

# National Geographic Final Report

**ADPR 5750 - SOCIAL MEDIA ANALYTICS**

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# Table of Contents

<b>Executive Summary</b>	<b>- 3-4</b>
<b>Recommendations</b>	<b>- 5-7</b>
<b>Insights by Dataset</b>	
<b>- Owned Data</b>	<b>- 9-11</b>
<b>- Earned Organization</b>	<b>-12-17</b>
<b>- Earned Competition</b>	<b>-18-21</b>
<b>- Earned Topic</b>	<b>-22-26</b>
<b>Social Network Analysis</b>	<b>-27-33</b>
<b>Appendices</b>	<b>-34-35</b>





# Executive Summary





# Executive Summary

The purpose of this report was to analyze the owned and earned media of National Geographic, The network of National Geographic's media, as well as topic datasets relevant to National Geographic's organization. These datasets were analyzed with the intention of finding potential weaknesses or shortcomings in National Geographic's presence on social media platforms, as well as identifying the organization's strengths on these platforms, and providing insights as to how the organization can optimize its posting habits in order to reach a greater audience with a greater impact, as well as engage its current audience to a greater extent.

The owned, earned, and topic datasets were retrieved and analyzed utilizing the Brandwatch platform. Data limitations due to privacy policies for Instagram and Facebook prevented significant acquisition and analysis of posts from those platforms. Data processing limitations prevented the number of posts analyzed within the social network analysis from exceeding 1,000 posts.

## The report utilized five datasets

### Owned data

Timeframe: June 1 - September 15, 2021

Number of posts: 312

Data sources: Twitter (100%)

### Earned data

Timeframe: June 1 - September 15, 2021

Number of mentions: 723,353

Data sources: Twitter (89%)

News (8%) Reddit (3%)

### Earned Competition data

Timeframe: June 1 - September 15, 2021

Number of mentions: 1,076,288

Data sources: Twitter

### Topic data

Timeframe: June 1 - September 15, 2021

Number of mentions: 1,076,288

Data sources:

Twitter (78%) News (12%)

Reddit (4%) Tumblr (4%)

Blogs (2%)

### Social Network data

Timeframe: 2 hour time period on November 3, 2021

Number of posts: 1,000

Data sources: Twitter (100%)



# Recommendations





# Recommendations

## Earned Data Recommendations

Continue to post about varying scales of culture around the world and include attractive, hot, and specific cultural photographs. Also, use hashtags associated with other cultural organizations (e.g., #HoweSoundBiosphere) Cultural images were used moderately (n=21), but the average number of impressions for culture posts is the lowest theme of posts, implying there is room for growth.

Post more about photos of animals to draw more attention to wildlife. Post more about adorable or rare animal photos. Use related hashtags, such as #wildlife and #nature. Use the influence of popular Tweeters and mention them, such as @wildlifemag, @naturein\_focus, and @avibase. @wildlifemag (16,429 total tweets), @naturein\_focus (14,684 total tweets), and @avibase (11,962 total tweets) are the most mentioned Tweeters.

Maintain engagement levels of flora or fauna posts by continuing to post flora or fauna themed posts with a variety of photographs showcasing special or rare plants and animal, and use hashtags associated with flora/fauna (e.g., #wildlife, #polarbear, #oaktreerings, etc.) Flora/fauna posts maintained the highest levels of engagement and highest average number of retweets per post within the dataset.

## Owned Data

Make a greater effort to continually post about days of recognition that coincide with National Geographic's areas of interest. Top posts within datasets typically include hashtags celebrating or acknowledging these types of days, such as #worldoceanday or #sharkweek.

Increase engagement levels of posts within the earth theme. Continue to post about things within the scope of the earth theme, and utilize more hashtags that will connect the posts to a greater audience (e.g., #southernocan, #sharkweek, #volcaniceruption, etc.). Because Earth posts have the highest neutral sentiment in proportion to positive and negative sentiment, it might be the case that engagement with Earth posts is lower than it is with the other themes.

# Recommendations

## Topic Data

Post more about the positive effects that stem from the covid-19 vaccine. Use the influence of popular twitter users and mention them, such as @potus @cdcgov, and @who as well as retweeting or highlighting regular engagement with the topic. @potus (480,947,830 total impressions), @cdcgov (770,282,101 total impressions) and @who (1,021,806,206 total impressions)

Begin including vaccination information and links to vaccination scheduling or locating services within posts concerning COVID-19. Provide more information about the new COVID-19 vaccine clearances and regulations. Use related hashtags, such as #Covid19 or #vaccine and begin motivational hashtags such as #getvaxxed or #getthejab. On the Dataset Analysis slide, the top hashtag is #covid19 and has been tweeted (1,670,906 times/tweets)

Increase engagement levels within the target audience with females specifically. Consider discussions resulting in more retweeted posts and more comments/discussions related to said post. Males tend to contribute to the majority of mention volume on official statement posts and anti-tax posts.

Attempt to tap into the network of testimonial posts and mentions within the topic dataset for COVID-19. Testimony posts were identified to have the highest ratio of positive sentiment as compared to negative sentiment across top themes within the topic dataset. Tapping into that positive sentiment could potentially boost engagement and associated positive sentiment with National Geographic.

## Social Network Insights

Interact with users mentioning @natgeo and its various secondary accounts more. Engagement with other users within the primary cluster for National Geographic resulted in a much larger network, while most of the other identified clusters within National Geographic's network were substantially smaller, as National Geographic did not reciprocate any edges within those smaller clusters.

Post more content and engage with content after being posted, specifically within the COVID-19 topic. Clusters generated around topics like COVID-19 and COVID-19 news stories that National Geographic posted or had on their website, and yet National Geographic did not engage within those conversations or clusters, as there were no reciprocated edges from National Geographic or any of its secondary accounts.

Create and post content that creates more concise communities and conversations around it. Density and reciprocity values were very low for all of National Geographic's network clusters, implying that the groups are weakly linked together and there are many unidirectional mentions and tags that go unresponded to or unanswered. By engaging the community and creating engaging content that promotes conversation, density and reciprocity can be increased and a stronger network can be established.



# Insights by Dataset





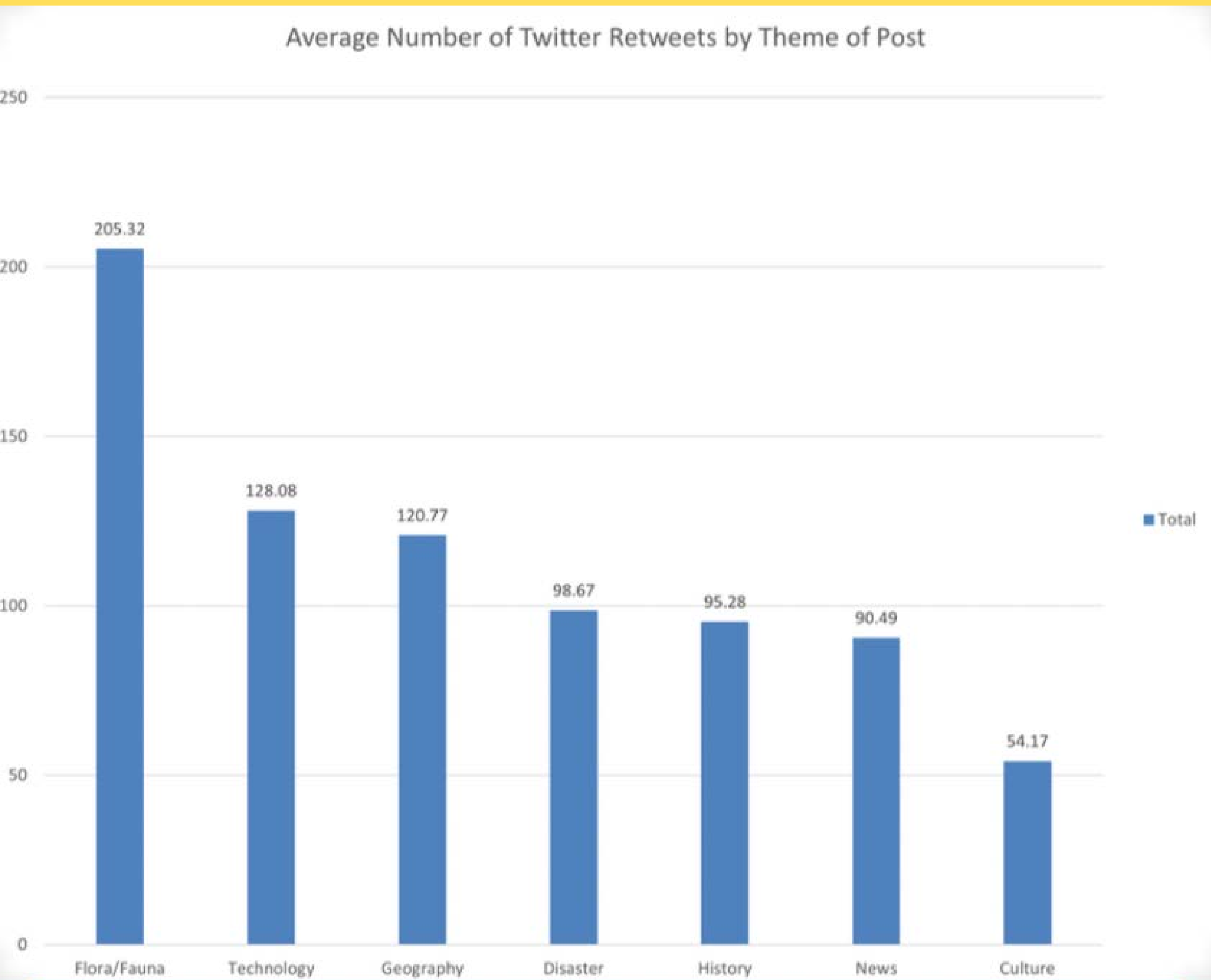
# **Owned Data**

**Data was collected from June 1 -  
September 15, 2021**

**N = 312 total tweets for the total dataset**



# OWNED DATA: Twitter

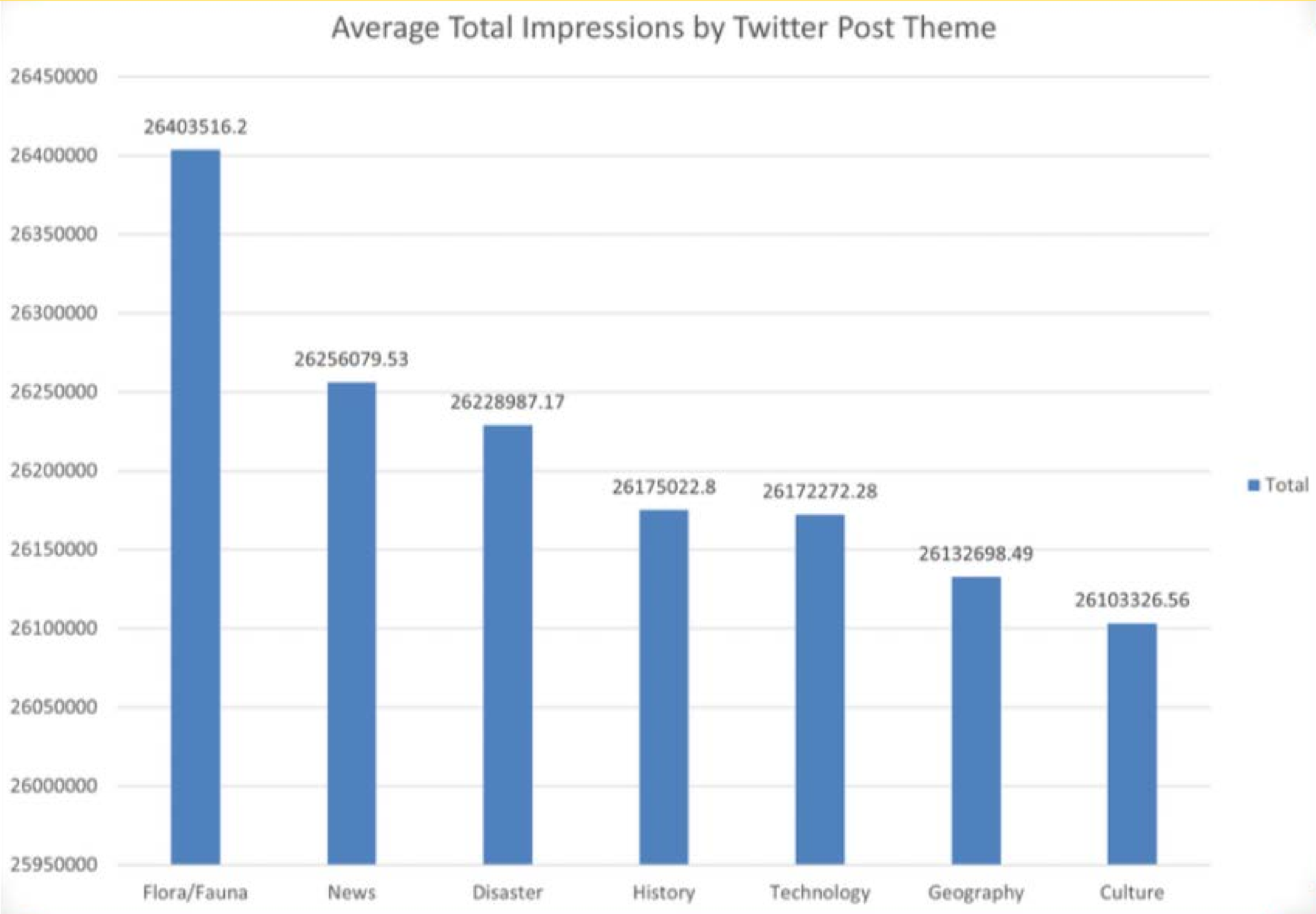


Theme of Post	Average Number of Twitter Retweets
Flora/Fauna	205.381818
Technology	128.08
Geography	120.7674419
Disaster	98.66666667
History	95.2826087
News	90.4893617
Culture	54.16666667

Given that Flora/ Fauna themed posts were retweeted approximately 77 more times per post on average than posts with other themes, NatGeo should post more nature/wildlife related content, to receive more engagement.



# OWNED DATA: Twitter



Flora/Fauna tweets are posted substantially more than any other themed posts. His data set also shows a massive disparity between the category with the most achieved impressions (Flora/Fauna) and second-most achieved impressions (News). The difference in achieved impressions is approximately 147,336.

Theme of Post	Average Number of Impressions
Flora/Fauna	26403416.2
News	26256079.53
Disaster	26228987.17
History	26175022.8
Technology	26172272.28
Geography	26132698.49
Culture	26103326.56



# **Earned Organizational Data**

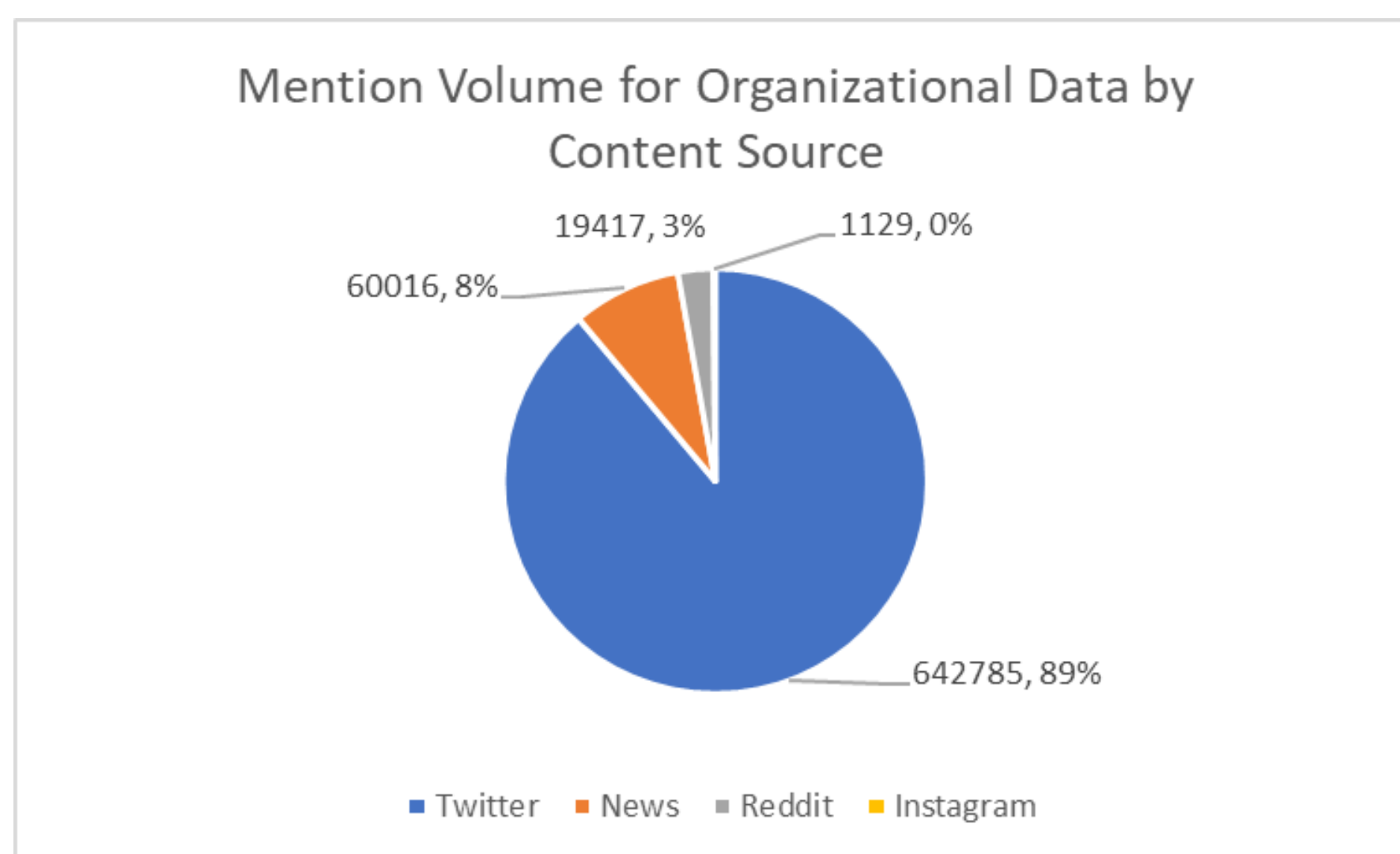
**Data was collected from June 1 -  
September 15, 2021**

**N = 723,353 total mentions for the total  
dataset**



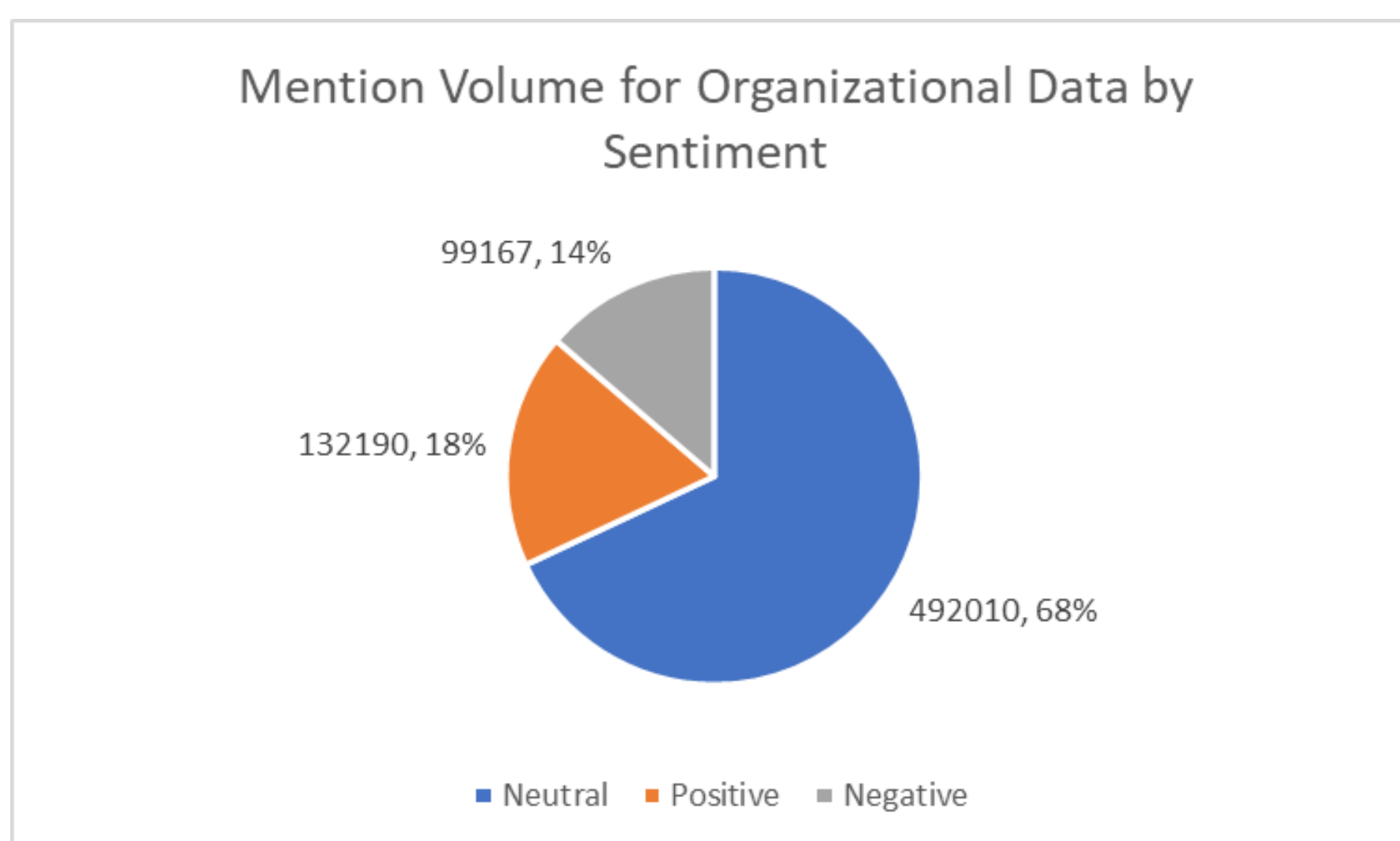
# Earned Data: Dataset Summary

## Data Breakdown by Platform



**Twitter was the platform that was utilized the most. Twitter mentions accounted for 89% of total mentions in the dataset.**

## Data Breakdown by Sentiment

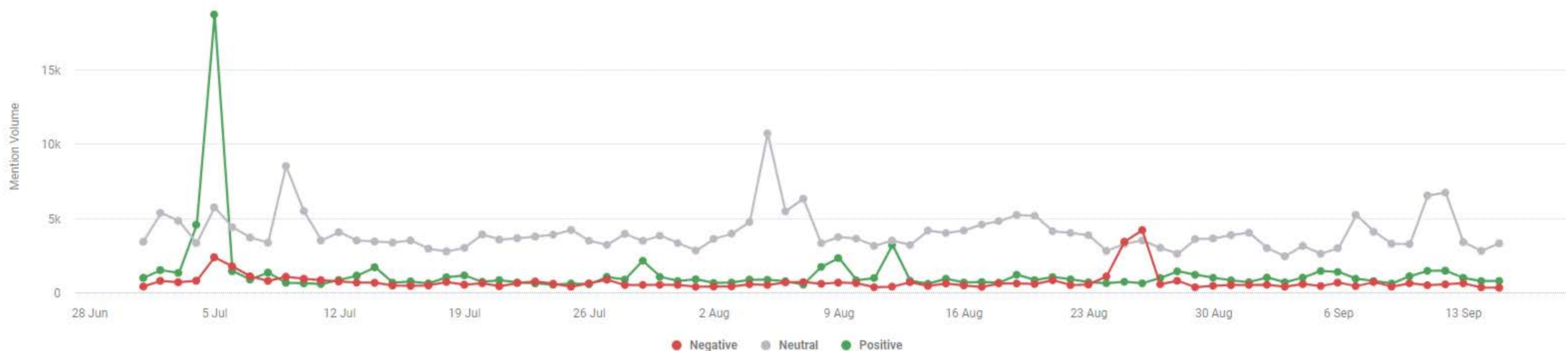


**The majority (68%) of mentions with identified sentiment within the dataset were identified as neutral, with positive and negative sentiment only accounting for 28% of identified sentiment.**



# Earned Data: Dataset Summary

## Narrative by Sentiment



- Sentiment Remained fairly invariable throughout the duration of the dataset
- The positive spike on July 5th was caused by Post A and the following Shark Week posts and conversations
- the neutral spike on August 5th was caused by Post B and its subsequent conversations

## Post A



## Post B

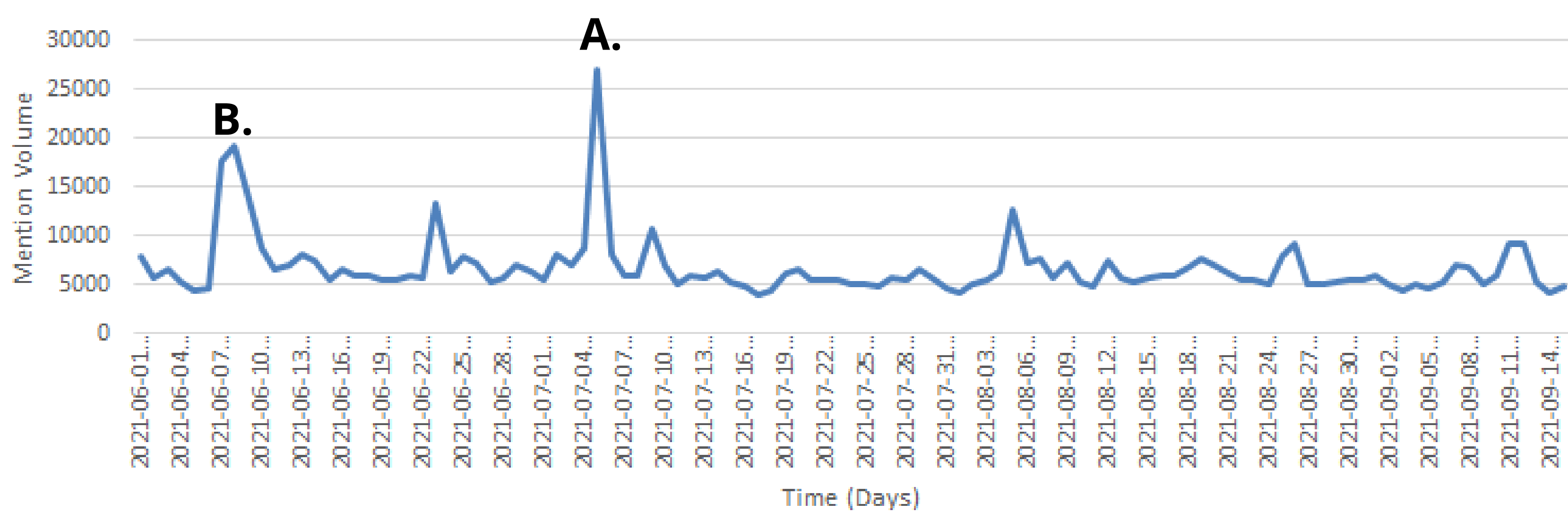


**Nat Geo's top post (post A) includes a hashtag acknowledging a specific day/event (#sharkfest.) The second top post (post B) pertains to current and relevant news.**



# Earned Data: Dataset Summary

## Earned Data Mention Volume Spike Analysis



A: July 5th, 2021: 26,977 mentions; Post A was the most interacted with  
B: June 8th, 2021: 19,291 mentions; post B was the most interacted with

Post A



Post B



**Spikes in the conversation within this dataset regarding National Geographic occur around wildlife posts and recognized event days/weeks.**



# Earned Data:

## Dataset Summary

### Most Mentioned Tweeters

- @wildlifemag : 16,429 total tweets
- @naturein\_focus : 14,684 total tweets
- @avibase : 11,962 total tweets

### Top Hashtags

Hashtag	All Tweets	Retweets	Tweets
#sharkfest	25060	8584	16474
#natgeo	18253	12455	5796
#nature	10666	7447	3218
#ecoterror	6449	3748	2700
#ecocide	6196	3604	2591
#wildlife	7559	5377	2181
#travel	4276	2119	2155
#photography	7234	5107	2126

The Top Hashtags chart shows that #sharkfest, an event-based hashtag and #natgeo has the highest level of engagement.

### Potential Influential Users

- @incognito9
  - 4,950 total mentions, 601 average reach
- @DrGem2015
  - 2,338 total mentions, 62 average reach
- @passivelyactive
  - 957 total mentions, 789 average reach

Non-organizational users that are active within National Geographic's social media networks tend to have varying reach and impact, but unilaterally do not have influence over National Geographic's audience.



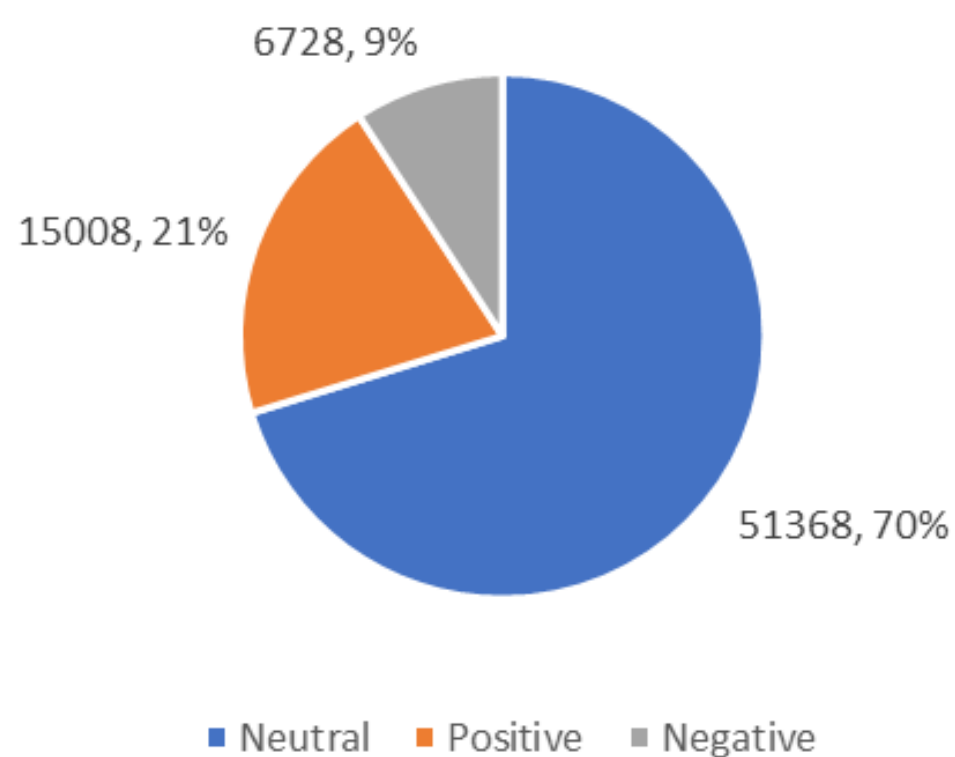
# Earned Data: Theme Dataset Summary

## Top Themes:

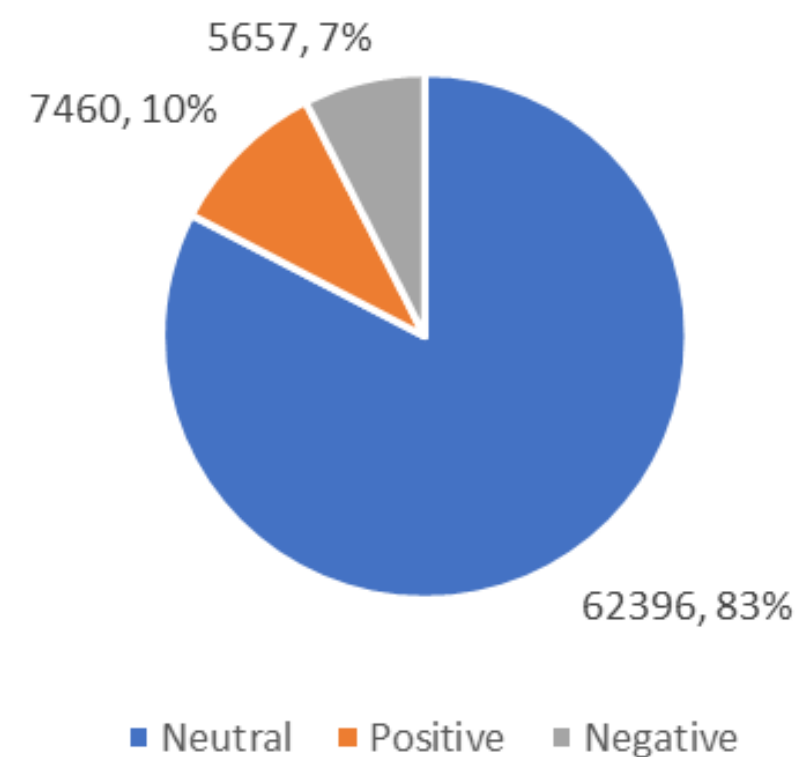
- **Photography: 78,253 mentions**
- **Earth: 75,515 mentions**
- **Animals: 73,106 mentions**

## Sentiment Breakdown by Theme

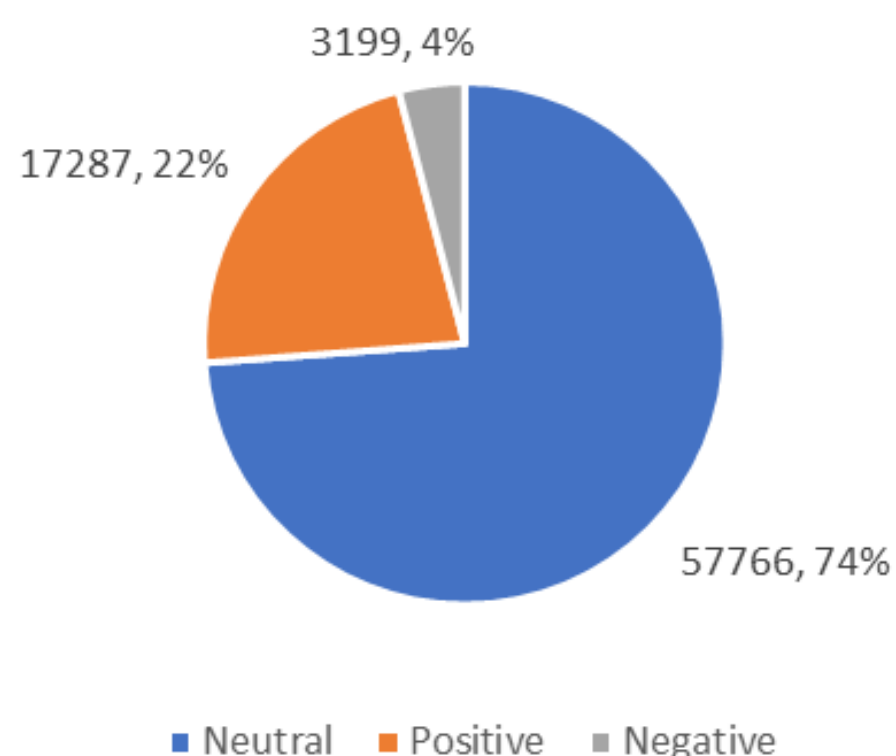
Mention Volume by Identified Sentiment for  
"Animals" Theme



Mention Volume by Identified Sentiment for  
"Earth" Theme



Mention Volume by Identified Sentiment for  
"Photography" Theme



**Earth posts have the highest neutral sentiment percentage compared to the other two top themes, implying there is less interaction with earth-themed posts.**

## Gender Breakdown for Top Themes

- **Photography: 30,548 mentions with identified gender**
  - 16,342 male mentions (53%) 14,206 female mentions (47%)
- **Earth: 27,336 mentions with identified gender**
  - 15,355 male mentions (56%) 11,981 female mentions (44%)
- **Animals: 30,019 mentions with identified gender**
  - 15,161 male mentions (51%) 14,858 female mentions (49%)



# Earned Competition Data

Data was collected from June 1 -  
September 15, 2021

N = 1,076,288 total mentions for the total  
dataset

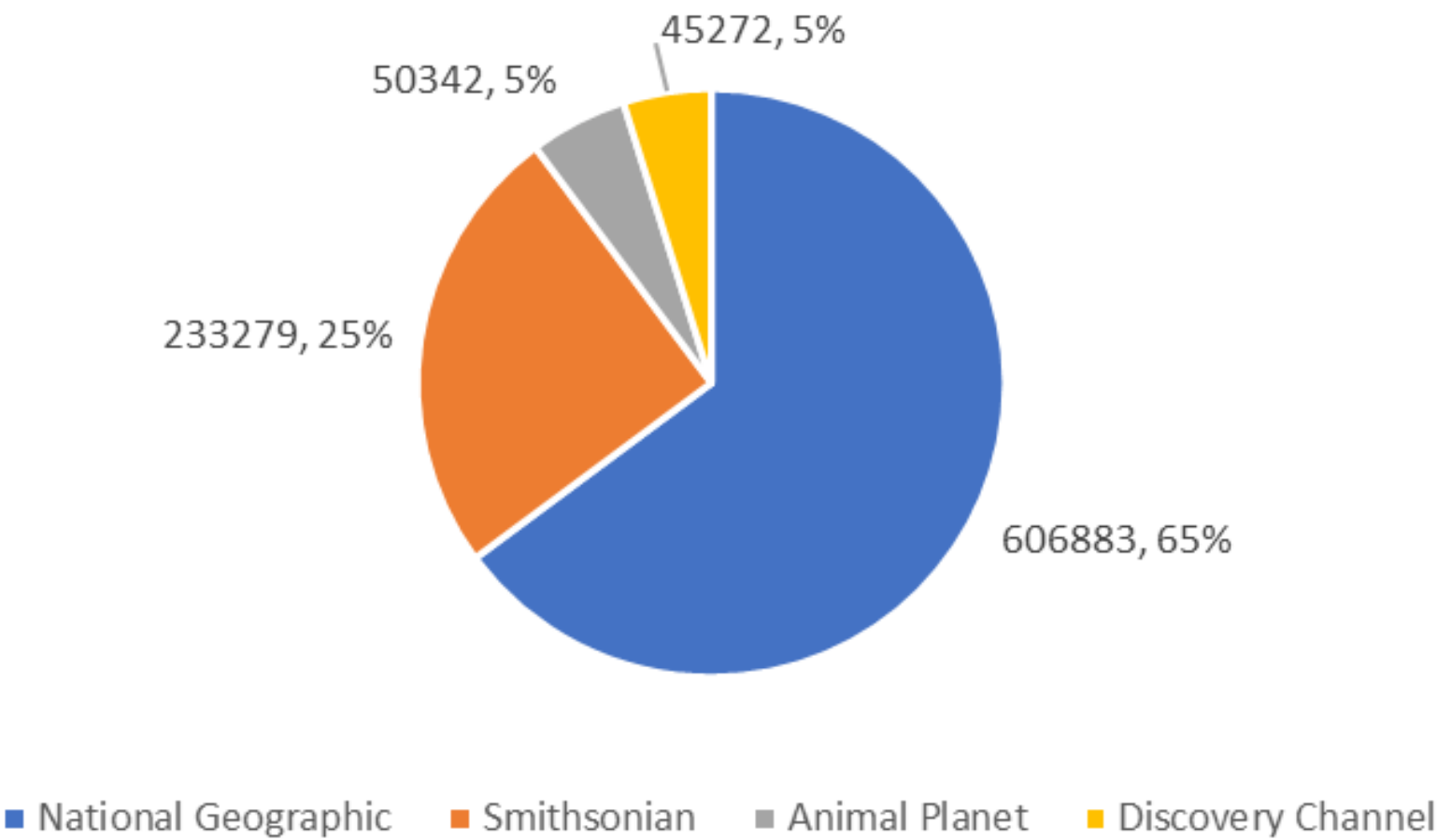
Organizations within dataset: National  
Geographic, Smithsonian, Animal Planet,  
Discovery Channel



# Earned Competition

## Data: Dataset Summary

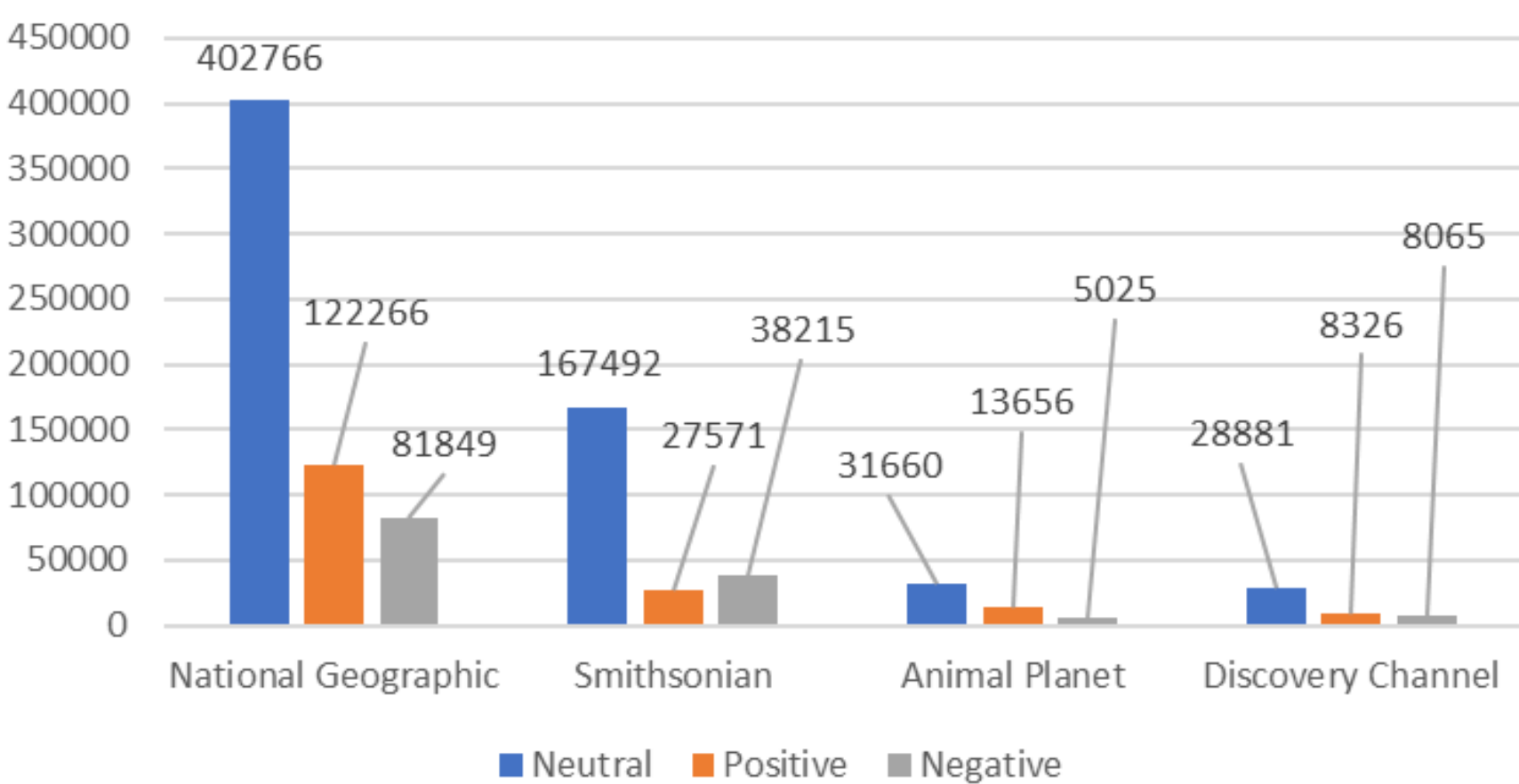
Mention Volume by Organization



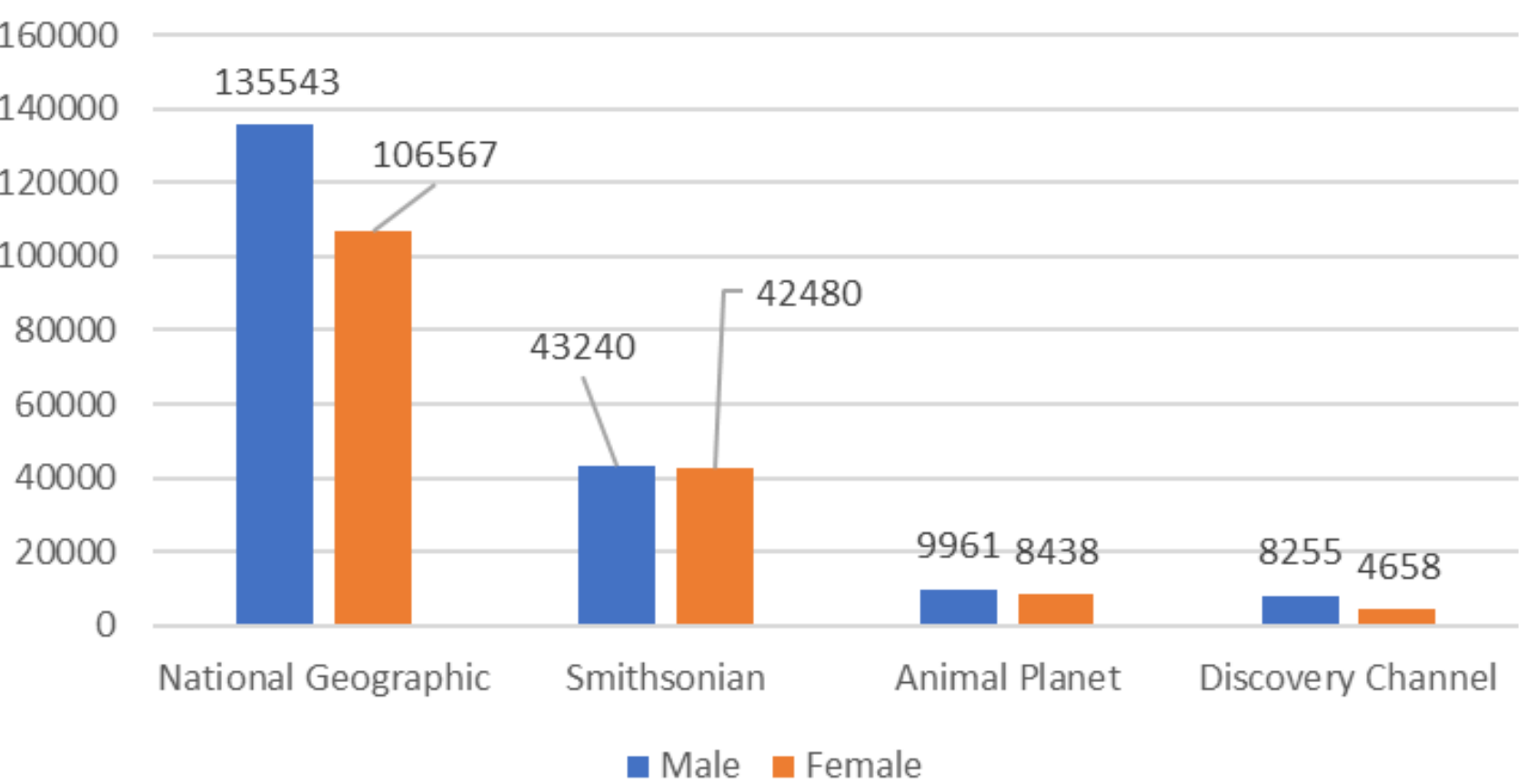
This graph shows the mention volume by organizations of National Geographic and three comparative organizations. National Geographic takes up more than half of the graph. (606,883, 65%) Compared to other comparative organizations, National Geographic is mentioned the most.

Neutral sentiment within National Geographic posts comprised the largest volume of mentions compared to other organizations and sentiments. All organizations had higher positive sentiment than negative with the exception of Smithsonian.

Mention Volume by Sentiment by Organization



Mention Volume by Gender by Organization



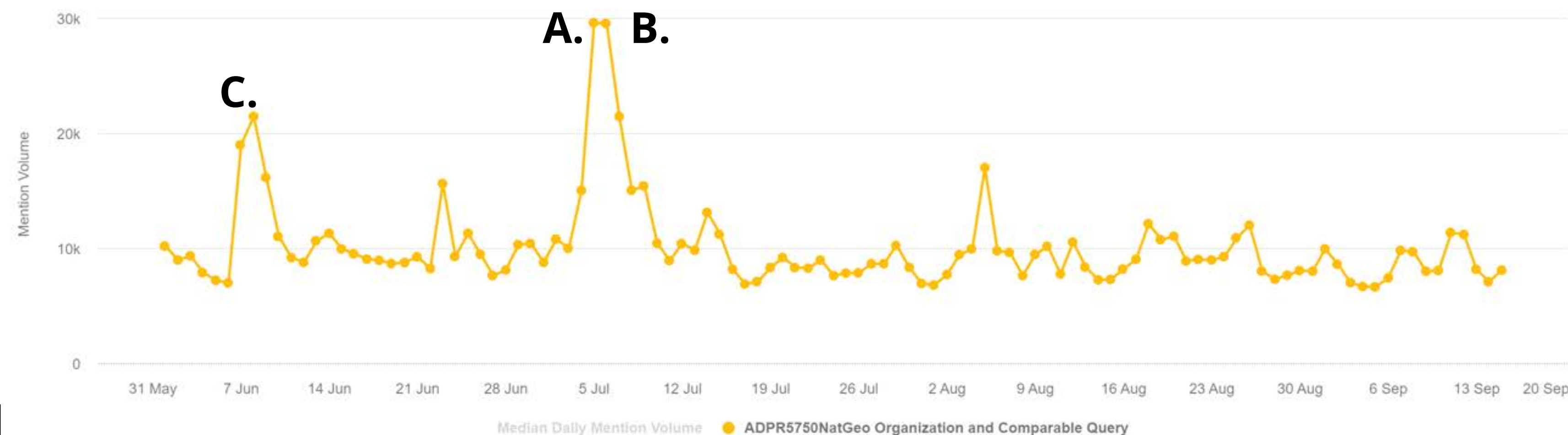
This chart illustrates the mention volume by identified gender within mentions. All mentions for National Geographic and its comparable organizations seem to be comprised mostly of male users, implying these organizations are not making a concerted effort to include female audiences.



# Earned Competition

## Data: Dataset Summary

### Earned Competition Mention Volume Spike Analysis



**A: July 5th, 2021: 29,553 mentions; Post A was the most interacted with.**  
**B: July 7th, 2021: 29,495 mentions; post B was the most interacted with.**  
**C: June 8th, 2021: 21,420 mentions; Post C was the most interacted with; Top driver of mention volume was #worldoceanday (3,732 mentions using the hashtag)**

#### Post A



#### Post B



#### Post C



**Spikes within the earned dataset were largely created by posts that pertained to relevant and current events (post A and post B.) These two posts featured links to news articles or secondary resources, and post A utilized a hashtag acknowledging a specific event. Post C featured the most popular theme within National Geographic posts, Flora/Fauna, and featured a video.**



# Earned Competition

## Data: Dataset Summary

### Most Mentioned Tweeters

- @wildlifemag : 11,288 total tweets
- @naturein\_focus : 9,866 total tweets
- @avibase : 7,471 total tweets
- @Smithsonian: 6,978 total tweets

### Top Hashtags

Hashtag	All Tweets	Retweets	Tweets
#sharkfest	24860	8384	16475
#natgeo	17813	12096	5716
#nationalgeographic	8526	4729	3796
#nature	10993	7559	3433
#ecoterror	6524	3796	2727
#ecocide	6277	3667	2608
#wildlife	7932	5547	2384
#travel	4363	2113	2249
#photography	7142	4974	2167
#naturephotography	7264	5537	1726

### Potential Influential Users

- @incognito9
  - 5,052 total mentions, 615 average reach
- @DrGem2015
  - 2,307 total mentions, 63 average reach

**Top hashtags within the earned dataset continued to be related to specific events or flora/fauna. The top retweeted post pertained to current and trending news, and the second most retweeted post resonated with an audience due to its strong sentimental message.**

### Top retweeted Content



**Andy Kim**   
@AndyKimNJ

6 months ago today I wore this blue suit as I cleaned the Capitol after the insurrection, now I just donated it to the Smithsonian. Jan6 must never be forgotten. While some try to erase history, I will fight to tell the story so it never happens again. Here is one story... (THREAD)



9:12 AM · Jul 6, 2021 · Twitter Web App

**16,900 total retweets**



**Matt Doogue**  
@MattDoogue

13 years ago I tried to kill myself  
12 years ago I was fired from my job  
11 years ago I was declared bankrupt

10 years ago I picked up a camera  
7 years ago I was published with National Geographic  
6 years ago I'd won countless awards  
4 years ago I got a mortgage

Have faith.

11:43 AM · Aug 24, 2021 · Twitter for iPhone

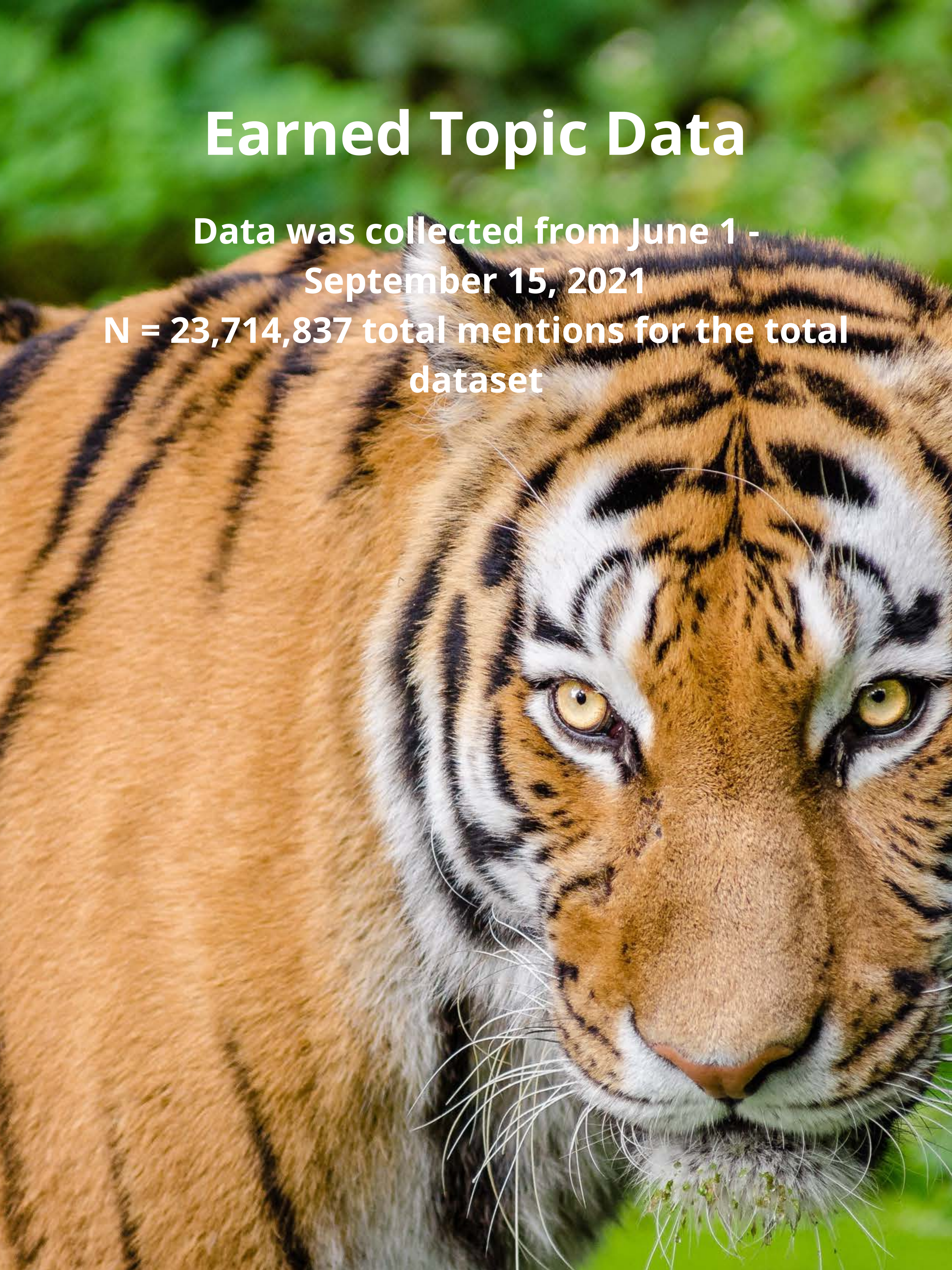
**8,506 total retweets**



# Earned Topic Data

Data was collected from June 1 -  
September 15, 2021

N = 23,714,837 total mentions for the total  
dataset

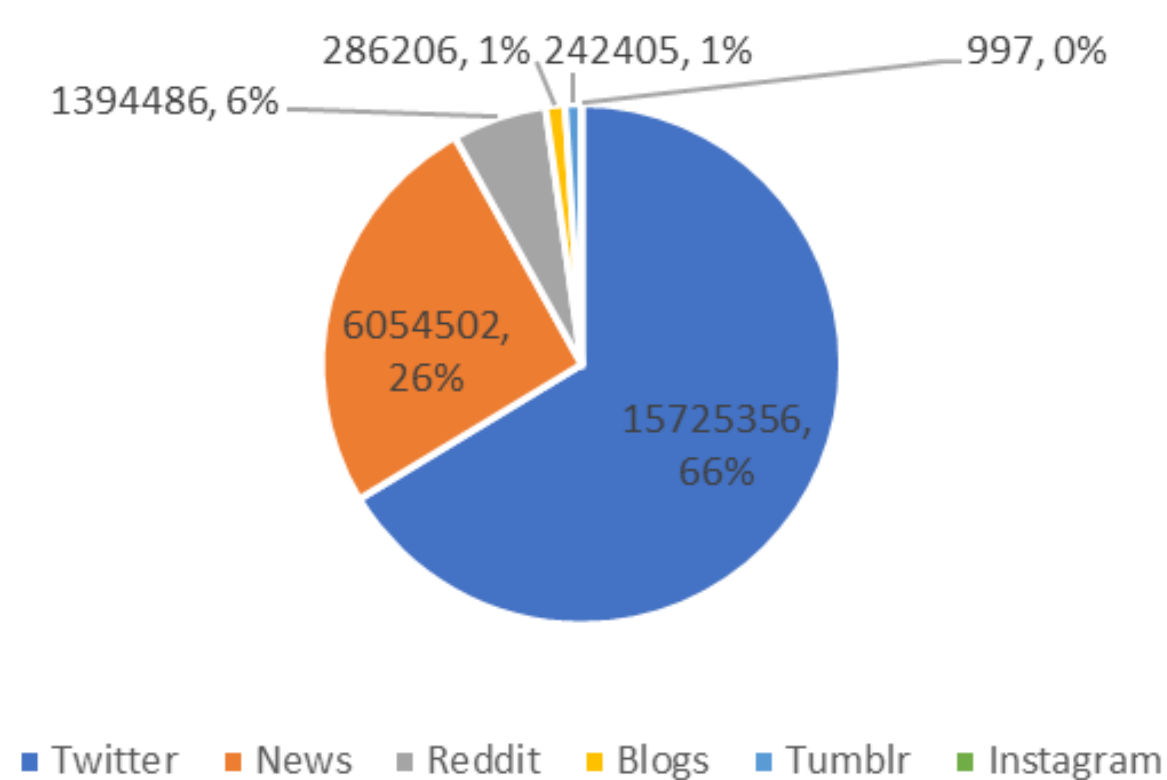




# Topic Data: Dataset Summary

- Data was collected from June 1 - September 15, 2021
- N = 23,714,837 total mentions for the total dataset
- 8,853,269 mentions had identified gender; 4,874,354 (55%) were identified as male and 3,978,915 (45%) were identified as female

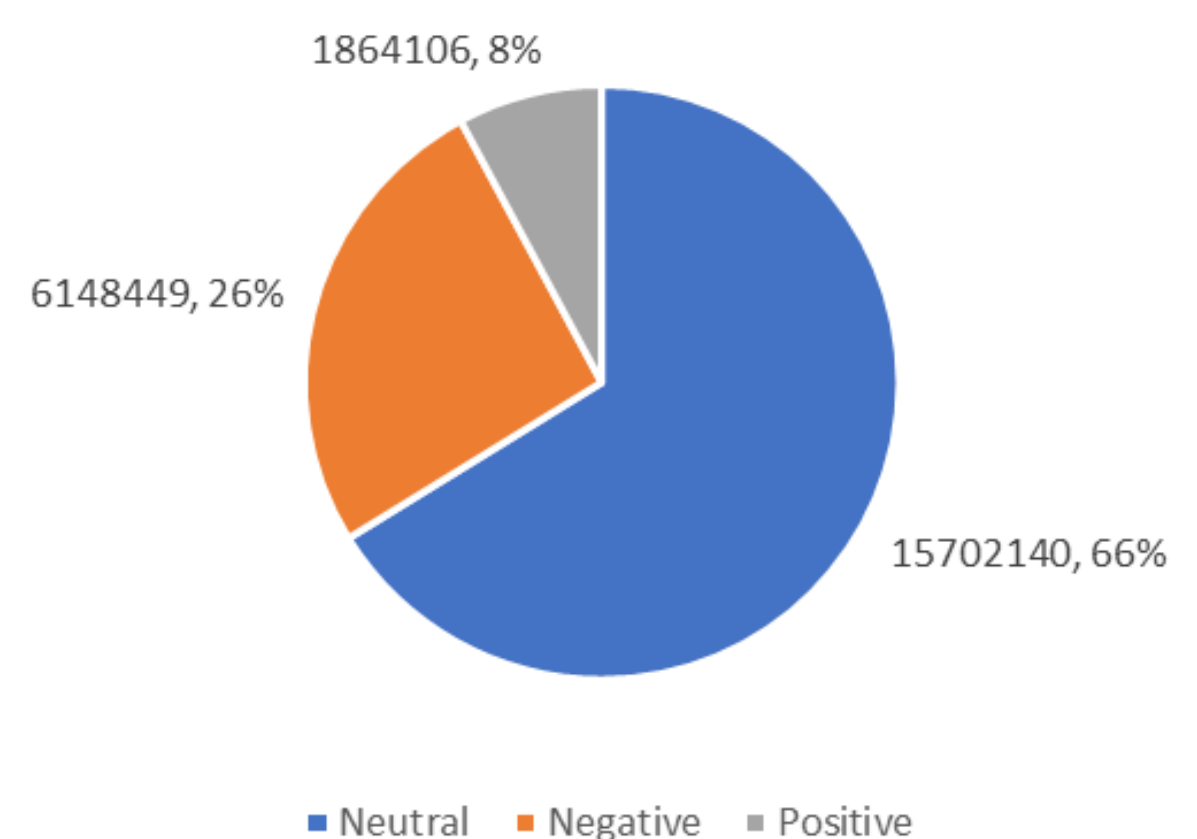
Mention Volume for Topic Data by Content Sources



**Unlike other datasets, other sources such as news accounts and Reddit have some amount of significant representation within the topic dataset.**

**Within the topic dataset, there is a larger representation of negative sentiment than in other datasets. Neutral sentiment still occupies the majority of the dataset.**

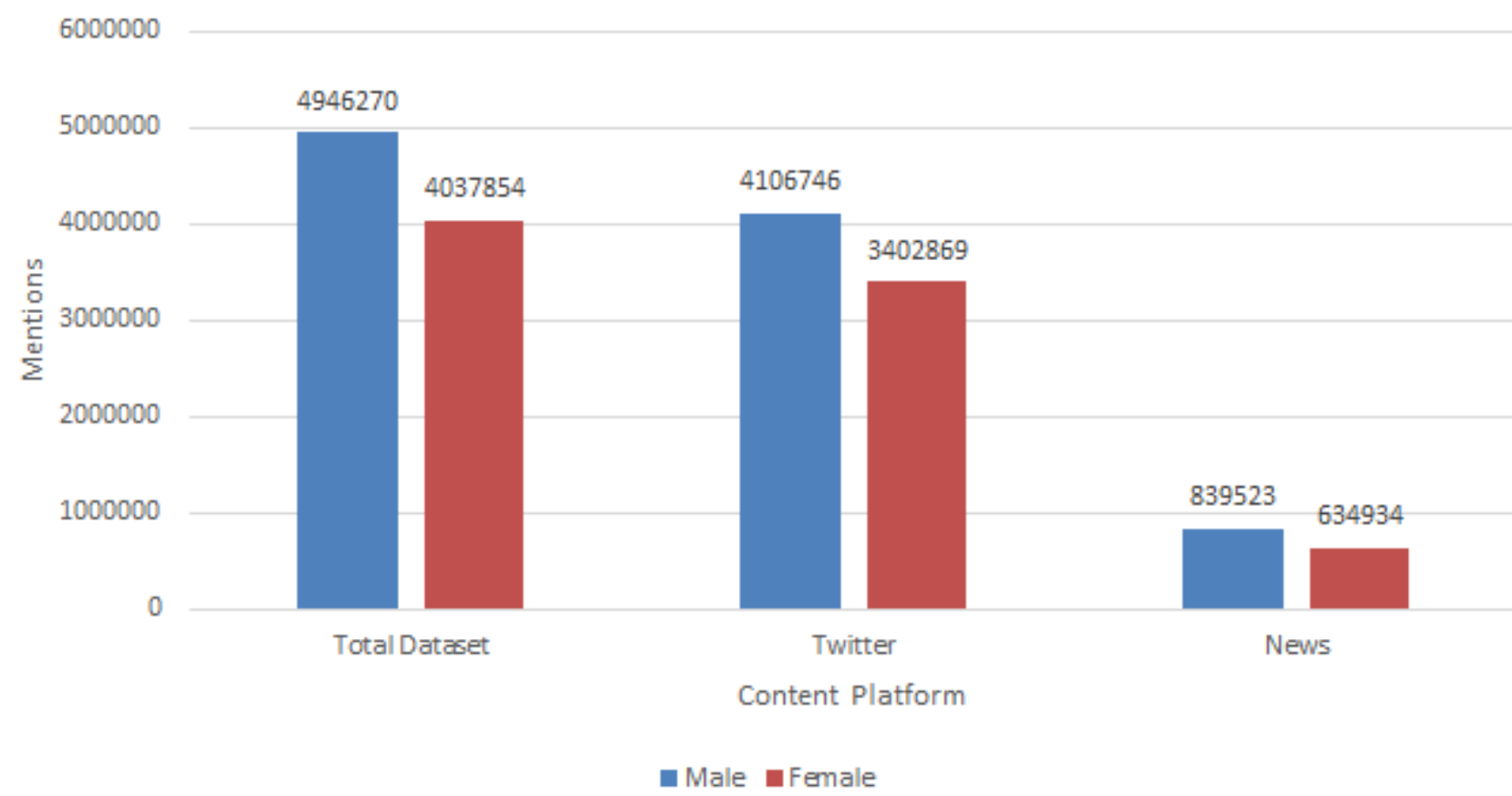
Mention Volume for Topic Data by Sentiment





# Topic Data: Dataset Summary

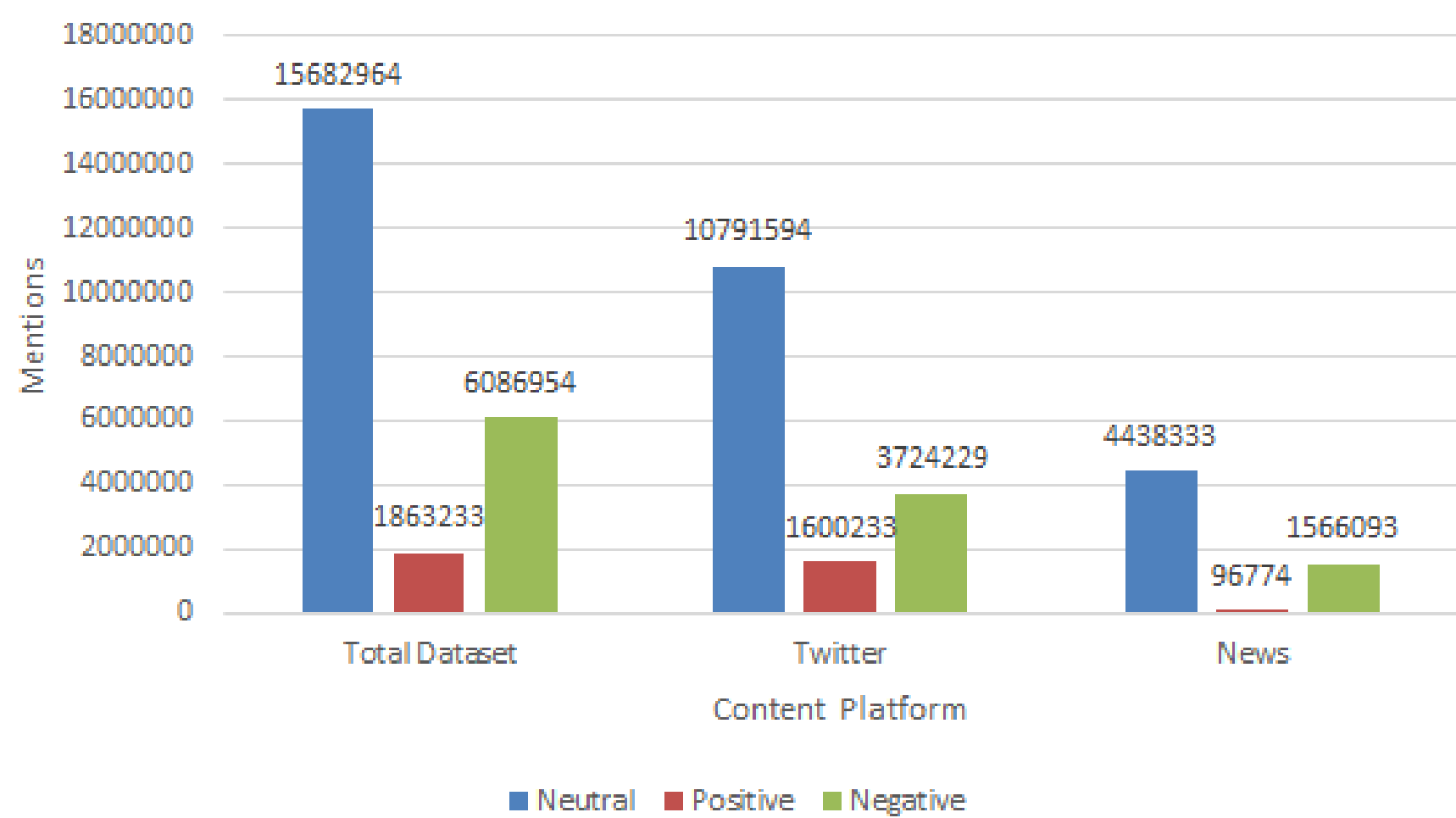
Mention Volume by Identified Gender by Content Source



**Across the top contributing sources to the topic dataset, males contributed more mention volume than females.**

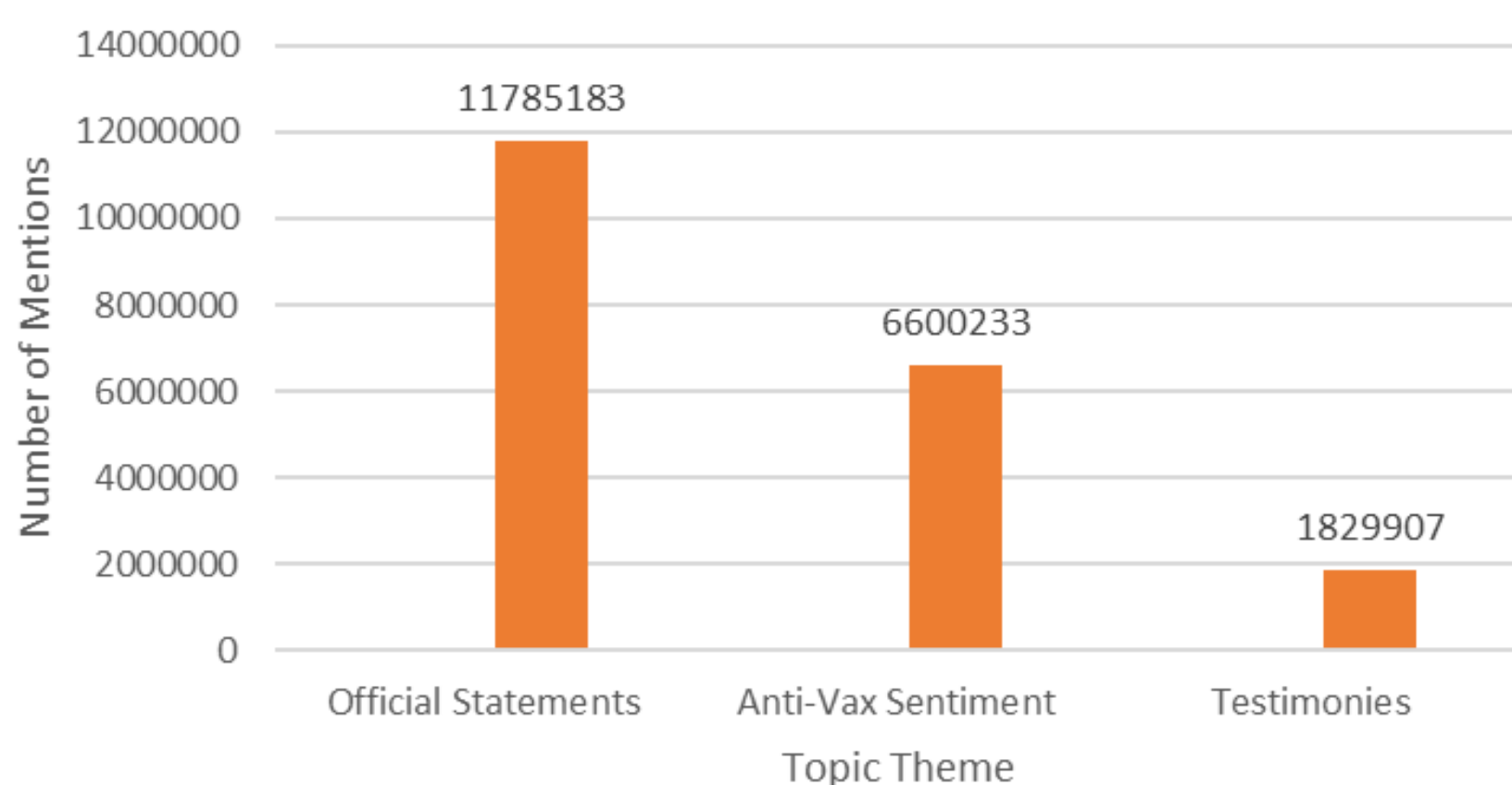
**Across the top contributing sources to the topic dataset, sentiment proportions remained relatively similar, and across all platforms positive sentiment was much lower than neutral or negative.**

Mention Volume by Identified Sentiment by Content Source



**Official Statements comprised the largest proportion of mention volume within the dataset. Testimonies comprised the lowest by a substantial margin.**

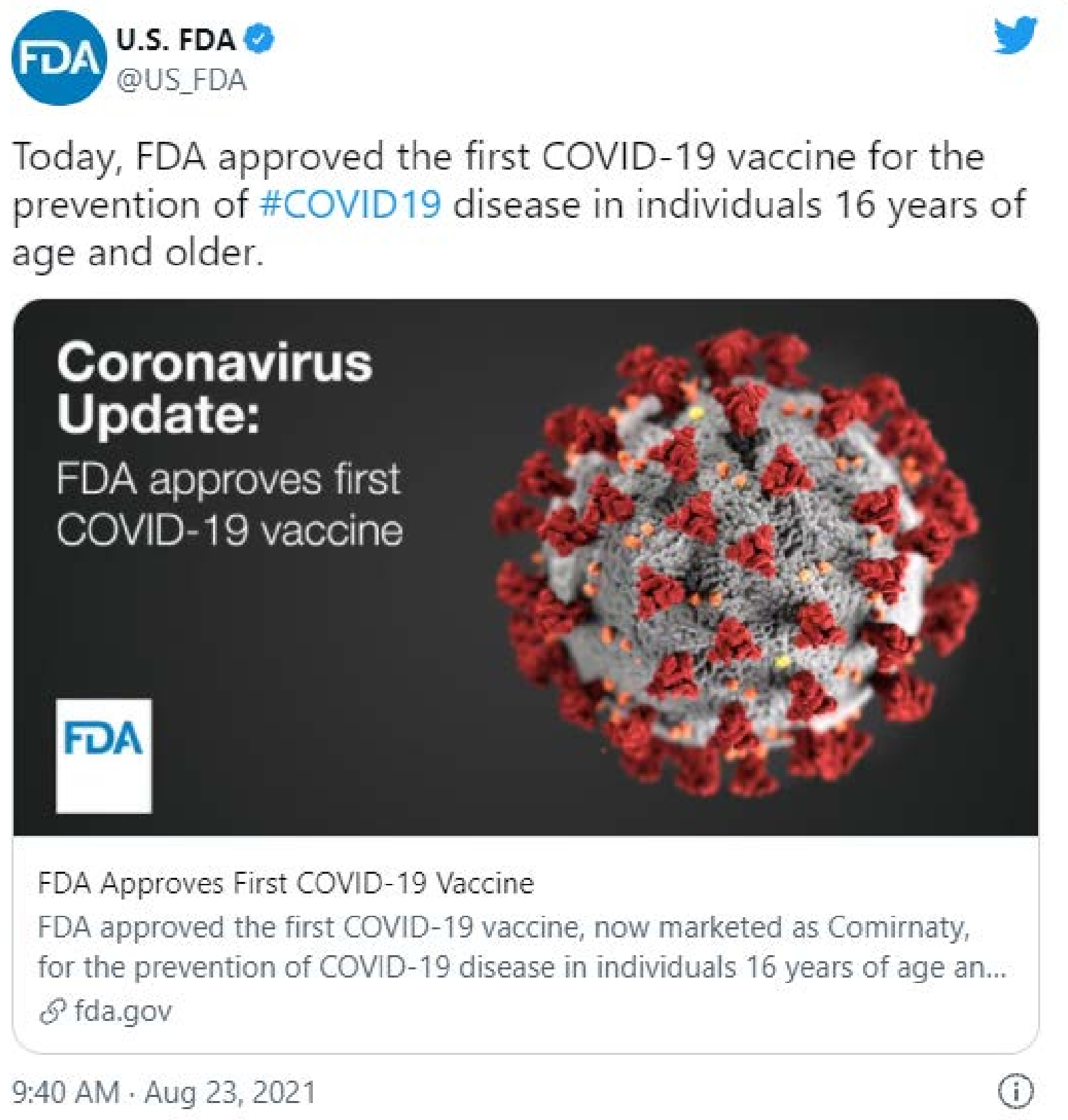
Mention Volume by Topic Theme





# Topic Data: Dataset Summary

## Top Posts



**47,573 retweets**



**41,670 retweets**

## Top Users

- @potus 480,947,830 impressions
- @cdcgov 770,282,101 impressions
- @who 1,021,806,206 impressions

**Top users within the topic dataset were figures or organizations of authority with large reach and influence. Top items were major official statements and sentiment-charged posts.**



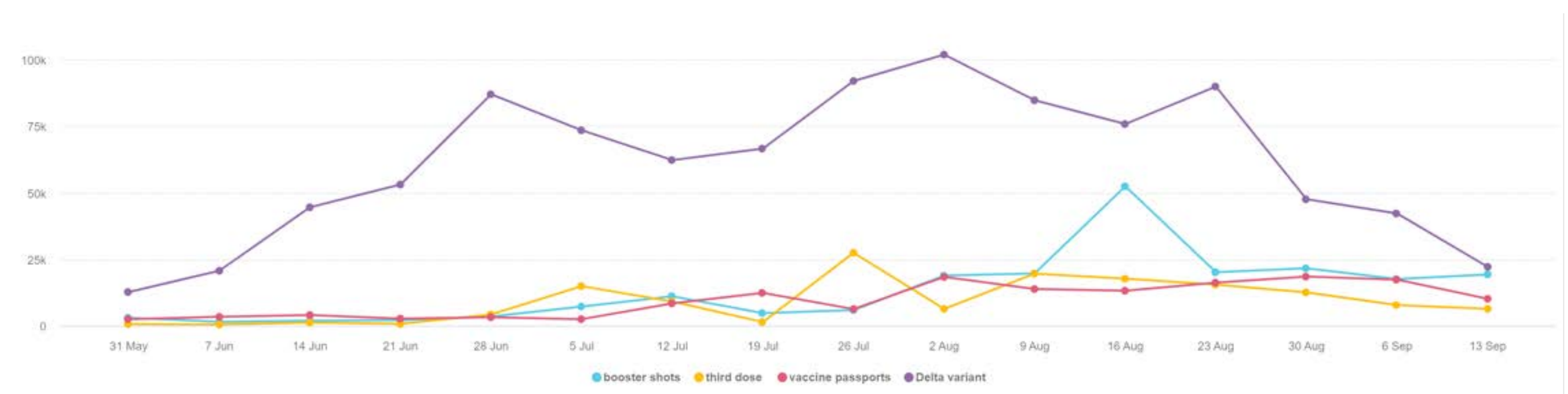
# Topic Data: Dataset Summary

11,785,183 mentions (49.70% of total dataset)

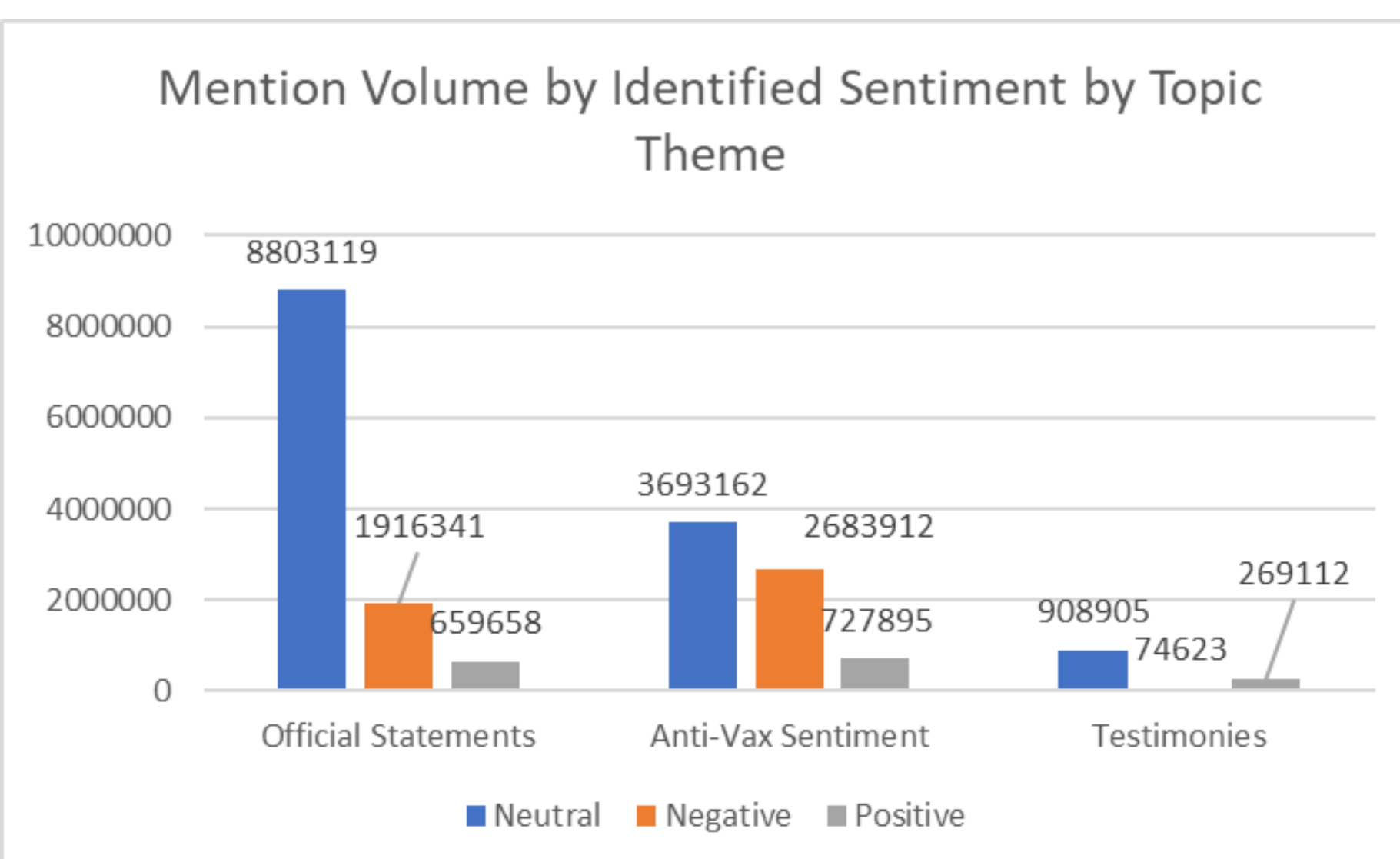
## Top URLs

URL	All Tweets	Retweets	Tweets	Impressions
<a href="https://www.walgreens.com/findcare/vaccination/covid-19">https://www.walgreens.com/findcare/vaccination/covid-19</a>	47746	0	47746	1291330
<a href="https://www.cvs.com/immunizations/covid-19-vaccine">https://www.cvs.com/immunizations/covid-19-vaccine</a>	30561	181	30379	23253242
<a href="https://www.fda.gov/news-events/press-announcements/fda-approves-first-covid-19-vaccine">https://www.fda.gov/news-events/press-announcements/fda-approves-first-covid-19-vaccine</a>	61258	55953	5305	117458515

## Trending Topics in Topic Data



## Mention Volume by Sentiment by Theme



The chart illustrates that **neutral sentiment comprises the majority of mentions within each theme of the topic dataset.** However, the testimonies theme had higher positive sentiment than negative, which sets it apart from the other two themes within the dataset.



# Social Network Analysis





# Social Network Analysis; Dataset Summary

The Dataset was limited to 1,000 tweets, collected from 1,232 twitter users involved in conversations involving key search terms from the query. These 1,000 tweets were collected over the course of 2 hours on November 3rd, 2021.

## Search Query

“National Geographic” OR “nationalgeographic” OR @NatGeo OR #NationalGeographic OR #NatGeo OR #nationalgeographic OR #NationalGeo OR “NatGeo”

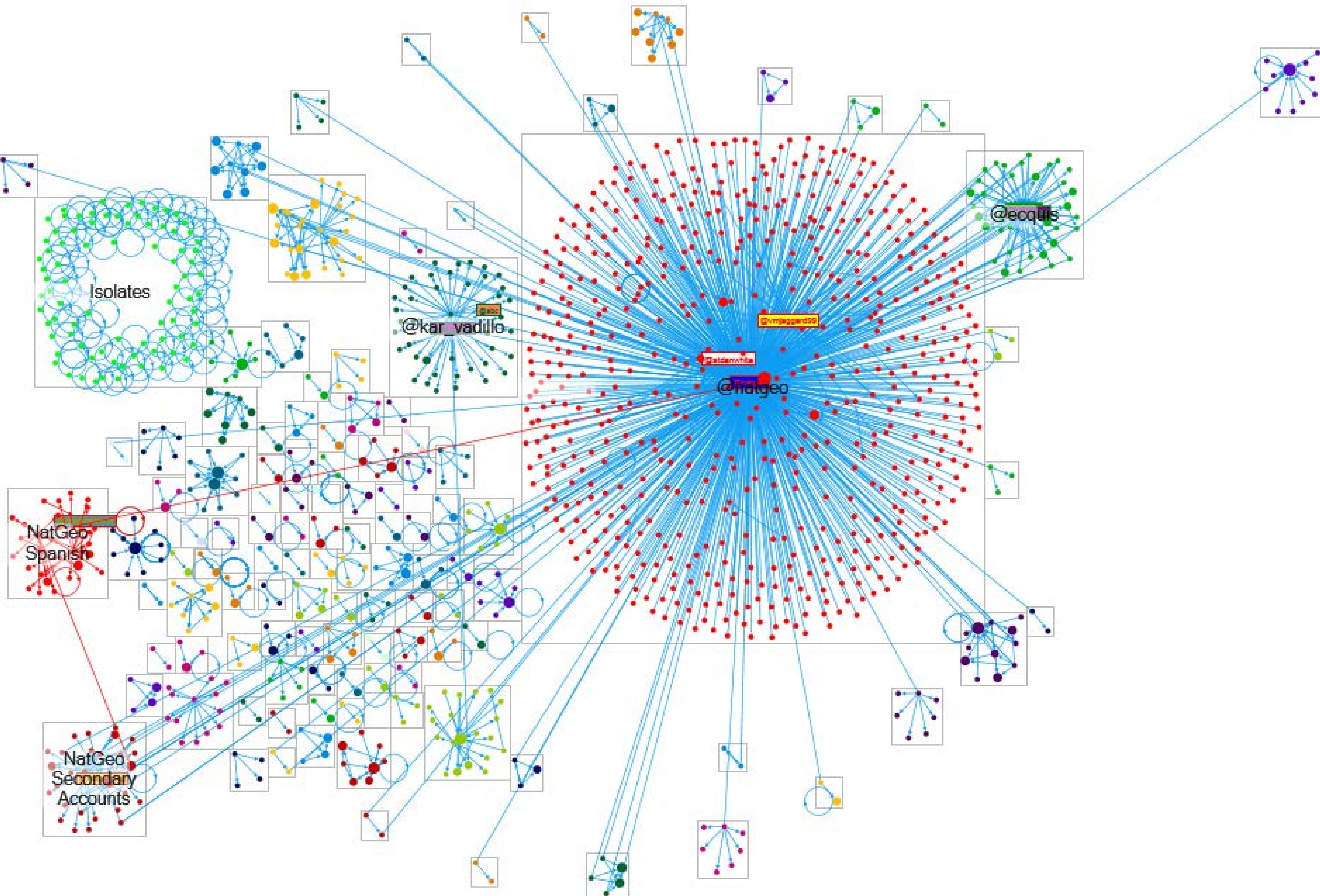
## Key Metrics of Dataset

- **Edges: 1,644 total edges, 192 duplicate edges, 202 self-loops**
  - Edges are the points of connection between two vertices (users within the network)
  - Self-loops are edges that occur within the same vertex
- **Reciprocated Vertex Pair Ratio : 0.0103**
  - Reciprocated Vertex Pairs are vertices that link to one another in both directions
- **Single-Vertex Connected Components (isolates): 82**
  - Isolates are vertices that have no connections in the network
- **Graph Density : 0.00091**
  - A measurement of the number of potential connections within a network divided by the actual number
- **Graph Modularity: 0.6067**
  - A measurement of group (vertex cluster) fitness; the lower the number, the more defined the group is



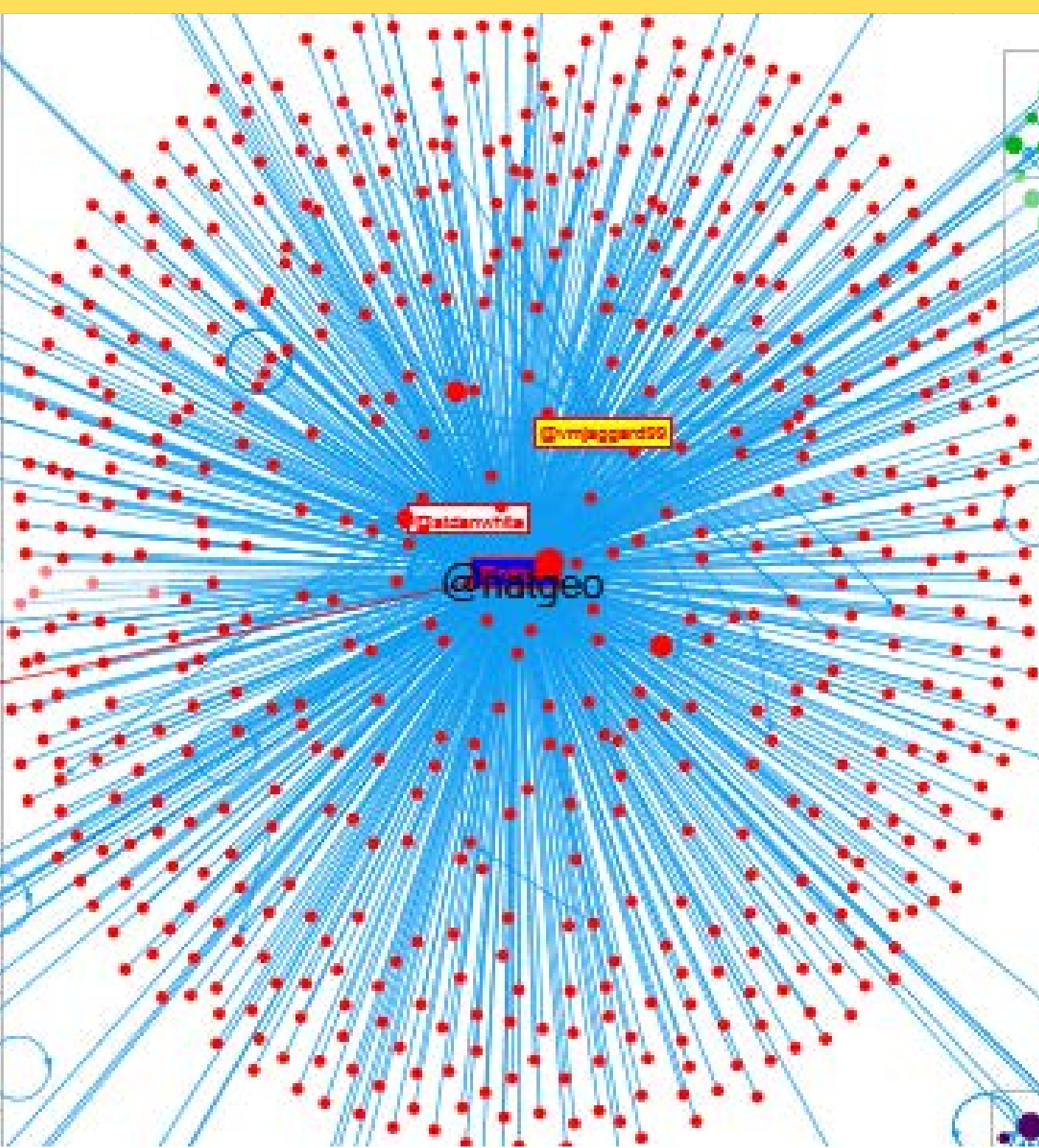
# Social Network Analysis; Dataset Summary

## Social Network Visualization





# Social Network Analysis; Cluster Analysis



## Top Items in Cluster

### Top Words

- world, happy, Jellyfishday

### Top Hashtags

- #jellyfishday, #worldjellyfishday, #cop26

### Top Domains

- nationalgeographic.com, disneycareers.com, twitter.com

### Top URLs

- <https://jobs.disneycareers.com/job/washington/science-resident-national-geographic/391/19816078>
- <https://www.nationalgeographic.com/science/article/covid-vaccines-latest-updates?cmpid=org=ngp::mc=social::src=twitter::cmp=editorial::add=tw20211103science-cvdapproval5to11pfizer&sf250962423=1>
- <https://www.nationalgeographic.com/animals/article/whales-eat-three-times-more-than-thought?cmpid=org=ngp::mc=social::src=twitter::cmp=editorial::add=tw20211103animals-howmuchwhaleseat&sf250956941=1>

## National Geographic Cluster

Vertices: 585

Unique Edges: 680

Reciprocated Vertex Pair Ratio: 0.010

Density: 0.002

## Top Users in Cluster

**@natgeo (26,669,076 followers)**

- National Geographic's Twitter page

**@atdanwhite (43,479 followers)**

- Popular Twitter user; cohost of podcast

**@dsaarchaeology (19,813 followers)**

- Popular twitter user; occupational archaeologist and writer for science journals

**@vmjaggard99 (8,287 followers)**

- Executive editor for National Geographic's science articles and publications

**@superchristop (172 followers)**

- Occupational Archaeologist

## Cluster Narrative

The narrative within this cluster is substantially varied. The two most prominent themes within the cluster were conversations surrounding world jellyfish day and conversations about and involving COP26, the UN Climate Change conference, which was occurring during the time of data collection. A slightly less prominent conversation about #reconafrika was also present in this cluster, which more specifically involved voiced concerns and opposition to the oil and gas company's planned fracking efforts in Africa.



# Social Network Analysis; Cluster Analysis



## Top Items in Cluster

### Top Words

- natgeo, abc, bbcnews

### Top Domains

- msn.com

### Top URLs

- [https://www.msn.com/es-mx/noticias/mexico/uif-respalda-prisi%  
c3%b3n-preventiva-para-emilio-lozoya/ar-AAQhSAq?ocid=mailsignout&li=AAggxAT](https://www.msn.com/es-mx/noticias/mexico/uif-respalda-prisi%c3%b3n-preventiva-para-emilio-lozoya/ar-AAQhSAq?ocid=mailsignout&li=AAggxAT)

## Emilio Lozoya MSN Article Cluster

Vertices: 44

Unique Edges: 44

Reciprocated Vertex Pair Ratio: 0.000

Density: 0.023

## Top Users in Cluster

**@natgeo (26,669,076 followers)**

- National Geographic's Twitter page

**@abc (16,985,915 followers)**

- Prominent global and American news source

**@bbcnews (12,956,292 followers)**

- Prominent world and European news source

**@egade (19,304 followers)**

- Twitter account for the business school of the Tecnológico de Monterrey

**@tecdemonterrey (513,876 followers)**

- Twitter account for the Tecnológico de Monterrey, a prominent university system in Mexico

## Cluster Narrative

The narrative within this cluster revolves around the conversation concerning the top URL, which links to a news article detailing the preventative detention of Emilio Lozoya, the former director of Pemex, who is currently in jail pending trials on corruption charges. The narrative is largely unrelated to National Geographic, and was only caught in the network analysis because of conversations on Pemex and National Geographic being mentioned by a few users within the conversation. National Geographic did not contribute to conversations within this cluster.



# Social Network Analysis; Cluster Analysis



**Top Items in Cluster**

## Top Words

- UK, natgeo, ecquis, variant

## Top Domains

- nationalgeographic.com,  
twitter.com, apple.news

## Top URLs

- <https://www.nationalgeographic.com/science/article/an-offshoot-of-the-delta-variant-is-rising-in-the-uk>
- <https://twitter.com/natgeo/status/1455780545716269060>
- <https://apple.news/ASdjQeJDUSAWeFsW9HojyLw>

## COVID-19 Delta Variant Cluster

Vertices: 37

Unique Edges: 71

Reciprocated Vertex Pair Ratio: 0.014

Density: 0.053

## Top Users in Cluster

**@natgeo (26,669,076 followers)**

- National Geographic's Twitter page

**@chrischirp (165,166 followers)**

- Director of clinical operational research unit of UCL

**@ecquis (382 followers)**

- Coordinator of COVID-19 and Cancer Consortium registry

**@GuptaR\_lab (18,990 followers)**

- Lab twitter account for Ravi Gupta; professor of Clinical Microbiology at the University of Cambridge

## Cluster Narrative

The narrative within this cluster revolves around the conversation concerning the top URL, which links to a news article posted to National Geographic's website detailing an offshoot of the COVID-19 Delta variant spreading in the UK. Top users within this cluster are largely involved within the conversation from an academic and educated perspective, and respond to one another, hence the higher reciprocity and density values as compared to other clusters within the network analysis.





# Social Network Analysis; Cluster Analysis



## Top Items in Cluster

### Top Words

- natgeo, whales, natgeomag

### Top Domains

- nationalgeographic.com,  
twitter.com

### Top Hashtags

-#animals, #jellyfishday,  
#faroeislands, #tigray

### Top URLs

- <https://www.nationalgeographic.com/animals/article/whales-eat-three-times-more-than-thought?cmpid=org=ngp::mc=social::src=twitter::cmp=editorial::add=twp20211103animals-howmuchwhaleseat&sf250954654=1>
- <https://www.nationalgeographic.com/animals/article/whales-eat-three-times-more-than-thought>
- <https://www.nationalgeographic.com/magazine/article/earths-creatures-sport-patterns-with-many-purposes>

## Animal Conversation Cluster

Vertices: 29

Unique Edges: 32

Reciprocated Vertex Pair Ratio: 0.000

Density: 0.038

## Top Users in Cluster

**@natgeo (26,669,076 followers)**

- National Geographic's Twitter page

**@Britnatureguide (64,556 followers)**

- Twitter page for the British Nature Guide; photo-documenting project for fauna in Britain

**@natgeomag (520,285 followers)**

- National Geographic's magazine Twitter page

**@WildlifeMag (202,427 followers)**

- Twitter page for BBC's Wildlife Magazine

**@NatGeoIndia (443,347 followers)**

-National Geographic's India branch Twitter page

## Cluster Narrative

The narrative within this cluster concerns a National Geographic article detailing specifics about whales and their dietary needs and the conversations that the article began across multiple accounts. Many of National Geographic's secondary accounts (i.e. the magazine account and the Indian branch account) retweeted the article or posted the URL in their own tweet, interacting with the main National Geographic Twitter page and creating a cluster.



# Appendices





# Organizational Query

"National Geographic" OR "nationalgeographic" OR @NatGeo OR #NationalGeographic OR #NatGeo OR #nationalgeographic OR #NationalGeo OR "NatGeo"

# Comparable Organizations Query

Smithsonian OR #Smithsonian OR @Smithsonian OR AnimalPlanet OR @Animal\_Planet OR "Animal Planet" OR ("Discovery Channel" OR DiscoveryChannel OR @DiscoveryChannel)

# Topic Dataset Query

"Fully vaccinated" OR fullyvaccinated OR "fully vaxxed" OR fullyvaxxed OR #fullyvaxxed OR #vaxxed OR ((COVID19 OR COVID-19 OR #COVID OR Coronavirus OR "corona virus" OR pandemic OR #pandemic) AND (vaccine OR #vaxxed OR vaxxed OR vaxed OR #vaxed OR "Johnson & Johnson" OR J&J OR JohnsonJohnson OR Pfizer OR PfizerBiontech OR "Pfizer Biontech" OR Biotech OR Pfizerbooster OR "Pfizer booster" OR "second dose" OR #seconddose OR #secondose OR #2nddose OR #2ndose OR Moderna OR #Moderna OR "Moderna second dose" OR "Pfizer second dose" OR #Modernaseconddose OR #Pfizerseconddose OR "booster dose" OR "booster vaccine" OR "global vaccine" OR #globallyvaxxed OR "vaccines save lives" OR #vaccinessavelives OR #modernabooster OR #PFizerbooster OR #JJBooster OR #Covidvaccine OR #Vaccinebooster OR #Vaccineboosters OR #jab OR jab OR "COVID Jab" OR "coronavirus jab" OR #COVIDJAB OR injection))

# Social Network Query

"National Geographic" OR "nationalgeographic" OR @NatGeo OR #NationalGeographic OR #NatGeo OR #nationalgeographic OR #NationalGeo OR "NatGeo"