National Geographic Final Report

GRACE ASCAR, JAYNE KAY, NAOMI TUCKER



Twitter: @SeeSuiteUGA Instagram: @seesuiteuga

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About National Geographic Social Media

National Geographic is a nonprofit that aims to share information and media relating to nature, travel, science, education, photography and more. Their social media reflects the goal to share media to promote exploration and conservation across a global audience. NatGeo's social media spans across Instagram, Twitter, Facebook, News, Reddit, and Blogs in a variety of content types, such as URLs, pictures, videos, etc.

Executive Summary

National Geographic Social Media

During the past semester, our team has analyzed National Geographic's owned and earned social media channels using Brandwatch to better understand engagement, demographics, trends, and themes and topics of conversation. We have then analyzed and provided recommendations for future social media use.

We analyzed Twitter, Instagram, Facebook, blogs and news sources for

Comparable Organizations Green Peace Animal Planet Smithsonian History Channel Themes Hunting Climate crisis Wildlife conservation Extinction

Topics People Travel Photography Nature

Limitations for this data set include that Facebook data was not easily accessible during our analysis. Much of National Geographic's Facebook information could not be analyzed with Brandwatch. Additionally, Instagram data was inconsistent throughout analysis.

RECOMMENDATIONS

Tweet more photo and video media rather than just article links

National Geographic produces a plethora of content, much of which is published via National Geographic's magazine as well as their online platform. In order to drive users to their site, they post a majority of their articles on their Twitter, @natgeo.

National Geographic should continue posting articles, but less often. Of course, driving traffic to their site is important, but so is breaking up many of the same kinds of posts. With an increase of photo and video content, overall engagement will increase, as well as brand awareness, since the Nat Geo Photo of the Day and their photo competitions, are already very popular.

Articles (N=258) equate to 10 times the amount of posts than images (N=29) and videos (N=20). Notably, articles did not perform as well as the photos and videos. National Geographic is known for their photography and a multitude of people compete to be featured on any of their platforms. With this content, it would be easy to implement a more balanced ratio of photos and videos and articles. Lastly, some content that doesn't do as well, such as their podcast, would benefit from additional media, like photos and videos added to these Tweets. (see full analysis on pgs 11 & 12).

Increase amount of quick fact posts

Quick fact: Tweets that are informative but don't link to outside sources. They can include media that supports the tweet but the information in the tweet is the most important.

The tweets that are classified under "quick fact" theme of tweet have the most average retweets per Tweet. 'Quick fact' tweets average 193.9 retweets per tweet, 7% higher than the next most engaged theme. However, it is the least common theme of Tweet*. There are only 29 quick fact posts in the past 3 months.

Compare this to the theme of article, there were 245 tweets with an article in the past 3 months. Articles were posted over 7 times the amount of quick fact tweets. These average 124.42 retweets per post, almost 70 fewer retweets per post.

Based on this data, we suggest increasing the amount of quick-fact tweets to increase engagement with National Geographic tweets (see full analysis on pg 11).

RECOMMENDATIONS

Post more family-friendly content

Gender analysis showed that women mentioned National Geographic alongside the topic of family and parenting significantly more than other topics. For this reason, it is recommended posting more family friendly content that can be shareable with families.

This content will likely have positive sentiments because family-friendly content is less historical or factual than other content. When posting this family-friendly content consider topics such as animals, environment facts, and including a media source (see full analysis on pg 23).

Expand NatGeo's reach to Western Europe

National Geographic is doing well in developed Western countries, as well as some larger Asian countries, such as India and Indonesia.

GreenPeace is coming in a close second in Western European nations. Good examples of this are Germany and France. In Germany, National Geographic is mentioned 1463 times, and Green Peace is mentioned 1200 times. In France, National Geographic is mentioned 1323 times and GreenPeace is mentioned 935 times. In order to keep this lead, National Geographic should focus on stories based in these countries, celebrate holidays that are popular in these countries, and make sure sentiments are leaning more positively towards these countries, at least in their original post (see full analysis on pg 17). HEHOMMENDATION

Partner with conservationists and nonprofits for sponsored content

According to our analysis using the social media tool, Buzz Sumo, we found more Twitter users that tweeted about wildlife conservation, who were also verified, had a high page authority, and 10s of thousands of followers. These conservationists, non profits, and wildlife trusts would be perfect for collaboration, content creation, donation drives, and sponsorships to get National Geographic's audience even more involved in causes they care about (see full analysis on pg 21).

Increase frequency of posts related to current events

Large spikes of engagement for National Geographic and comparable organizations were the Puppy Bowl, Year of the Tiger, Groundhog Day (February 2) and Superb Owl (a pun based on the Super Bowl). People interacted and responded well to posts that connect animals, current events, and culture to National Geographic's posts. It is recommended to increase the frequency of posts that relate relevant current events to posts with animals or related content (see full analysis on pgs 24 and 25).



RECOMMENDATIONS

Expand conversation of climate change to social media platforms

Climate crisis is already a large topic of conversation on News and Blogs, with 97.6k posts (see full analysis on pgs. 19 and 20). By expanding the type and number of platforms in which climate change is talked about in National Geographic posts, a larger audience, such as younger demographics and those that are environmentally cautious, will have more exposure to this topic and NatGeo as a whole. Those who follow other topics will be exposed to climate change conversation, e.g. people who are interested in animal content could be interested the effect of the climate crisis on migration patterns

More and more people are using social media as a primary source of information, so targeting them on these platforms will increase engagement with NatGeo content overall. The top audiences for climate crisis already are artists (n=620), scientists/researchers (n=530), teachers/lecturers (n=370), journalists (345), and students (n=190) (see full analysis on pg 16).

Cover environmental policies more thoroughly

National Geographic is a trustworthy source for environmental content. The audience reacts favorably to informational posts especially ones that are about the environment and nature.

Climate Crisis was engaged with exponentially more than other topics on news and blogs, and climate crisis and hunting had the most spikes on Twitter.

These findings, coupled with the effects that the climate crisis and hunting have on animals, National Geographic's most RTed topic from past research, means that their audience would react to posts involving animals as well as the policies that relate to animals and their environment (see full analysis on pgs 11, 17, 18, 19, and 20)

RECOMMENDATIONS

Use hashtags to link topics together

Hashtags are used to link conversations that are alike together. Using hashtags also allows a larger audience to see your content, and content that they are interested in. National Geographic does not use many hashtags in their posts and it is recommended that they should be using more content specific hashtags to broaden audiences and target content to an audience that is interested.

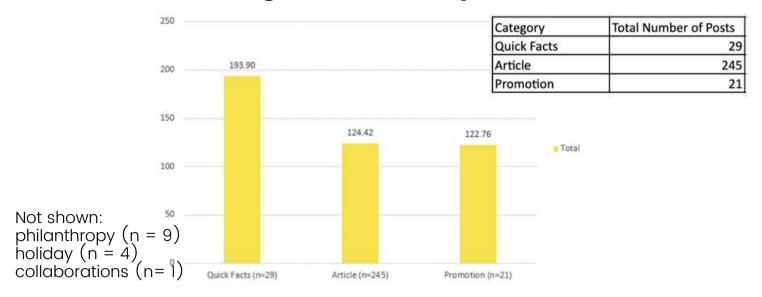
One example would be using the hashtags #biodiversity or #conservation when discussing hunting, climate crisis, wildlife conservation, and extinction. #biodiversity has been used within our dataset over 1,028 times and conservation has been used 581 times (see full analysis on pgs 12 and 18).

Early mornings are the best time to post for National Geographic

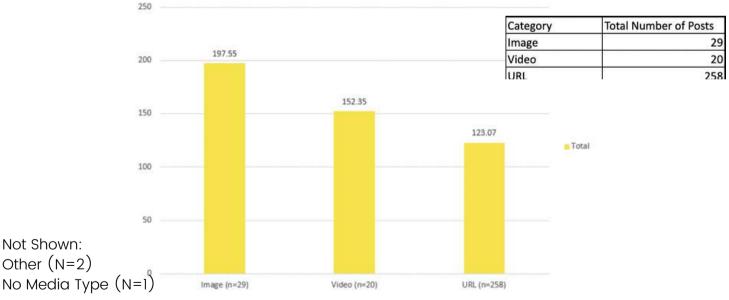
Utilizing the social media analytics tool, Keyhole, we found the best time to post content of any type on Twitter for @natgeo on Twitter was around 8 am. The best day of the week is Saturday. Therefore, Saturdays at 8 am are the most ideal time for National Geographic to post, which correlates with much of their audience being interested in the topic of Family & Parenting, since parents are one of the most likely demographics to be up early on Saturdays (see full analysis on pg 13).

OWNED MEDIA

Average Retweets by Theme



This graph shows the theme of the tweets on the National Geographic Twitter. There are three major themes: quick facts, articles, and promotions. (There are three more themes: philanthropy, holiday and collaborations but they did not have enough tweets to be statistically accurate). The most common theme was articles (n=245). The article tweets are a link to an article on the National Geographic website. The theme with the most engagement is quick facts with 193.9 retweets. Promotion is the least posted (n=21) and engaged with the least with 122.76 retweets.

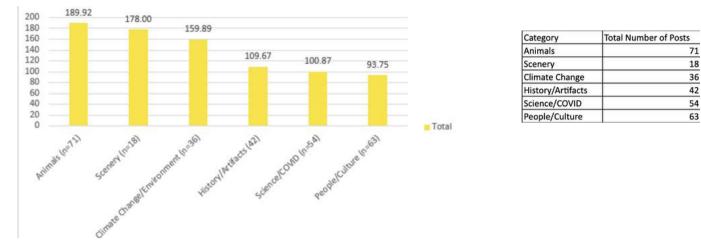


Average Retweets by Media Type

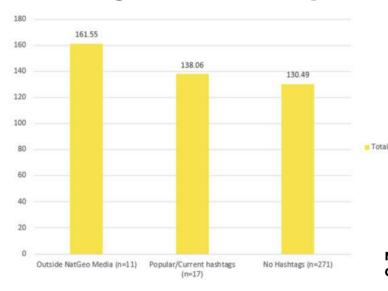
National Geographic typically posts 3 kinds of content: images (n=29), videos (n=20), URLs linking to their website (n=258). All of this content is important, but articles are posted 10x more than other content. While articles (average of 123.07 RTs) are important, both photos (average of 197.55 RTs) and videos (average of 152.35 RTs) receive much more engagement. If National Geographic posts 10 posts a day, which is common in the data we analyzed, making 3–5 of those videos or photos could be beneficial to their URL to other media ratio.

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Average Retweets by Media Content



This graph shows the Average Twitter Retweets by Media Content, which breaks down media content into 6 categories: Animals, Scenery, Climate Change/Environment, History/Artifacts, Science/COVID, and People/culture. The two categories with the largest average RTs are Animals (n=71, average RTs=189.92) and scenery (n=18, average RTs=178). In contrast, People/culture (n=63, average RTs=93.75) has 51% less average retweets than Animals (average RTs=189.92). It is interesting to note that although Scenery is ranked second highest, it has significantly less posts (n=18) than Animals (n=71). This shows that people engaged with scenery posts almost as much as Animal posts, even though there were less.



Average Retweets by Hashtag Target Type

Category	Total Number of Posts
Outside NatGeo Media	11
Popular/Current hashtags	17
No Hashtags	271

Not Shown: Podcast Series (N=2) Other (N=9)

Hashtag Target Type was also important in this analysis and is broken into three categories: Outside NatGeo Media (n=11), Popular/Current hashtags (n=17), and No Hashtags (n=271). Outside NatGeo Media hashtags had the largest number of average retweets (n=11, average RTs=161.55) despite having the least amount of posts. These are tweets where the hashtag correlated to another form of NatGeo media, like their video series #WelcomeToEarth. No Hashtags had the largest amount of posts by far (n=271), but the lowest engagement (average RTs=130.49).

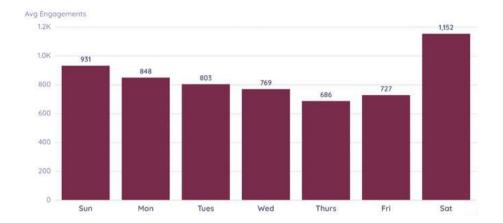
<u>Top Hashtags</u>

#natgeo, 39,156 mentions, #nature, 39,048 mentions, #naturephotography, 25,479 mentions, #photography, 16,534 mentions, #wildlife, 15,420 mentions

Notable: #natgeoyourshot, users use this hashtag for a chance to be featured on @natgeo's Instagram, 9,346 mentions

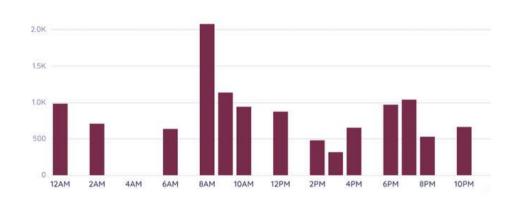
Social Media Analytics for Posting Times

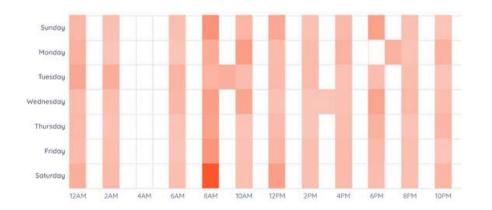
Data found using Social Media Analytics tool, Keyhole



Avg Engagements 2.5K Best day to post overall is Saturday

Best time to post overall is 8 am





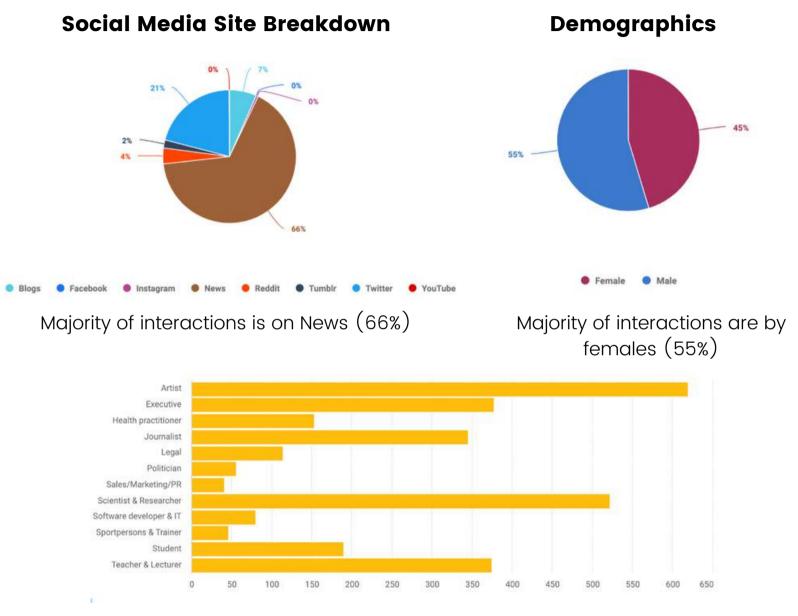
Posting heat map demonstrates highest engagement on Saturdays at 8 am

EARNED MEDIA

EARNED MEDIA TOPIC

Topic Data

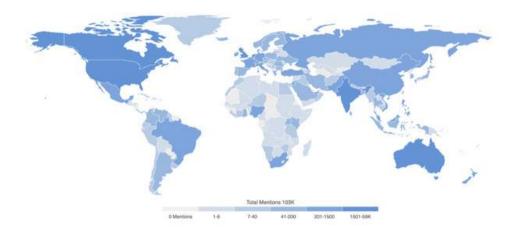
Volume: 127.78k posts Timeframe: January 1, 2022 - February 23, 2022



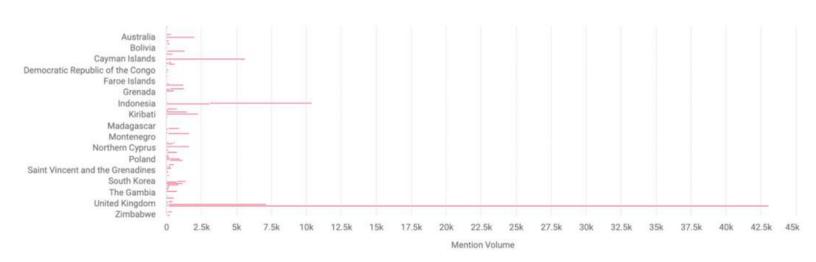
Professions: Artist, Teacher, Scientist and Researcher

Interests that were widely mentioned with our topics of interest are animals and pets, environment and politics. One interest that was mentioned less than other queries was science. Animals, Environment and Politics each compromised about 7% of interest which is plausible because the majority of posts within our topic set are about endangered animals, climate, and conserving biodiversity.

Geography



Our dataset is specifically focused on North America. The countries with the most posts about our topics are the United States with 54% of mentions and Canada with 11% of mentions. Countries outside of North America that have a lot of posts are India, Russia, Australia and Brazil.



Although hard to tell from this chart, the United States is the country that mentions all of these organizations the most. After further analysis, Canada, the United Kingdom, India, Indonesia, and Australia are the following most popular.

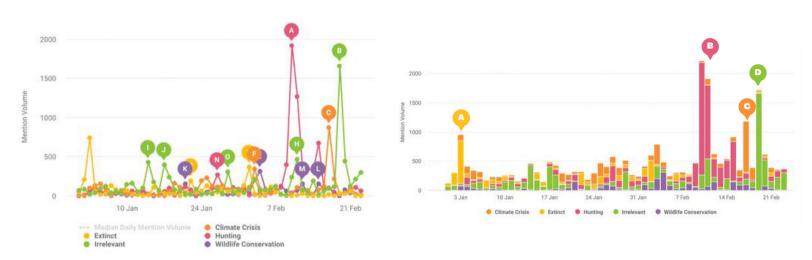
These countries all have beautiful nature, interesting cultures, and will probably see their country mentioned in National Geographic articles, photos, and videos.

It is also important to mention that National Geographic has a stronghold on all of these countries, and is mentioned by far the most. Keeping this stronghold is important and creating content that positively reflects these countries is a good approach.

Topics on Twitter

Volume over time, by topic

Annotated Time Bar Graph



January 3rd: Spike A in "extinct" topic because of extinct fish in the Gulf of Mexico which perished due to an oil spill. The American Chestnut Tree is also "nearly extinct".

February 10th and 11th: Spike B in "hunting" topic. People are raising awareness about the hunting of gray wolves and urging people to contact Sec. Haaland.

February 17th: Spike C in "climate crisis" due to a few reasons. One was a panel about biodiversity, others were about Canada's environmental efforts, and one is a photo of a man who champions biodiversity on an island in Mexico.

February 19th: Spike D of "irrelevant" due to many tweets about people instead of animals.

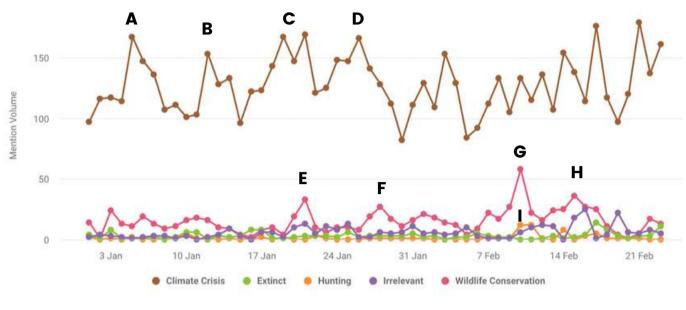
TOPIC NAME	TYPE	SENTIMENT	MENTIONS +
biodiversity	Hashtag	Neutral	1028
frelistwolves	Hashtag	Neutral	976
#wolves	Hashtag Neutral		910
fdanleisondojo	Hashtag	Hashtag Neutral	
#mexico	Hashtag	Neutral	674
#conservation	Hashtag	Rather positive	581
#extinct	Hashtag	Neutral	517
#biodiversitycrisis	Hashtag	Neutral	503
finature	Hashtag	Neutral	488
#protecttheoceans	Hashtag	Neutral	441

Top Hashtags

The top hashtag is #biodiversity with 1028 mentions. This is 50 more mentions than the next mentioned hashtag. The trending hashtags are #danielsondojo, #conservation, #biodiversitycrisis and #protecttheoceans, which means that these hashtags are being used more now and will increase in mentions.

Blogs

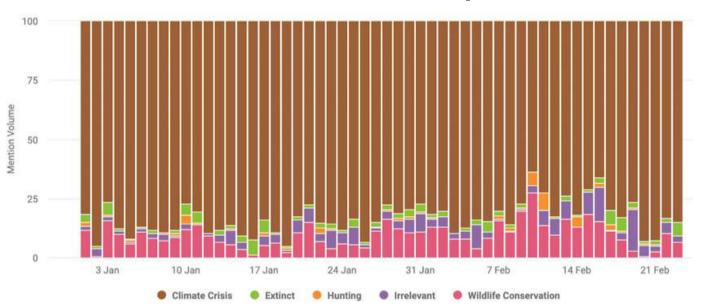
Volume over time, by topic



Wildlife conservation:

Spike E, Jan 21 - policies about endangered species Spike F, Jan 28 - animals and weather Spike G, Feb 10 - Inaugural Arabian Leopard Day Spike H, Feb 15 - ethics Climate crisis: Spike A, Jan 5 - Civil unrest in India Spike B, Jan 12 - various topics Spike C, Jan 19-20 - various topics, very political Spike D, Jan 26 - various topics Climate crisis discussed most on blogs.

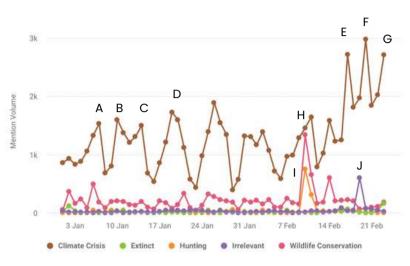
Hunting Spike I, Feb 10 - gray wolves



Annotated Time Bar Graph

Climate Crisis Topic consistently over 80% of content from blogs.

News



Volume over time, by topic

Climate crisis:

Spike A, Jan 7 - sustainable farmers Spike B, Jan 10 - last 7 years have been Earth's warmest on record Spike C, Jan 14 - Canada and climate action Spike D, Jan 19 - scientists suggest changes to prevent biodiversity loss Spike E, Feb 17 - EU invests in Green Deal Spike F, Feb 20 - EU invests in Green Deal Spike G, Feb 23 - Canada and Nunatsiavut Memorandum

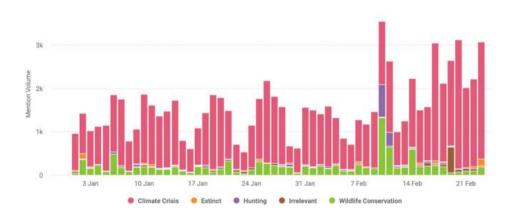
Wildlife Conservation: Spike H, Feb 10 - koalas officially endangered

Hunting:

Spike I, Feb 10 - gray wolves re-added to Endangered Species Act

Extinct:

Spike J, Feb 23 - asteroid collision in spring lead to increased extinction rates



Annotated Time Bar Graph

By far, the most talked about topics were Climate Crisis and Wildlife Conservation, over the entire time period. A spike in hunting occurred February 10th and 11th which was about the gray wolves legislation.

Social Media Analytics for Topic Conversation, Wildlife Conservation

Data found using Social Media Analytics tool, BuzzSumo

Select All	(Ma Actions)	Page Authority 🕢	Domain Authority 🕢	Twitter Followers	Retweet Ratio (j.)	Reply Ratio	Avg Retweets 🕢
- đ	Durrell Wildlife Conservation Trust durrellwildlife durrellwildlife durrellwildlife conservation trust is an international charity working globally to save species from extinction. Company	51	62	37К	16%	6%	16.3
	US Fish and Wildlife US Fish and Wildlife usfwsmtnprairie fws.gov/mountain-prairie , sd.questions? dm or @ mel #usfws #wildlife #conservation Blogger Influencer	56	85	44.1K	19%	7%	23.7
B USFWP	U.S. Fish and Wildlife U.S. Fish and Wildlife for two gov we at the u.s. fish and wildlife service (usfws) are dedicated to the conservation, protection, and enhancement of fish, wildlife, planta, their Show More Company	71	85	246.1K	31%	27%	58.2
C ZSL	ZSL officialzs1 zal.org the zoological society of london (zsl) is an international conservation charity, and our vision is a world where wildlife thrives. Company	62	75	35.4K	55%	29%	5.9

One of the tools we were able to use with BuzzSumo is the Twitter Influencers tool. This tool gives more information about tweets such as Retweet and Reply ratios and is more user friendly than Brandwatch when analyzing followers, reach, etc for top users. You can also filter by location, follower count, and relevance. With this, you can easily compare users/organizations against one another

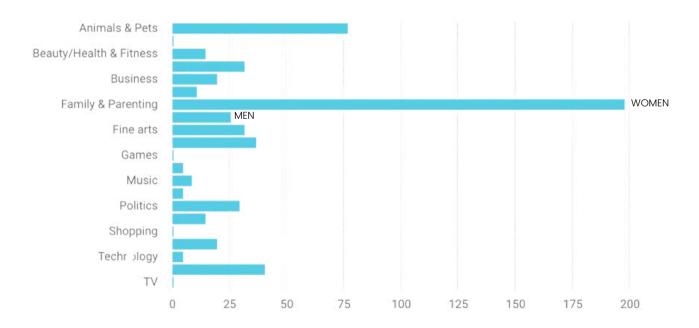
EARNED MEDIA ORGANIZATION

Demographics and Interests

ender split		Gender split trend
44% 12 921 authors	56% 16 228 authors	500 0 10 Jan 24 Jan 7 Feb 21 Feb • Female • Male
TOP INTERESTS	UNIQUE AUTHORS ()	
Books	4 618 10%	manth .
Family & Parenting	4 146 9%	- march -
Politics	3407 7%	- human -
Sports	3 377 7%	menthing +
O TOP PROFESSIONS	UNIQUE AUTHORS	TRENDS O
Artist	3276 28%	- Martha -
Teacher & Lecturer	1 443 12%	- Munuh -
Executive	1 395 12%	- mmmmm -
Scientist & Researcher	1 392 12%	- minhandra -

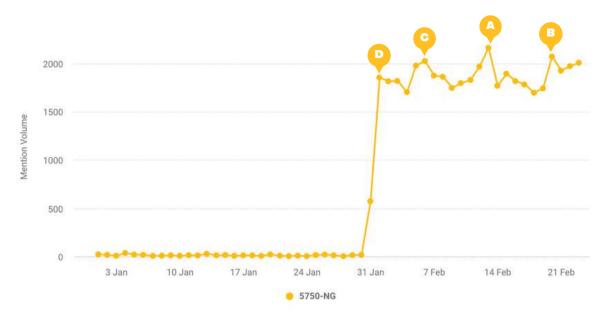
Across themes, gender differences and similarities were quite obvious. The main compatibility was sentiment and the main deviation was seen in area of interest.

Males (n=16,228) author 56% of tweets mentioning @natgeo, which is 12% more than women (n=12,921, 44%). The top interests of authors are books, family & parenting, politics and sports. It is significant that 28% of unique authors are artists (n=3,276), followed by teacher & lecturer (n=1,443, 12%), executive (n=1,395, 12%), and scientist & researcher (n=1,293, 12%)



In the same category analyzed on the previous page, People, and also across themes, women were exponentially more likely to mention Family and Parenting than men were. This corresponds the top URLs in some categories for women being about a children's reading challenge whereas top URLs for men were more likely to be about adventure or history.

Spike Analysis: National Geographic



In general, National Geographic mentions increased in February. January averaged about 15 mentions a day as opposed to February when there were an average of 1,900 mentions a day. There are a couple of reasons, travel restrictions were decreased in February.

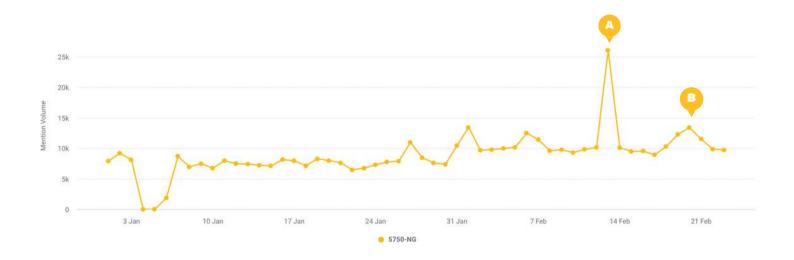
Spike A was on February 13 was with 2,160 mentions. The majority of posts during this spike were independent photographers posting with the hashtags. The top mentioned hashtag on this day was #nature, followed by #photooftheday and #wildlife. Many of the posts also directly mentioned Nat Geo or #natgeo. This was also the day of the Super Bowl and there were many posts about superb owls and the puppy bowl.

Spike B was on February 20 with 2,070 mentions. The hashtag #natgeo was the most used hashtag and appeared in 2,040 of the 2,70 mentions. The majority of posts were independent photographers that mentioned Nat Geo. The main topics were nature and travel.

Spike C was on February 6 with 2,024 mentions. On February 6, there were a large proportion of Instagram posts about birds. These posts weren't connected to each other, but there were an influx

Spike D was on February 1 with 1,852 mentions. This is an important spike because it is the initial spike in engagement. The main theme of posts were travel photography and animal photography from independent photographers. **24**

Spike Analysis: Comparable Organizations



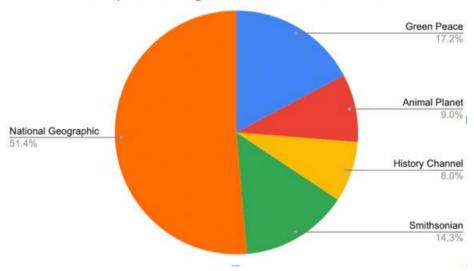
Spike A was 230% higher than usual. Most posts were driven by Animal planet with roughly 747 mentions of #animalplanet and other popular hashtags including #puppybowl. This spike also correlated with Spike A of National Geographics spike on Feb 13, the Super Bowl. Spike A also included the hashtag #superbowl from NatGeo.

Spike B was 46% higher than usual and carried by World Whale Day. National Geographic and Green Peace were the most mentioned and posted organizations on February 20, spike B. Additionally, it was National Pangolin Day which also had its own hashtag. Smithsonian Magazine also posted an article on February 20 that gained traction and increased mentions. Additionally, GreenPeace posted a lot about an energy bill in the UK.

EARNED MEDIA CONPETITION

Comparable Organization Data Set

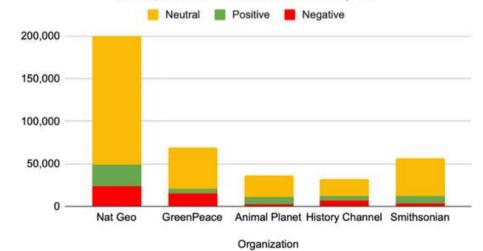
We analyzed earned data from Smithsonian, Green Peace, Animal Planet, and the History Channel compared to National Geographic. These organizations have similar content and audiences but we found differences in hashtags and mentions.



Comparable Organization Mention Volume

Share of Voice





Comparative Sentiment Analysis

NEW SOCIAL MEDIA TOOLS

Keyhole

Keyhole has an aesthetically pleasing interface and many options. You can use many different social media platforms, from Twitter to Facebook to Reddit to TikTok. You can enter any username, even if you are not the social media manager, which is not something some sites will let you do. This site gave us graphics of the recommendations or insights we would give, such as best time to post or best hashtags to use, which wasn't as clear or accessible on Brandwatch. Keyhole is more user friendly than Brandwatch and has more tools for analyzing audiences. Keyhole utilizes dashboards like Brandwatch. Keyhole can easily create Excel sheets that give you information about topics, sentiments, and media types, like we coded in Assignment 2, although Brandwatch does provide more information.

BuzzSumo

We utilized BuzzSumo, which helped us analyze Twitter and Instagram and the topic of wildlife conservation more thoroughly. This tool is much more userfriendly than Brandwatch and gives a better overview without having to click many buttons and filtering is much easier and reliable. You can filter by location, even with something as specific as a zip code, you can filter by how active users are, how many followers they have, their RT and reply ratios, and more. While BuzzSumo does not appear to have a gender filter, it is much easier to see more about users on BuzzSumo than Brandwatch, so analysis could still be done with ease. One drawback is that for the free version, you only have 30 days or 100 searches, which limits what you can do with the tool, but if we were to purchase Brandwatch it would be more expensive.

APPENDIX

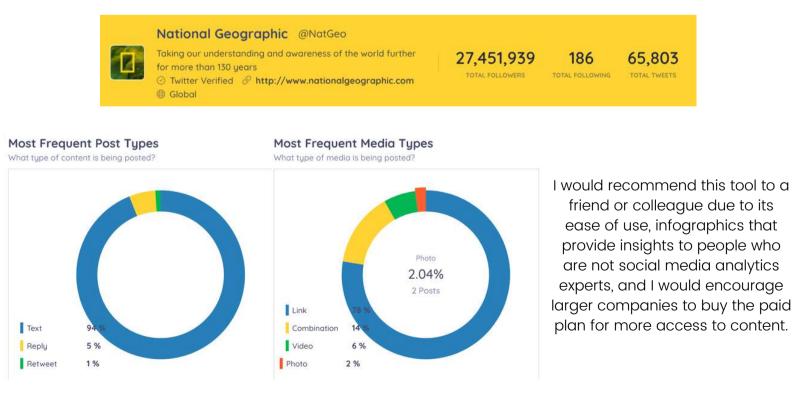
Social Media Tools Overview

BuzzSumo is more similar to Brandwatch than Keyhole. With Buzzsumo, you can analyze content across Twitter, Facebook, and Youtube, find influencers, and monitor trends. The main way we utilized Buzzsumo was searching for "Wildlife Conservation" as a topic like we did in Assignment 4. We then decided to look into top influencers for that category, which we could the narrow down, as we mentioned on page _. It provides you with the week's top trending stories, top shared and linked content, popular keywords for the month, popular related topics, and questions that have been searched related to the topic.

You can also look into the top ranking content for the topic on Google, ideas on external research sites, look into what types of media and word count get the most engagement, and see which platforms the topic performs best on and ideal times to post.

I would recommend this tool to a friend or colleague due to its ease of use, especially for someone new to social media analytics. It is set up well and does not require prior knowledge or training.

Keyhole allows you to do many different things, from listening to scheduling to publishing. For listening, which is most similar to Brandwatch and what we utilized, you can listen using brand mentions, benchmarks against competitors, measure cross platform performance, and analyze individual profiles. For our analysis, we used the function of analyzing a brand's @ on Twitter. Here are some of the results we could get without a paid plan.





Organization Boolean:

@natgeo OR "National Geographic" OR "Nat Geo" OR #natgeo OR #welcometoearthseries OR #overheardnatgeo

Comparable Orgs Boolean:

@natgeo OR "National Geographic" OR "Nat Geo" OR #natgeo OR #welcometoearthseries OR #overheardnatgeo OR "Green Peace" OR @greenpeace OR "Animal Planet" OR @animalplanet OR "History Channel" OR @history OR "Smithsonian" OR "Smithsonian Museum" OR @smithsonian

Topic Dataset Query - Endangered Species in North America

("wildlife conservation" OR "endangered species" OR #endangeredspecies OR #endangered OR endangered OR biodiversity OR #biodiversity OR #wildlifeconservation OR #wildlifeconservationday OR conservationist OR #conservationist OR "endangered animals" OR #endangeredanimals OR extinct OR "threatened species" OR extinction OR #extinction OR dying OR "save the bees" OR #savethebees OR "critically endangered species" OR "critically endangered OR "vulnerable species" OR #conservationstatus OR "conservation status" #vulnerablespecies) AND

("North America" OR "North American species" OR "United States" OR Mexico OR Canada OR states OR "50 states" OR "North American territory")

Org Mini Booleans (for themes):

<u>nature</u>

nature OR "Nature Photography" OR #nature OR wildlife OR wild OR animal OR "animal species" OR #animal OR #wildlife OR birds OR "bird photography" OR ocean OR park OR "National Park" OR species

<u>photography</u>

photography OR photographer OR "nature photography" OR "photo of the day" OR #natgeoyourshot OR photo OR #photo

<u>travel</u>

travel OR traveling OR adventure OR journey OR explore OR #explore OR #travel OR "travel photography" OR world OR visit OR "national park"

<u>people</u>

person OR hero OR culture OR society OR societies OR community OR communities OR group OR people OR nationality OR nation OR nationalities OR ethnicity OR ethnicities OR traditions OR civilization OR heritage OR values OR customs OR #culture OR #heritage

