY: EV Production

The positive conversation across the platform of Reddit, Tumblr, and Twitter discusses the positive impacts of electric cars in reducing pollution, saving the planet and producing a car with longevity and reliability. Positive sentiment discussion touched upon low CO2 emmissions of electric cars and saving money on gas.
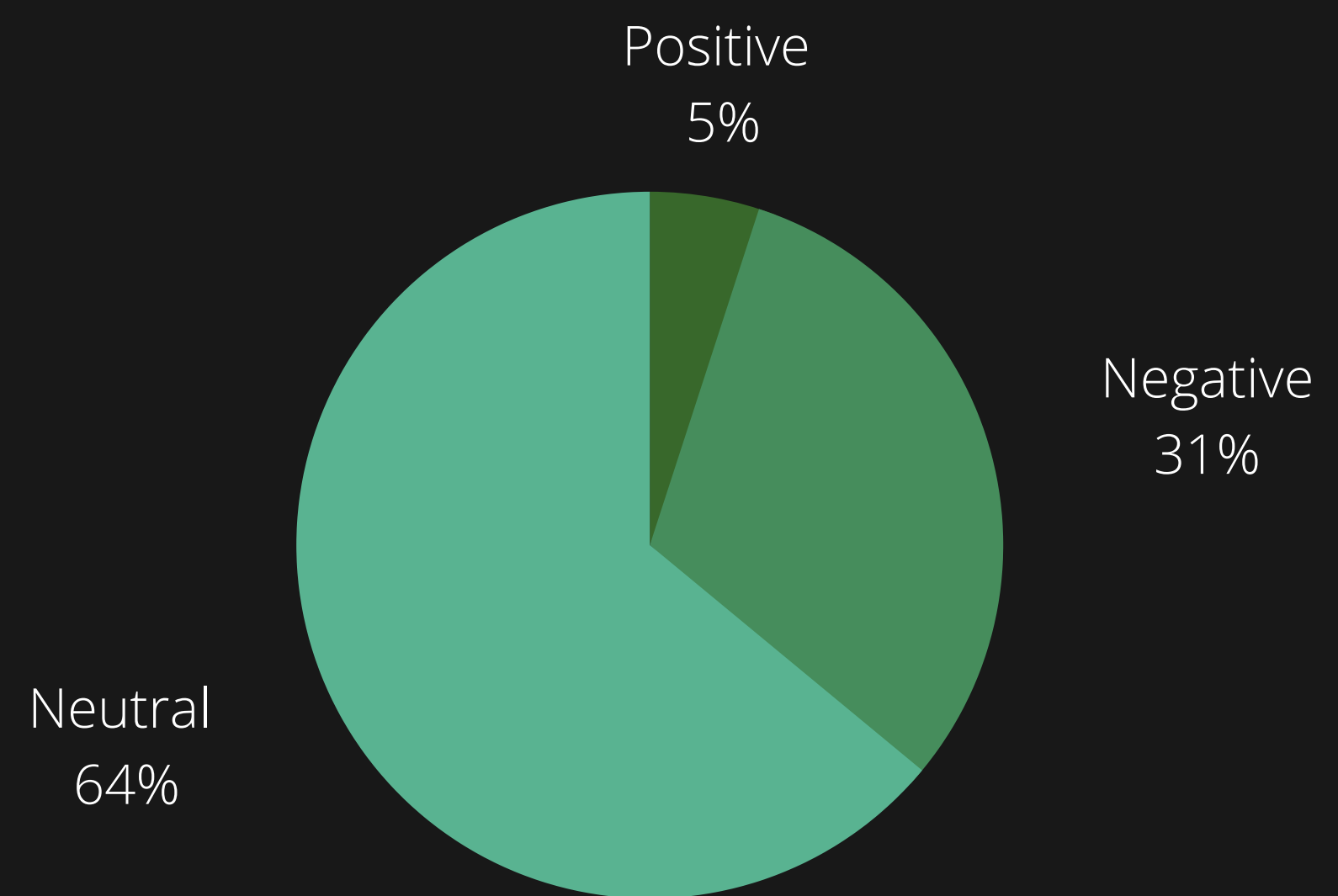
Gender Based Differences Across Twitter

Sentiment

Male

Positive
6%

Negative
21%
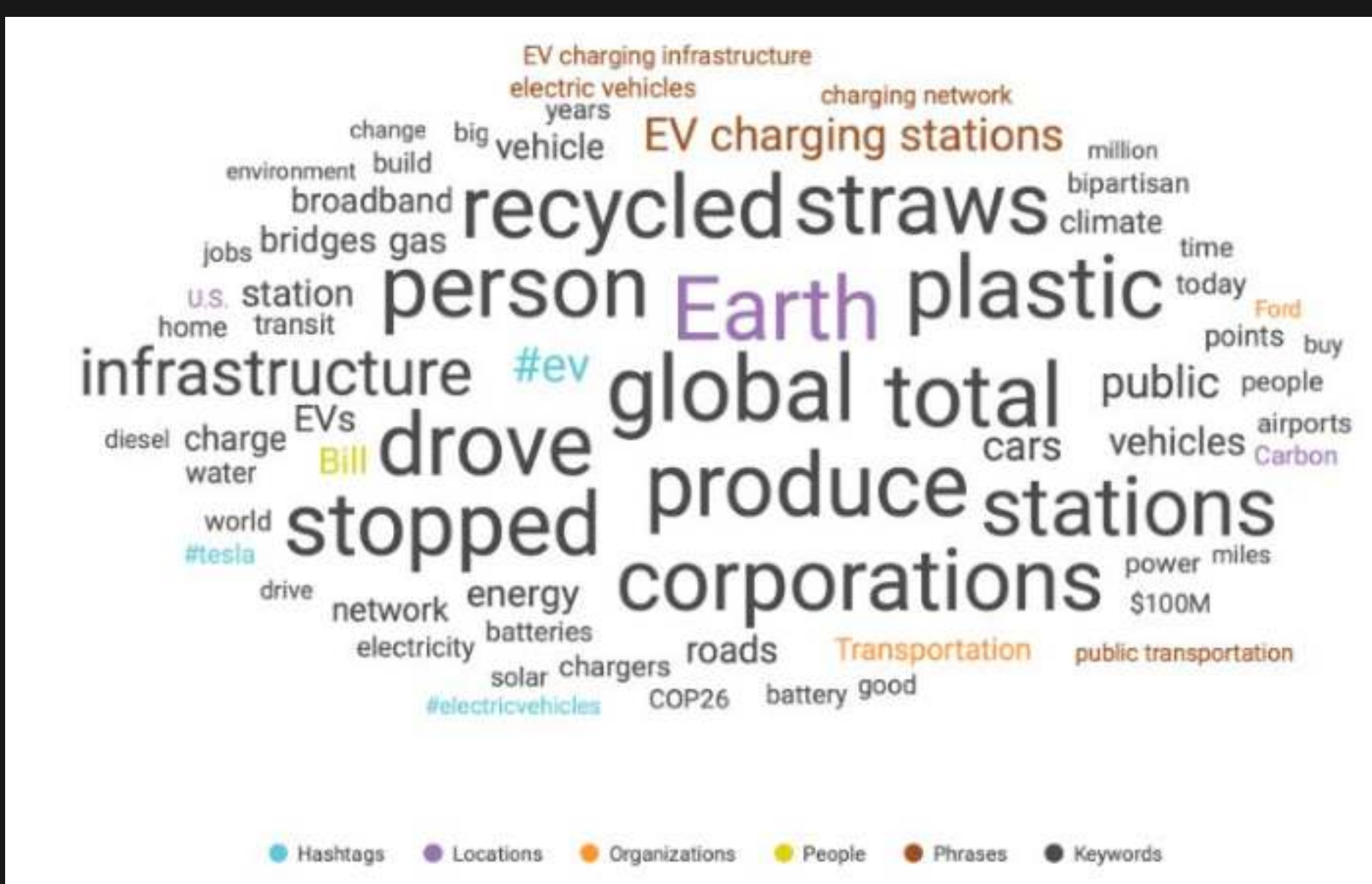
Neutral
73%
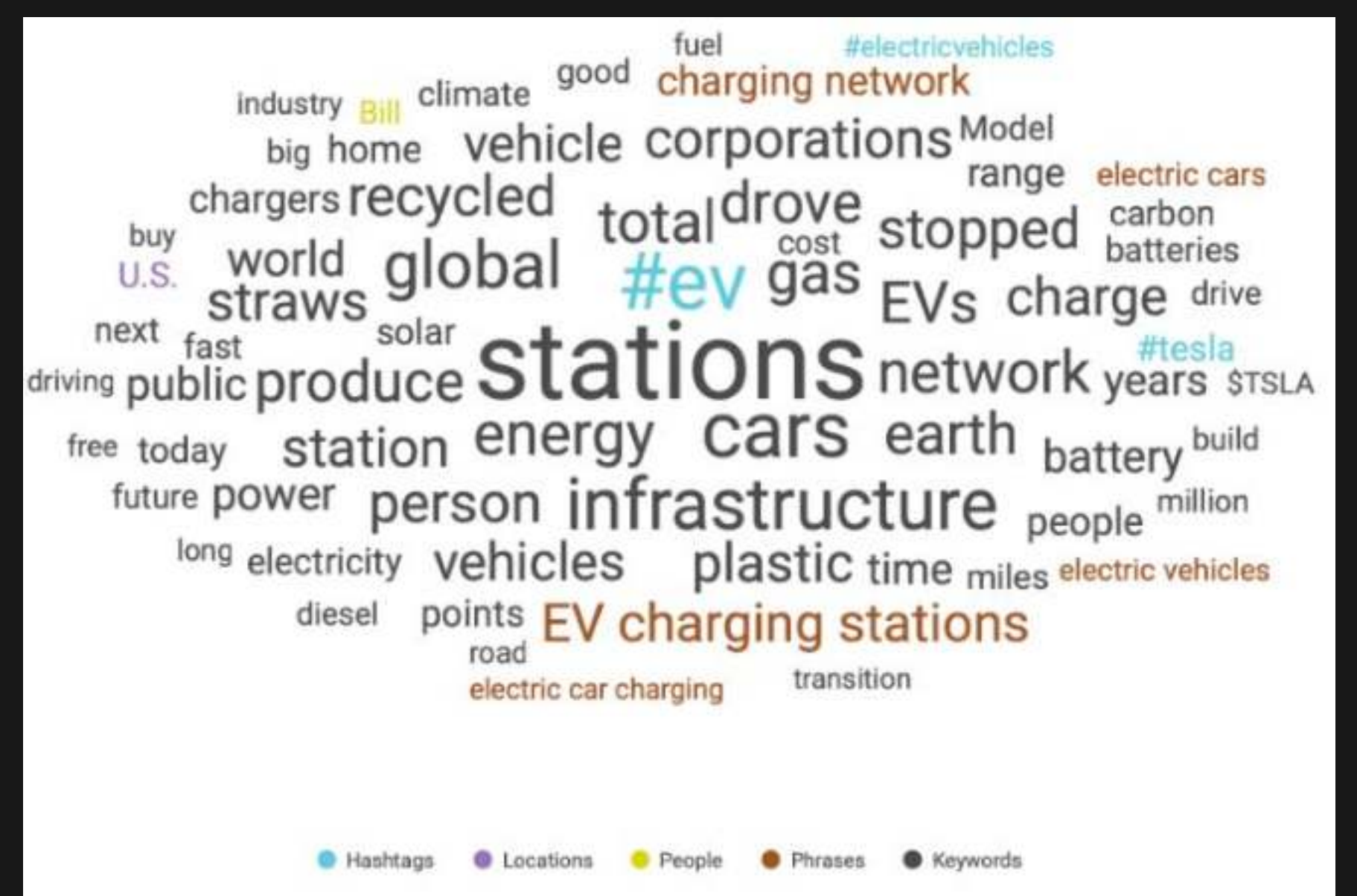
Female

Positive
5%
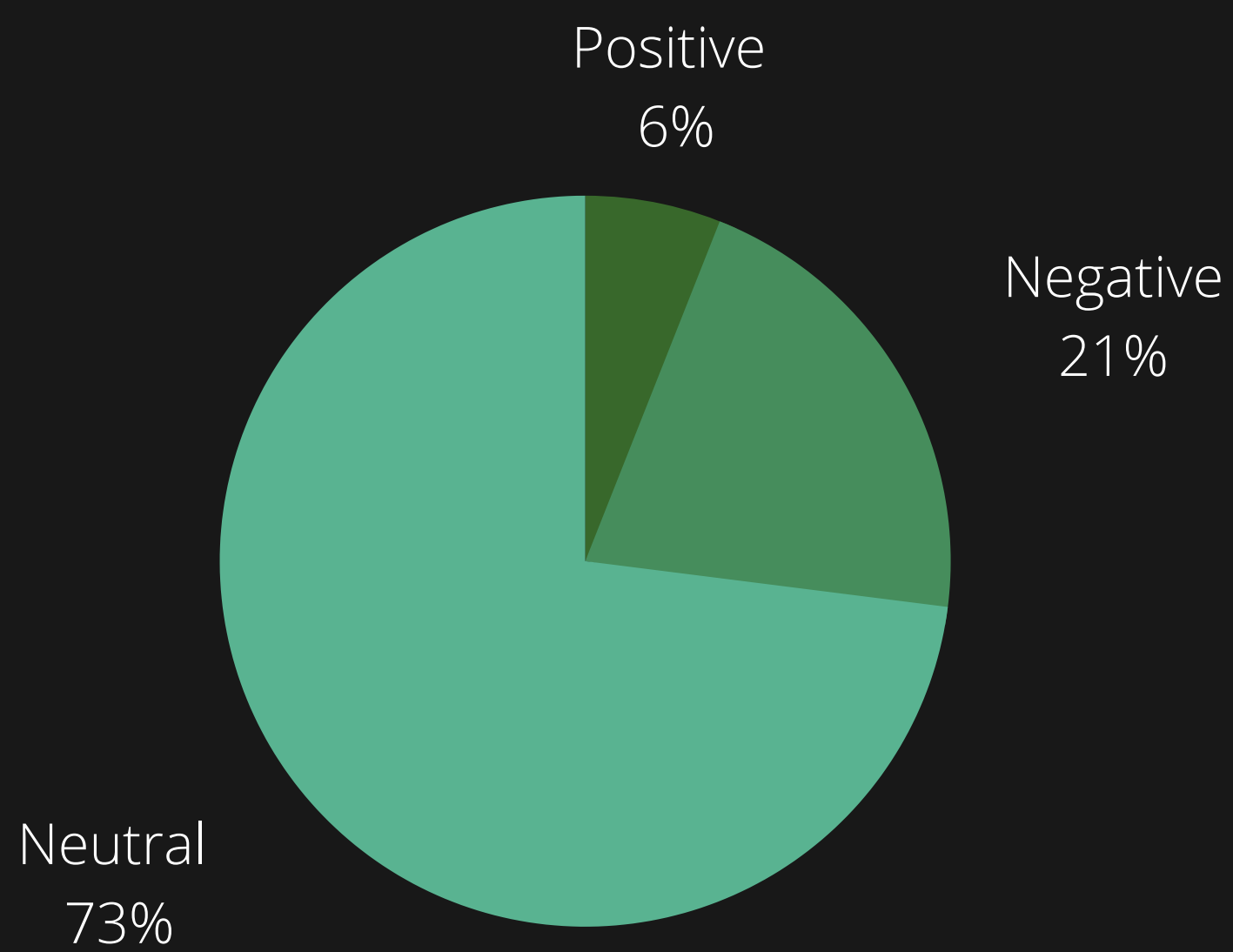
Negative
31%

Neutral
64%

In the gender based differences across Twitter sentiment, we can conclude they are similar comparing the positive, negative, and neutral sentiment. There is slightly more negative sentiment in female, about 10% more than males.

Word Cloud

Female

Male

Gender Based Differences Across Twitter

The Negative Conversations, Males

The negative conversation for males discuss the issues with EV and clean cars that battles with the ineffectiveness of its implementation of the its clean car policy. The lack of progress in made in EV impact of the environment and the difficult to enter the EV world were dominant conversations amongst males.

The Positive Conversations, Males

The positive conversation about electric vehicles discusses about the progress of the leader of EV; Tesla and its bright future. The conversation also discusses a step of charging infrastructure in other countries . Males had positive sentiment when dicussing the benefits of having more charging stations.

Gender Based Differences Across Twitter

The Negative Conversations, Females
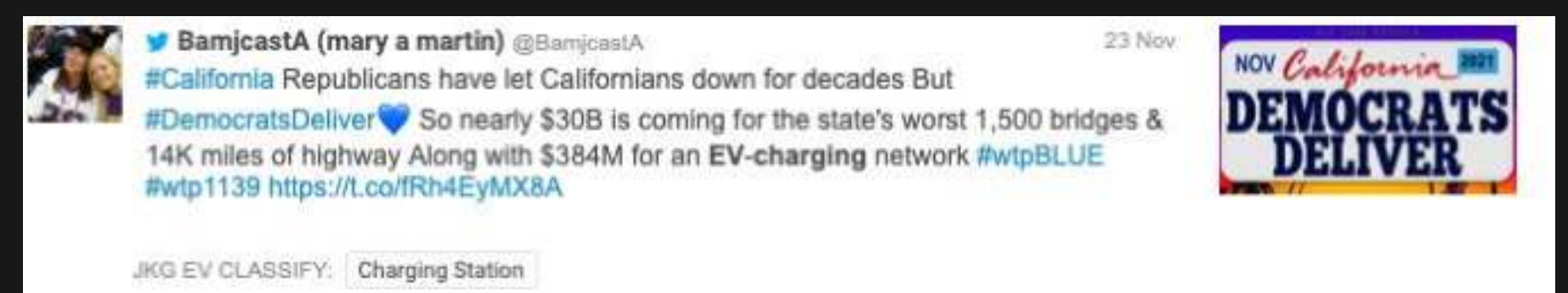
The negative conversation for females mainly discusses the issues of California republicans not delivering good intentions of EV's to California but also mentions the progress of the Democrat.

The Positive Conversations, Females
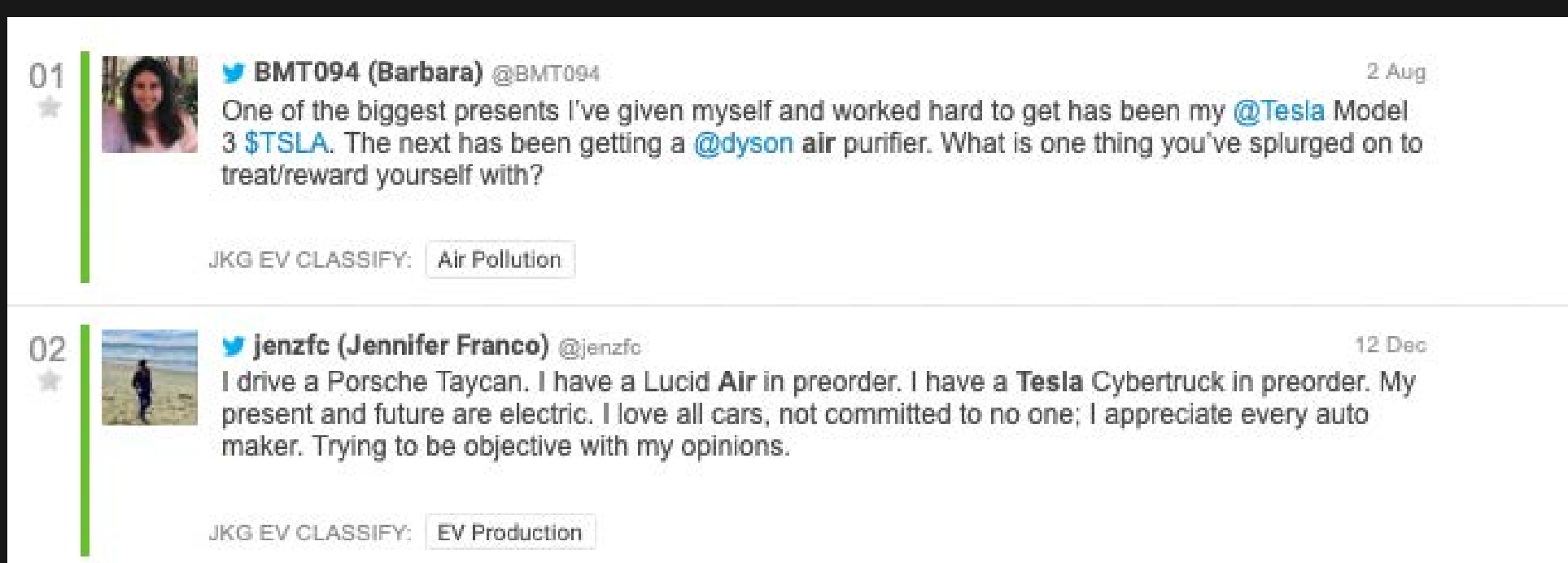
The positive conversations for females discusses fairly general positive comments about Tesla and the EV industry. We also see conversation about transforming specific regions in the Mid west into "Electric vehicle powerhouse.

Spike Analysis
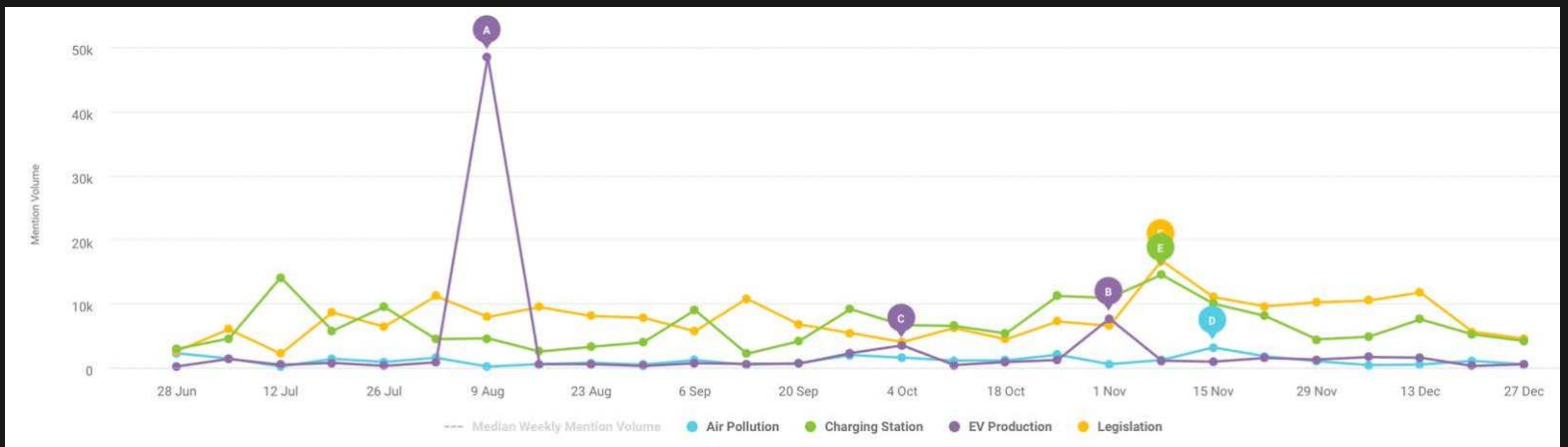
A) During August 9-15 2021, the volume was 5718% higher than usual, driven by a tweet from @GoodPoliticGuy, who explained the effects if everyone on Earth just recycled.

B) During November 1-7 2021, the volume was 819% higher than usual, driven by a tweet from @PeterSweden7, who explained how producing electric cars is not good for the environment.

C) During October 4-10 2021, the volume was 317% higher than usual, driven by @PeterSweden7 once again explaining the bad effects of producing electric car and how it emits tons more C02 than gasoline cars.

D) During November 15-21 2021, the volume was 197% higher than usual, driven by a tweet from @PPathole tagging Elon Musk on the startup of an EV company

E) During November 8-14 2021, the volume was 171% higher than usual, driven by using the hashtag #auspol

Spike Analysis Con.

Mac
@GoodPoliticGuy

If every person on earth just recycled, stopped using plastic straws, and drove an electric car, 100 corporations would still produce 70% of total global emissions.

6:09 PM · Aug 10, 2021

Read the full conversation on Twitter

♡ 221.2K   Reply   ⬆ Share this Tweet

Read 747 replies

PeterSweden
@PeterSweden7

Did you know that producing electric car batteries is horrible for the environment?

The lithium mining required for the batteries is really bad for the environment.

And did you know producing an electric car uses tons more CO2 than a gasoline car.

3:59 PM · Nov 2, 2021

♡ 4.1K   Reply   ⬆ Share this Tweet

Read 213 replies

Pranay Pathole @PPathole · Nov 18, 2021
Still many people are unaware that Tesla started because many big car companies were shutting down their EV programs. Tesla didn't start with the intention of getting govt incentives or making money, they started because it was the only chance to create an EV company. @elonmusk

Elon Musk ✔
@elonmusk

There were no EV incentives (nor did we expect them) & gasoline was super cheap, so tough to make the case for electric cars.

My guess was that we had <10% chance of success & most people thought 0%. The history car startups is just one big graveyard.

5:12 AM · Nov 19, 2021

♡ 8.2K   Reply   ⬆ Share this Tweet

Read 652 replies

PeterSweden
@PeterSweden7

Did you know that producing an electric car emits tons more C02 than a gasoline car?

You have to drive for years to make up that C02 and that assumes your electricity is made with non fossil energy.

Then there's the lithium mining which is horrible for the environment...

4:31 PM · Oct 5, 2021

Read the full conversation on Twitter

♡ 3.9K   Reply   ⬆ Share this Tweet

Read 246 replies

Cross Platform

Topic Theme Analysis

Cross Platform Theme: Air Pollution

Total Mentions

36.4k
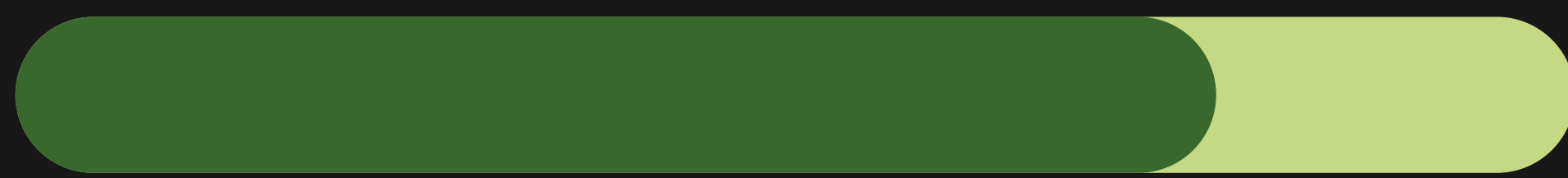
77% Male

At the heart of the electric vehicle uprising is the desire to limit air polution. When it comes to electric vehicles, two sides see the rise in electric vehicles drastically differently. On one side of the conversation, the introduction of electric vehicles can limit CO_2 emissions in the atmosphere by an extremely significant effect. On the other side, individuals view the claim of a cleaner environment and cleaner air as a capitalistic ploy. There are major financial barriers for those would like to participate in the electric vehicle revolution in the automobile industry, but the due to high prices, they can not. Some are even skepticle to whether electric vehicles will truly make any difference in the environment and wonder if the data supporting it are skewed to push for a consumers to purchase.

Positive
23.3%
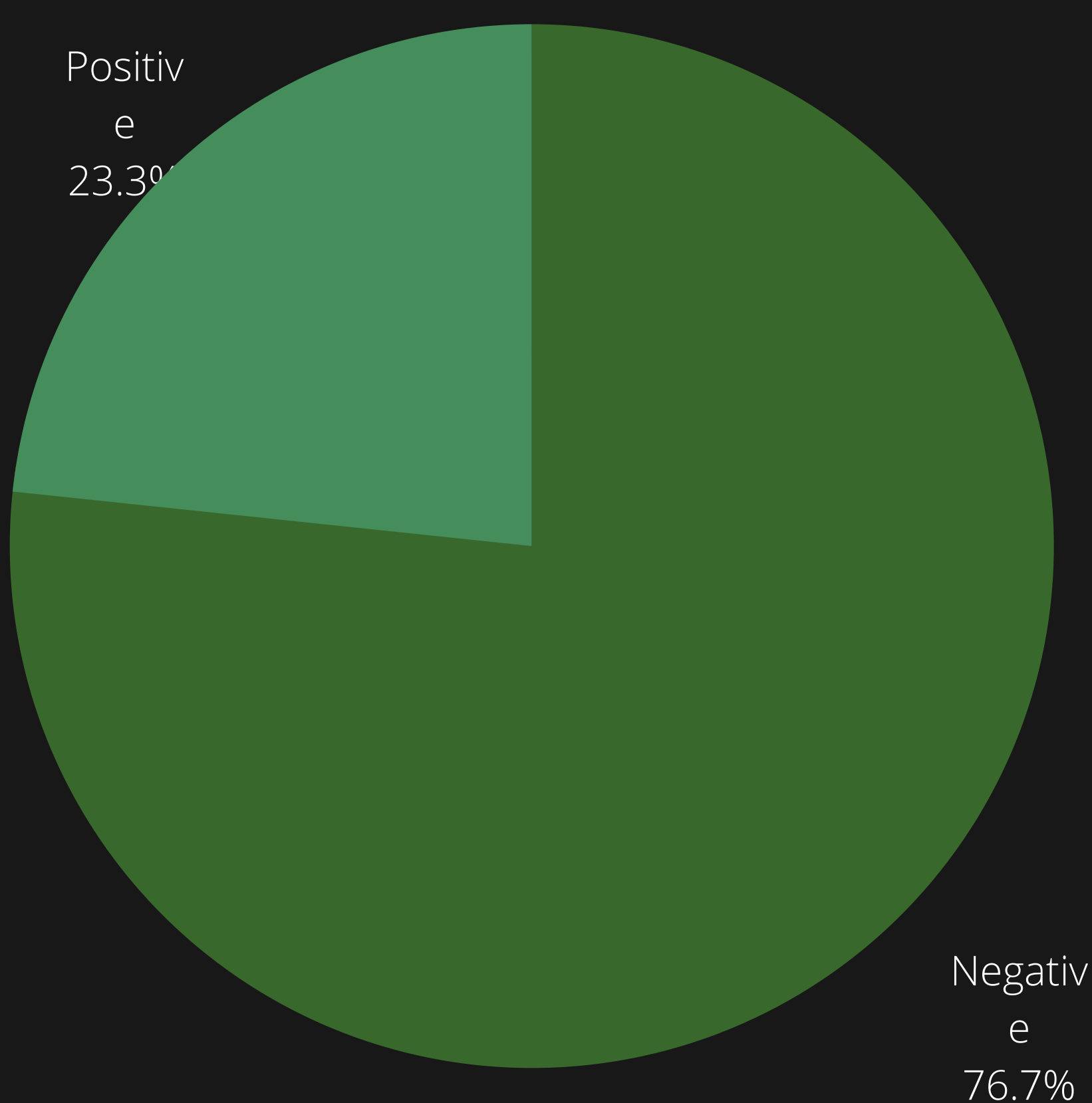
Negative
76.7%

8,259 mentions that had a negative sentiment. These mentions often referred to the argument that EV is not a solution to helping air pollution due to the financial barriers and the misrepresentation of impact EV have on the environment. 2,584 mentions that had a positive sentiment. These conversations often discussed the positive impact EV have on the limited air polution through transportation.

Cross Platform Theme: Legislation

Total Mentions

135.68k
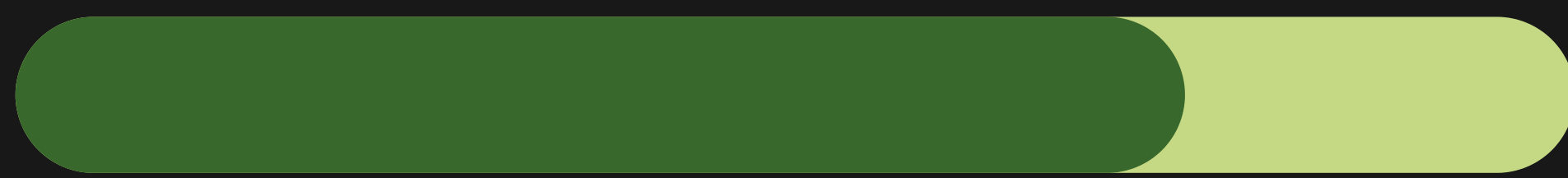
75% Male

Electric Vehicles is a very important topic politically. The introduction of Electric Vehicles to society has come with the hope for a greener, more efficient future. With this topic being extremely politically charged, legislation and regulation are a necessary component to the implementation into society. The conversation involving legislature endured conversations of about Zero Emision legislation, smart charging, and infrasucture.

Positive
46.7%
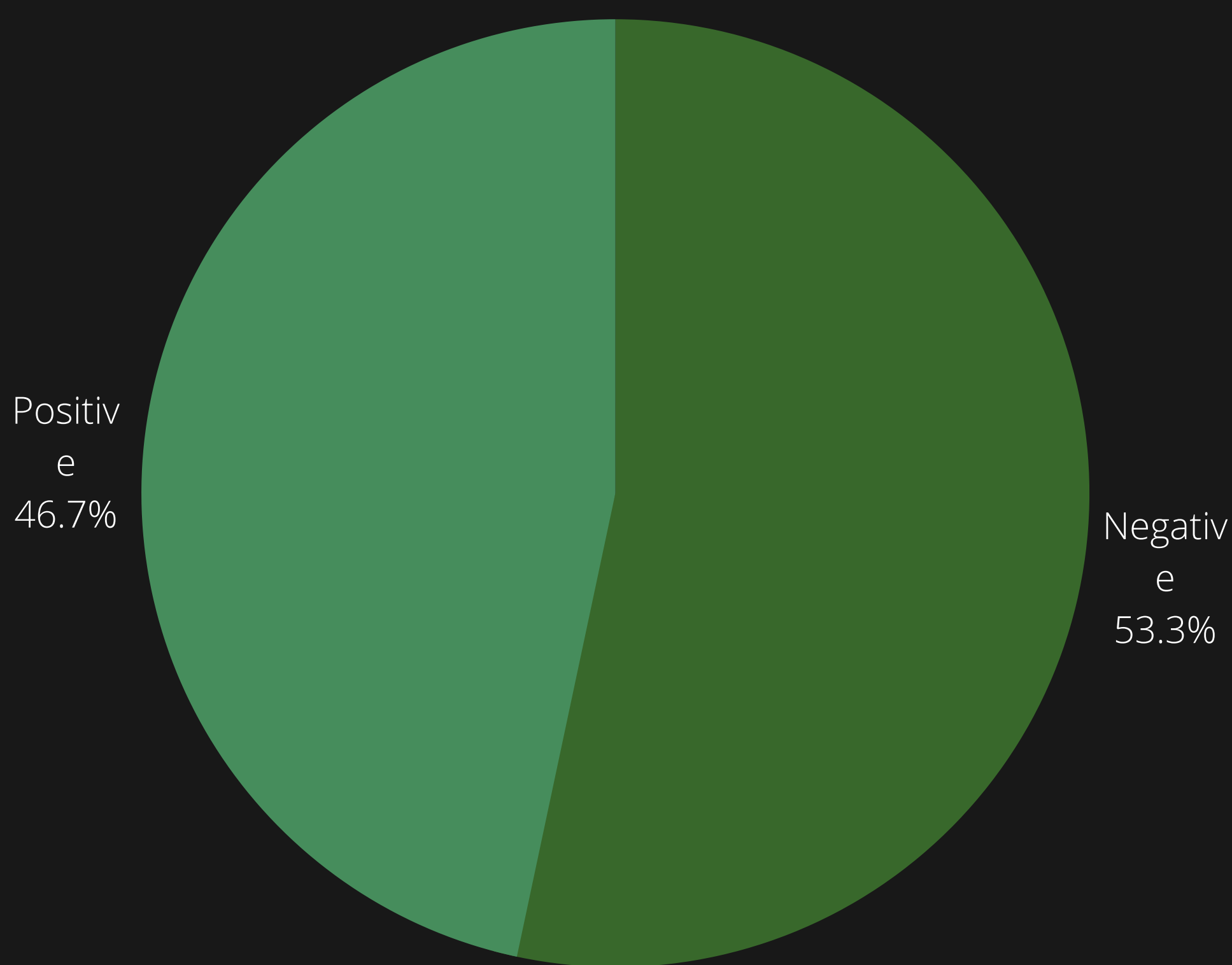
Negative
53.3%

11,284 mentions had a negative sentiment. These mentions often referred to accident involving government regulation involving charging, infrastructure and emission regulation. 9,773 mentions had a positive sentiment. These conversations often discussed the positive impacts that EV and emission mandates could have on the environment

Cross Platform Theme: Production

Total Mentions

124.91k

75% Male

The production of electric vehicles is a very polarizing topic. Amongst those discussing the topic, some see the mass production of electric vehicles as a great step toward a more green future. They see it as the more electric vehicles produced, the closer society is to a zero-emision future. But there is a side who sees it very differently. They see major corporations building electric cars while producing extreme amounts of pollution in the process. They see the major corporations, such as Tesla, as hypocritical groups that leverage electric vehicles to turn a profit rather then actually making a real impact on the environement.

Positive 8%
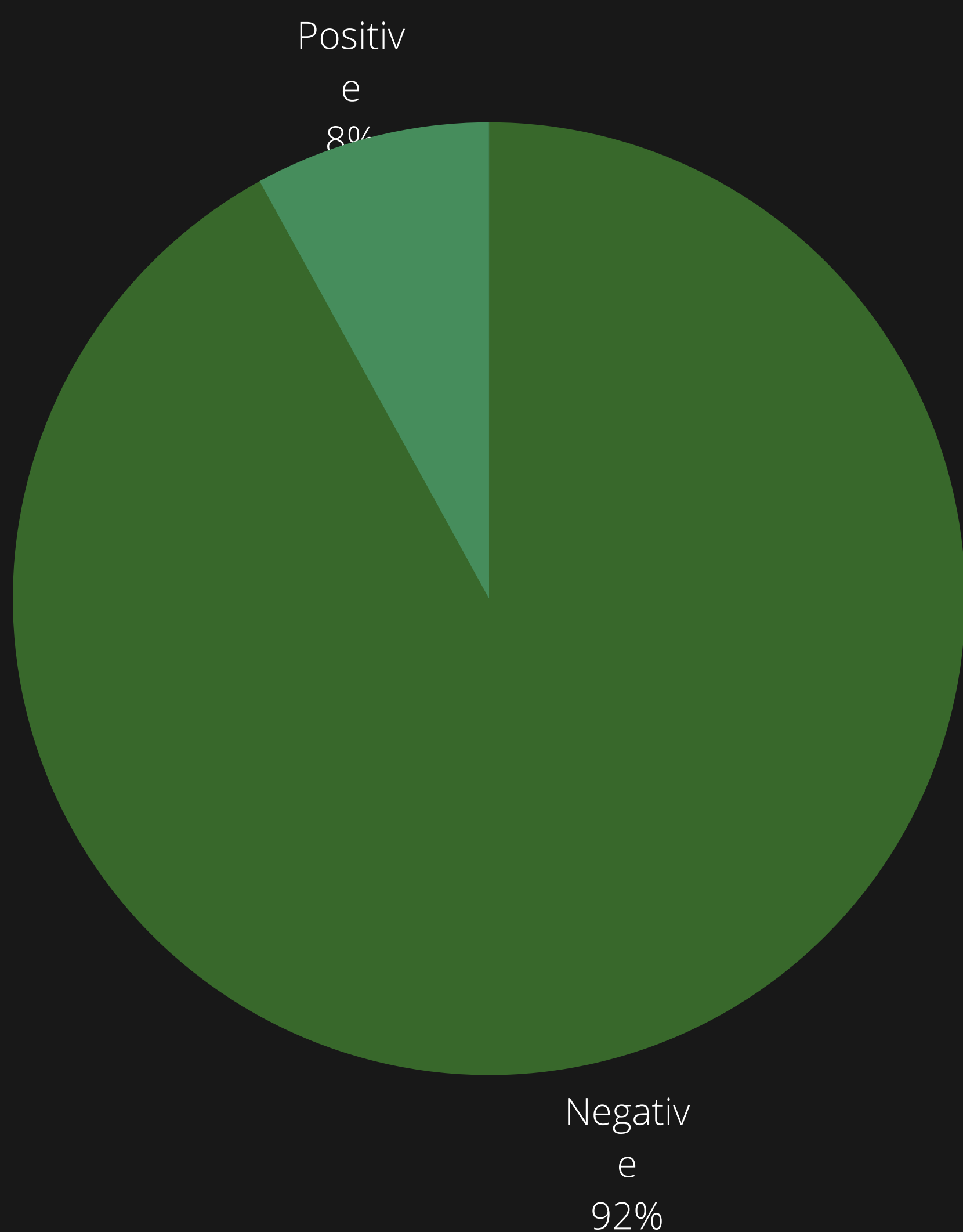
Negative 92%

58,130 mentions had a negative sentiment. The negative sentiment greatly outweighs positive sentiment. The conversations surrounding negative sentiment discussed a multitude of things, such as that the pollution from the production of Tesla's offsets any benefits from the fact that it's an electric car and the souring prices of the oil industry. The positive sentiment discussed how the production of EV is good for the environment.

Cross Platform Theme: Charging Stations

Total Mentions

200.16k
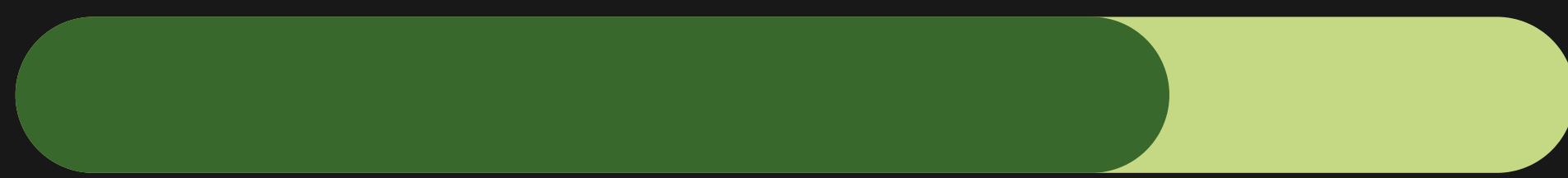
74% Male

The introduction of charging stations into society has caused for a massive stir in conversations. With every introduction of new technology that hopes to change life styles comes large sums of controversy. The conversation about charging stations in relation to electric vehicles are very two sided, with one side being an optimist about the effects electric charging can have on climate change an pollution, and the other side struggling with the inconvenience and lack of access to this change. In order for individual to buy into to the shift from gas to EV, they not only need money, but access to available charging stations, otherwise it will be pointless. Both sides of the conversation share similar goals and hopes for the future, but the negative side is concerned with the issues of today that charging stations present, such as safety and infrasturcture,

Positive
26.3%
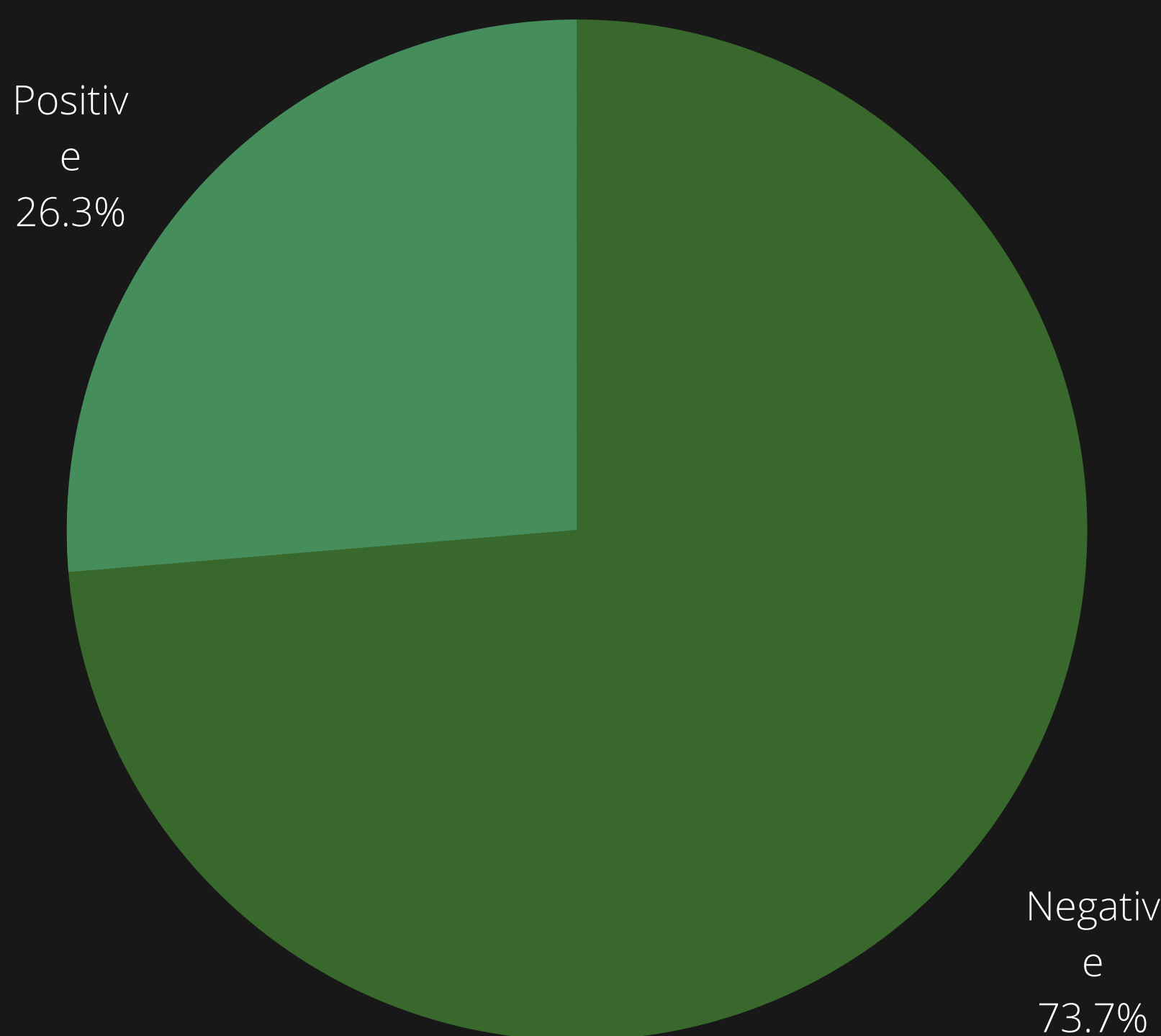
Negative
73.7%

27,315 mentions that had a negative sentiment. These mentions often referred to accident involving charging stations, the security surrounding them, and the charing infrastructure and range anxiety barriers for EV user entry. 10,902 mentions that had a positive sentiment. These conversations often discussed the positive impacts that charging stations will have on the environment.

Node XL

Israel Tours Greenwashing Accusations

Rebuilding the Red Wolf Population

John Muir's Legacy

Isolates

Call for USPS to Purchase Electric Trucks

Banks Contributing to Fossil Fuels

British Columbia's Climate Change Accountability Act

Lawrence O'Donnell on Sen. Thom Tillis

Sierra Club & Earth Justice's Call to Action on EPA Loopholes
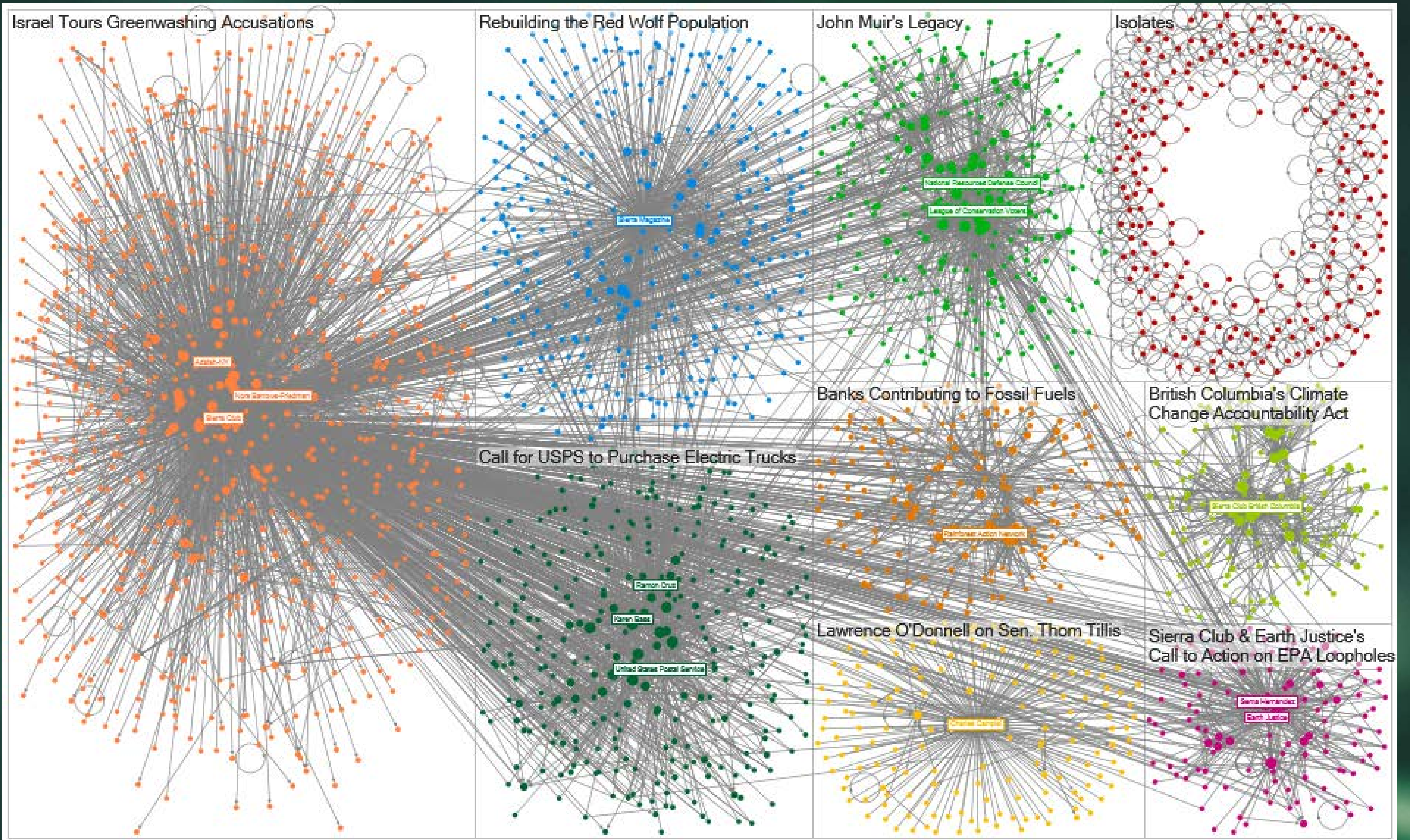
We used NodeXL, a plugin for Microsoft Excel, to construct a network graph of content activity surrounding Sierra Club on Twitter. Above are the 8 most prominent clusters of activity, as well as the isolates. In the next page, we analyze and report our findings as to what each cluster's conversation focused on, as well as the most prominent parties involved in each online discource.

Israel Tours Greenwashing Accusations

This cluster consists predominantly of users, led by @Adalah-NY, a campaign created to promote Palestinian voices in Israel, calling out Sierra Club for their tours of Israel, where they outline Israel's "environmental achievements" that were developed on "unsustainable practices rooted in colonization of Palestinian land & resources." This is in response to a post by Sierra Club, regarding the topic of greenwashing. Users stated that Sierra Club themselves participated in greenwashing by promoting these tours, and refusing to cancel them. This call to action by @Adalah-NY has led to petitions being signed to attempt to convince the Sierra Club to cancel these tours, and denounce the previous statements they have made about Israel's part in the fight for sustainability.

Rebuilding the Red Wolf Population

This cluster was based around an article posted by @Sierra_Magazine, Sierra Club's magazine's twitter page. This article outlined the Biden administration's plans to release a family of the endangered species of Red Wolves, in order to rebuild the population. The conversation mainly focused on the different approaches the Biden administration is having towards conservation in comparison to past administrations.

Call for USPS to Purchase Electric Trucks

The conversation within this cluster was focused on the promotion of electric car usage and unionization of the United States Postal Service, again spurred by an article posted by the Sierra Club. The conversation was led by Ramon Cruz, president of the Sierra Club, and Karen Bass, a candidate for the mayor of Los Angeles.

John Muir's Legacy

This cluster's conversation sparked after a Huffington Post article was published, outlining Sierra Club's board election, in which there was much discourse about how to move forward while addressing and resolving the history of its founder, John Muir, who, throughout his life, made many decisions that were considered racist, and welcomed the removal of indigenous peoples from their native lands.

Banks Contributing to Fossil Fuels

This cluster surrounded the discourse following a joint effort by Sierra Club and other non-profits to expose the large amounts of financial investment the largest American banks have in the continued use of fossil fuels.

Lawrence O'Donnell on Sen. Thom Tillis

This cluster focused on a comment that news anchor Lawrence O'Donnell made regarding Senator Thom Tillis' stance on the Kentaji Brown Jackson confirmation. Sen. Tillis stated that, because leftist organizations such as the Sierra Club endorsed Jackson, he could not. In a rebuttal, O'Donnell said that this is hypocritical, citing that, despite the KKK endorsing Trump, Sen. Tillis felt it was okay to also endorse his presidential candidacy.

British Columbia's Climate Change Accountability Act

This cluster is due to British Columbia's new Climate Change Accountability Act, which will help to revamp and give more of a foundation to the conservation and sustainability efforts of BC. The conversation was led by Sierra Club's British Columbia-specific twitter page.

Sierra Club & Earth Justice's Call to Action on EPA Loopholes

This cluster is focused on a joint call to action by Sierra Club and Earth Justice to end the loopholes found in the EPA and State Clean Air Acts that allow fossil fuel operators to continuously exploit the guidelines.

Appendix

Theme #1

"Build Back Better Act" OR #BuildBackBetter OR #Greennewdeal OR Buildbackbetteract OR Climatejustice OR #ClimateJustice OR #Environmentaljustice OR BBB OR pass OR #Endchildpoverty OR #Climateaction OR #ClimateEmergency OR #Biden OR @POTUS OR #JoeBiden OR Biden OR President OR government

Theme #2

"Renewable energy" OR #Cleanair OR #FossilFuels OR "fossil fuel" OR energy OR Electric

Theme #3

#Cleancars OR Cars OR "Electric Vehicles" OR EV OR Transportation OR Air OR Pollution OR Fossil OR Fuel

Theme #4

Frack OR Fracking OR Fracked OR Oil

ADPR5750

Social Media
Analytics

Thank
You