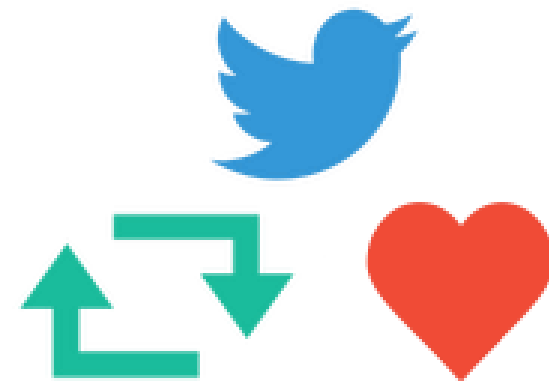


Twitter Data Comparison & Sentiment Analysis

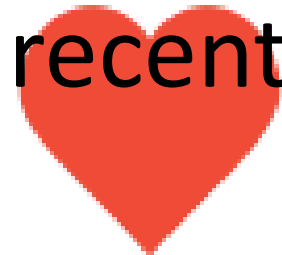
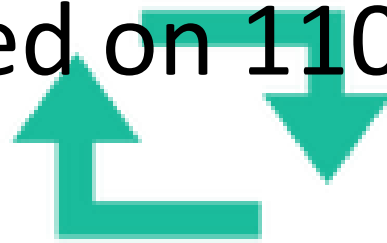
The Telegraph



INDEPENDENT

Introduction

- The intention of this analysis is to study and compare the tweet trends of The Telegraph (@telegraph) and The Independent (@independent) during the corona virus pandemic.
- This analysis is done based on 1100 recent tweets by these twitter handles.
- Further 5000 tweets with mentions of each of these handles are extracted and analyzed to see the retweet pattern.
- A combination of R and Python was used to download, process and analyze the tweets and other metadata.



About the handles

The Telegraph

The Daily Telegraph, known online as The Telegraph, is a national British daily broadsheet newspaper published in London by Telegraph Media Group and distributed across the United Kingdom and internationally. It was founded by Arthur B. Sleight in 1855 as Daily Telegraph & Courier.




INDEPENDENT

The Independent is a British online publisher of news that was established in 1986 as a politically independent national morning printed newspaper published in London. Nicknamed the Indy, it began as a broadsheet and changed to tabloid format in 2003. The last printed edition was published on Saturday 26 March 2016, leaving only the online edition.

Twitter Profile Comparison

- Both accounts are approximately 11.5 years old.
- Surprisingly The Independent has tweeted almost thrice the number of times as The Telegraph.
- This seems to be the reason of The Independent having more followers than The Telegraph.



The Telegraph 
@Telegraph
Think ahead with the latest news, comment, analysis and video
📍 London, UK telegraph.co.uk/?WT.mc_id=tw 📅 Joined September 2008
746 Following 2.8M Followers

[Follow](#)

The Telegraph

Location	Tweets	Following	Followers	Joined
London, UK	372,017	746	2,855,495	11.56 years




 **INDEPENDENT**

The Independent 
@Independent
News, comment and features from The Independent.
Try an ad-free experience with access to premium articles with our app:
independent.onelink.me/wgiA/cfc
📍 London, England independent.co.uk 📅 Joined October 2008
1,147 Following 3.1M Followers

[Follow](#)

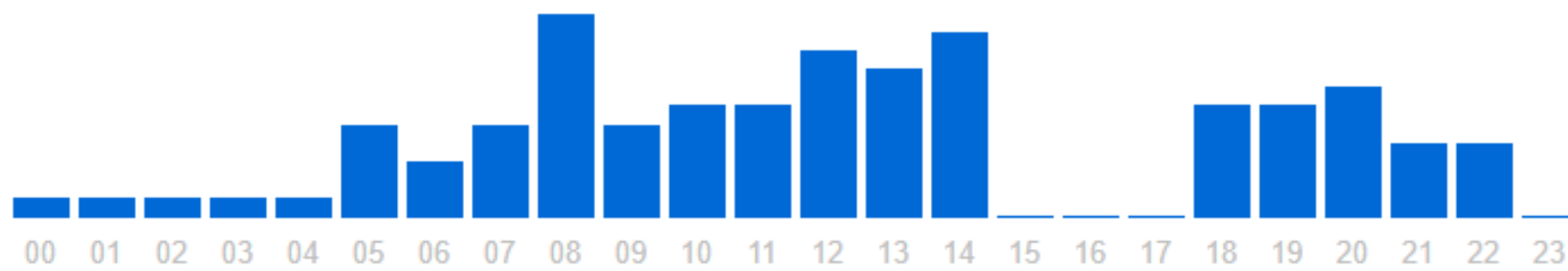
Location	Tweets	Following	Followers	Joined
London, England	971,955	1,147	3,179,855	11.46 years

10 recent tweets from both handles

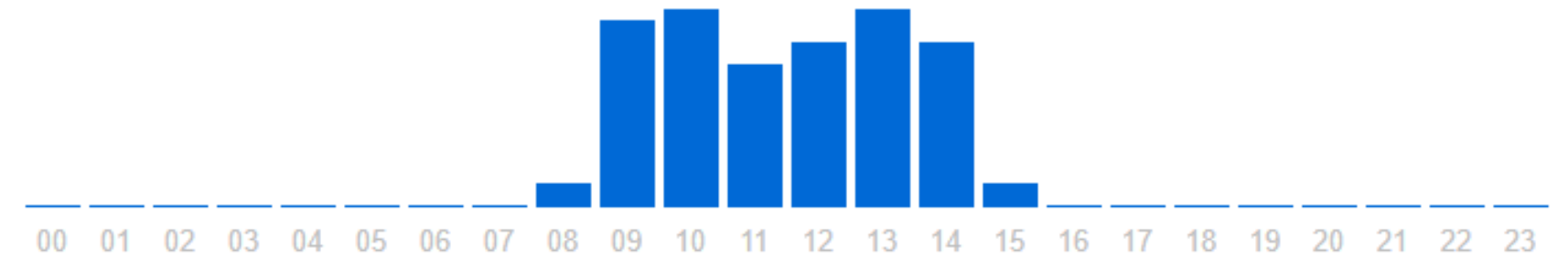
Independent	Unprecedented deal agreed to cut oil production in bid to boost prices https://t.co/W2sGaGj0Av	7:02:29 PM on 4/12/2020
Telegraph	More than 50 Amazon warehouses across the world have reported cases of #coronavirus https://t.co/BCnPPmWTMM	6:41:40 PM on 4/12/2020
Telegraph	 Imperial and Oxford clashed last month, when they produced starkly contrasting studies into the possible course o... https://t.co/SEkxPdR90X	6:25:22 PM on 4/12/2020
Independent	App being created for NHS to warn users if they have been near infected people https://t.co/h6SWFGWRKi	6:22:58 PM on 4/12/2020
Independent	Tornadoes rip through US as southern states face severe storms https://t.co/cFRd2Gk8uG	6:15:27 PM on 4/12/2020
Independent	Coronavirus cases in UK epicentre London 'stabilising' https://t.co/QhZonVDcDX	6:15:26 PM on 4/12/2020
Telegraph	Many of us don't peak creatively until our 50s. These five entrepreneurs reached their career nirvana when they wer... https://t.co/IC7r827kdY	6:09:03 PM on 4/12/2020
Telegraph	'Some people believe we must be carrying the virus,' one nurse told the Telegraph https://t.co/OUdxCtquEF	5:52:45 PM on 4/12/2020
Independent	Boris Johnson is back with a video message of subtle political skill John Rentoul https://t.co/Ydp2ZS5Sd3	5:46:54 PM on 4/12/2020
Telegraph	With more than 21,000 deaths, the US has lost more lives to #Covid-19 than any other country in the world https://t.co/9b41M3WUWS	5:38:46 PM on 4/12/2020

Active hours

The Telegraph



INDEPENDENT



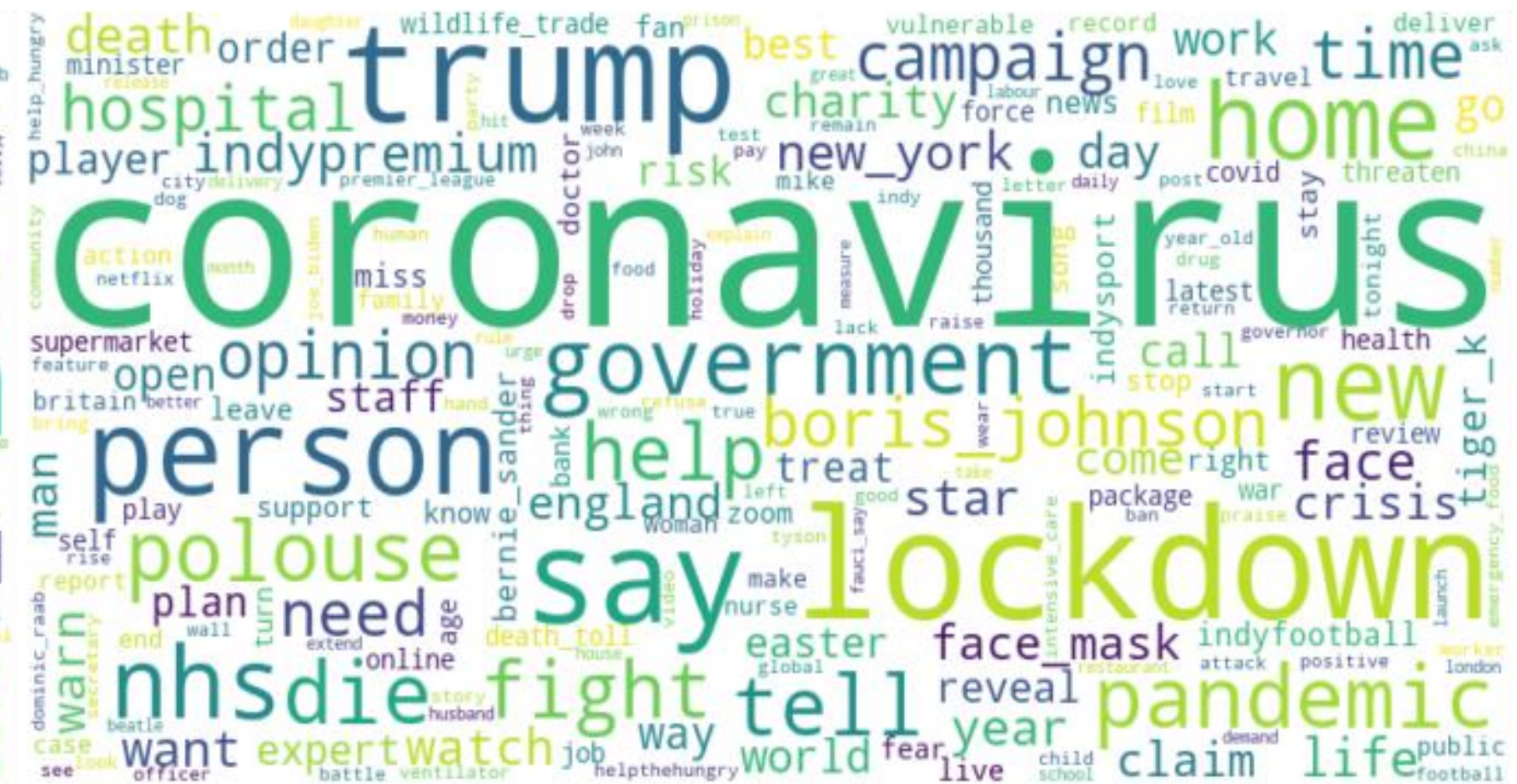
It can be seen that “The Telegraph” has been active for more hours as compared to “The Independent”. Also it appears that the amount of tweets by “The Telegraph” are more than “The Independent” in a typical day.

100 frequently words used in recent tweets.

The Telegraph



INDEPENDENT



'coronavirus' and 'lockdown' are prominently used words in the recent tweets. Surprisingly 'The Independent' has mentioned the U.S. president 'trump' a lot more than the British prime minister. While recent 'The Telegraph' tweets include mentions of British prime minister 'johnson'.

Interactive Wordclouds (Click on the words to navigate)

The Telegraph

Topics

[ahead](#) [returning](#) [cough](#) [going](#) [rest](#) [covid19](#) [short](#) [perfect](#) [1000](#) [countries](#) [rec](#)
[ord](#) [crisis](#) [peace](#) [home](#) [writer](#) [died](#) [coronavirus](#) [wins](#) [tim](#)
[e](#) [fines](#) [problems](#) [discharged](#) [ignoring](#) [unite](#) [government](#) [issued](#) [said](#) [plac](#)
[e](#) [nurse](#) [creative](#) [stories](#) [brooketaylor](#) [nhs](#) [easter](#) [medical](#) [needed](#) [tim](#) [journalis](#)
[ts](#) [advice](#) [johnson](#) [despit](#) [china](#) [chief](#) [shields](#) [minister](#) [days](#) [prime](#) [fig](#) [testing](#) [!](#)
[ockdown](#) [stay](#) [boris](#) [writes](#) [delivery](#) [shouts](#) [pleas](#) [stars](#) [peop](#)
[le](#) [health](#) [hospital](#) [watch](#)

#Hashtags

[#easter](#) [#coronavirus](#) [#easterweekend](#) [#coronavirusupdate](#) [#protectthe](#)
[nhs](#) [#nhs](#) [#stayhome](#) [#stayhomesavelives](#) [#getwellsoonboris](#) [#coronavir](#)
[usupdatebritain](#) [#lockdown](#) [#covid19](#) [#virgingalactic](#) [#covid19pandemic](#)



INDEPENDENT

Topics

[tiger](#) [dropped](#) [thunder](#) [lockdown](#) [opinion](#) [spoiler](#) [exotic](#) [eilish](#) [st](#)
[artling](#) [received](#) [easter](#) [kings](#) [boris](#) [news](#) [trolls](#) [needs](#) [response](#) [outbreak](#) [a](#)
[mid](#) [accuracy](#) [netflix](#) [huge](#) [moss](#) [billie](#) [sir](#) [british](#) [king](#) [pandemic](#) [johnso](#)
[n](#) [joe](#) [allegation](#) [taika](#) [thor](#) [nhs](#) [swimsuit](#) [hospital](#) [hits](#) [racing](#) [hate](#)
[coronavirus](#) [makes](#) [dont](#) [reinke](#) [shows](#) [stirling](#) [says](#)
[long](#) [photo](#) [world](#) [episode](#) [legend](#) [wave](#) [greatest](#) [nurses](#) [battle](#) [peter](#) [!](#)
[ove](#) [trump](#) [people](#) [john](#) [chelsea](#)

#Hashtags

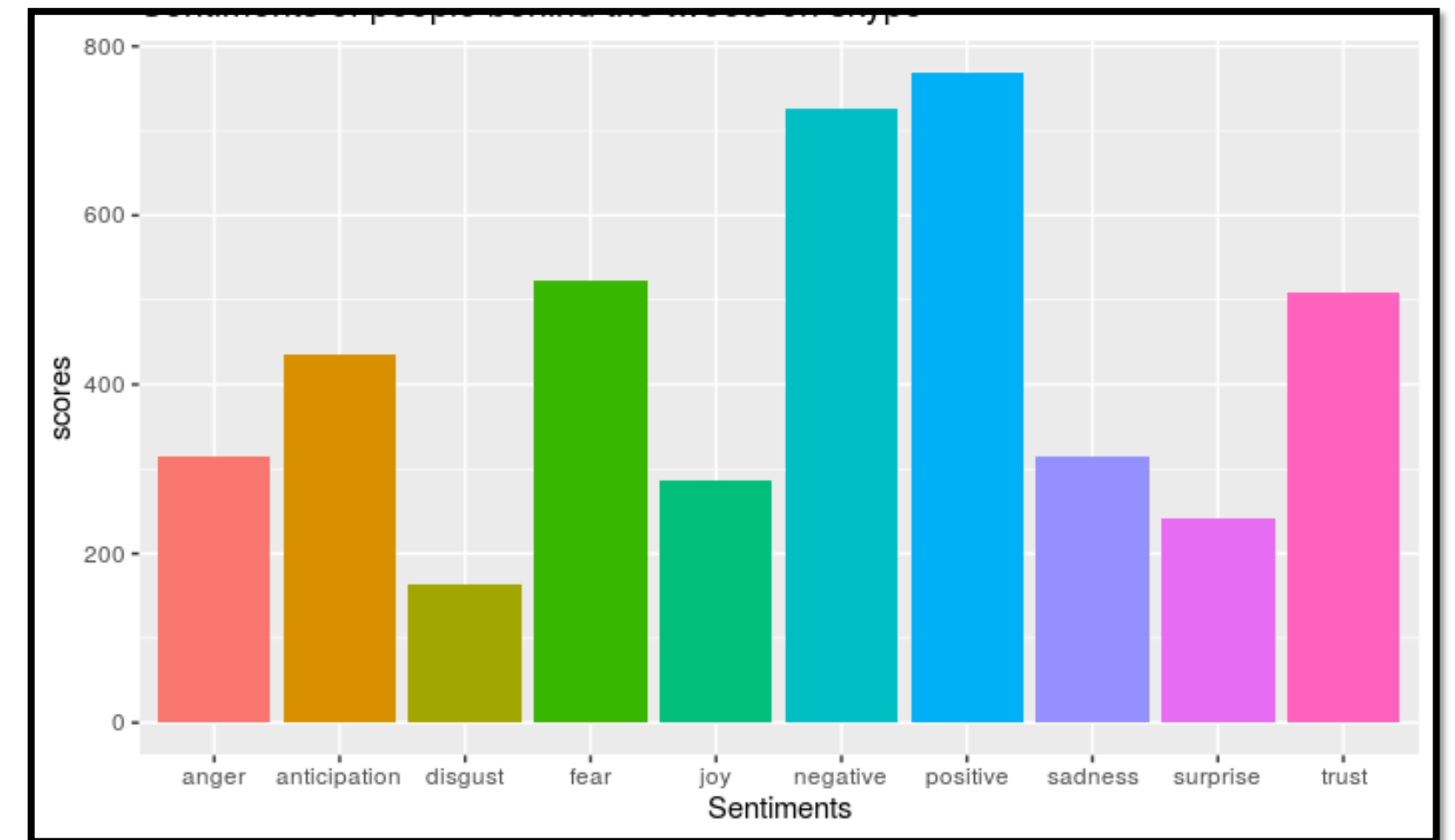
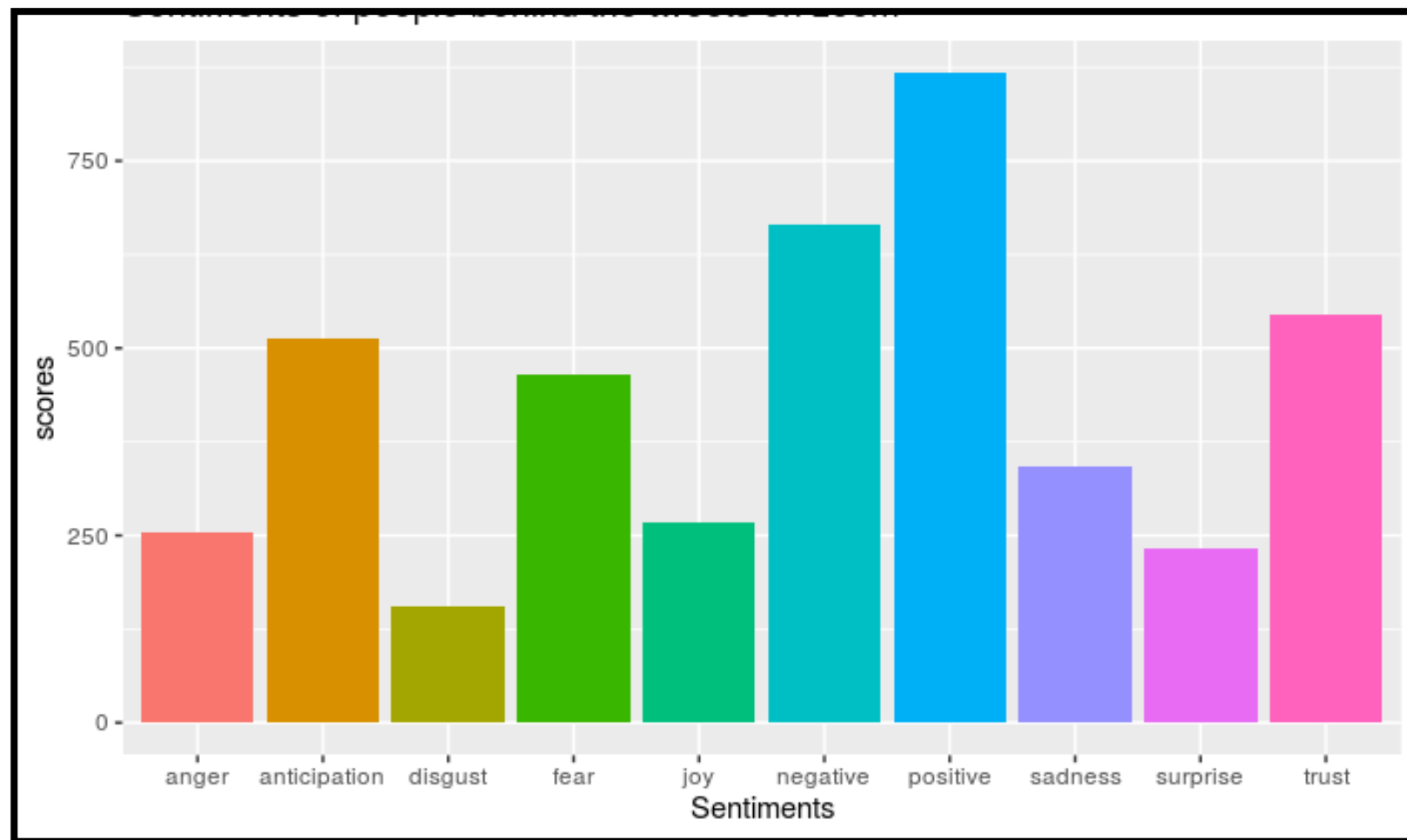
[#coronavirus](#) [#cfc](#) [#banwildlifetrade](#) [#lebanons](#)

Sentiment score based on emotions

The Telegraph



INDEPENDENT



Both handles have similar usage of words in their tweets. 'The Independent' has used more negative words in their tweets as compared to 'The Telegraph'.

Overall sentiment

The Telegraph

screenName <chr>	sentiment <chr>	station_total <int>	n <int>	percent <dbl>
Telegraph	positive	22740	925	0.04067722
Independent	positive	17228	790	0.04585558

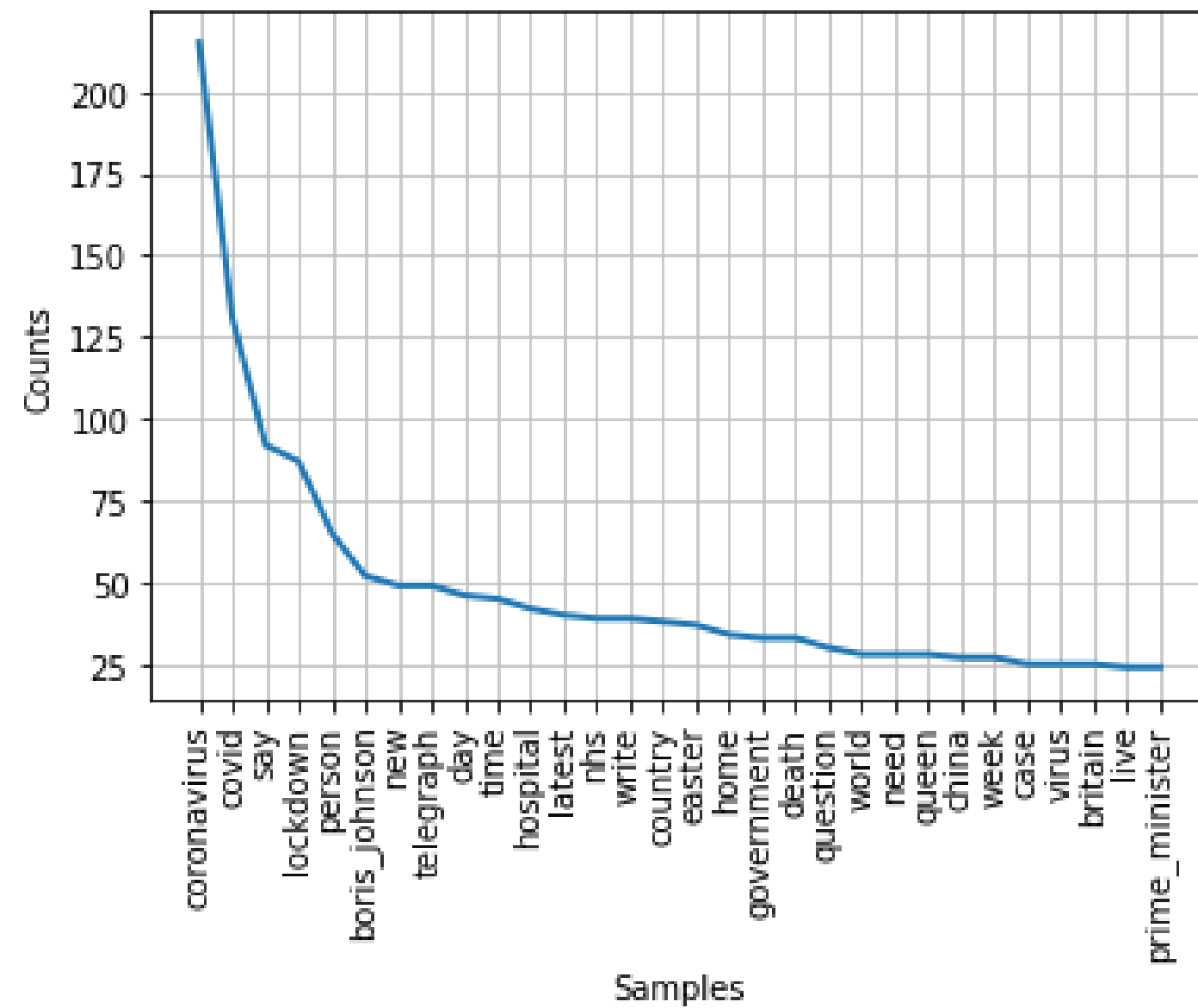
screenName <chr>	sentiment <chr>	station_total <int>	n <int>	percent <dbl>
Telegraph	negative	22740	695	0.03056288
Independent	negative	17228	759	0.04405619



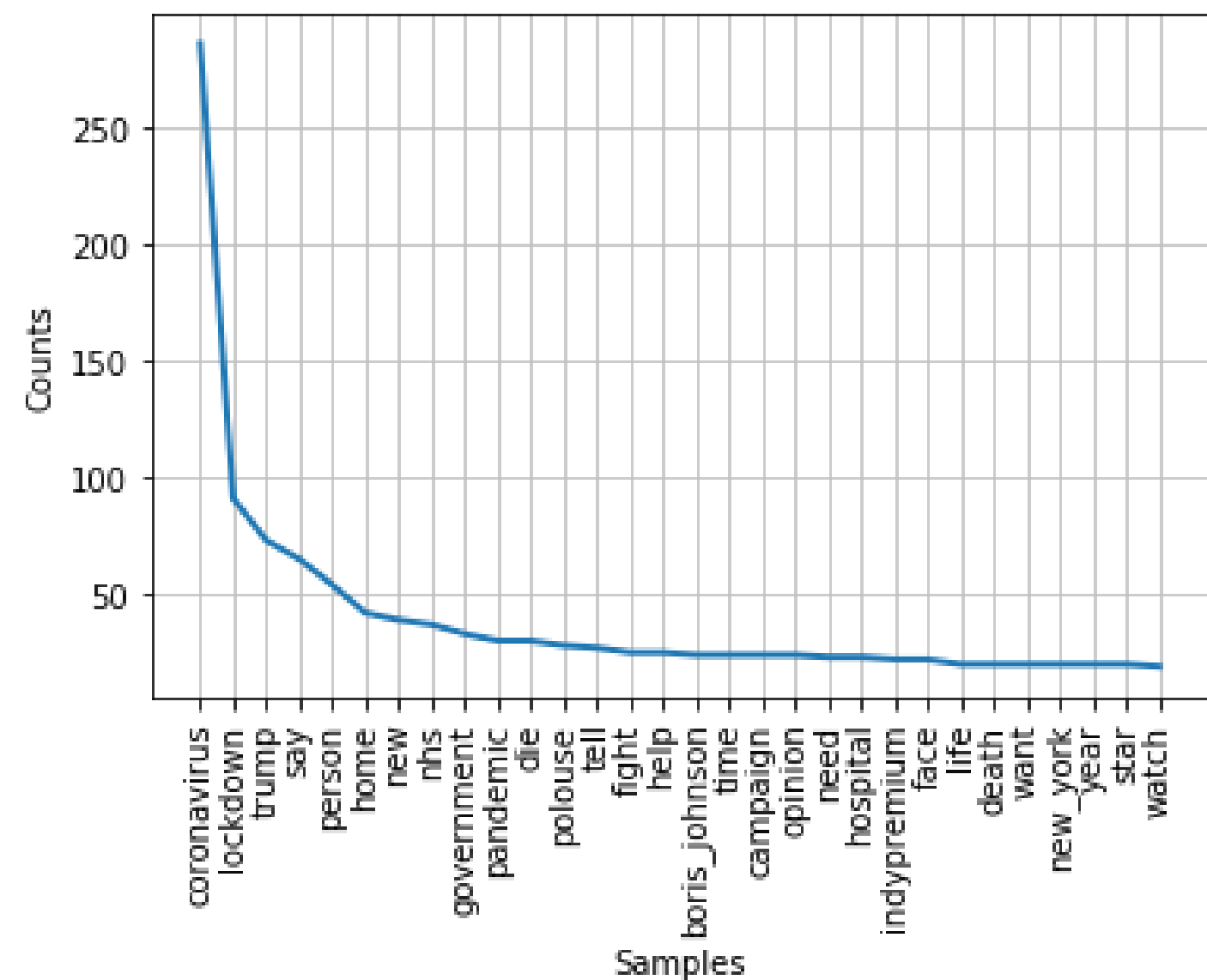
These scores denote the overall sentiment of the recent 1100 tweets from both the handles. It can be seen that ‘The Telegraph’ has used more positive words than negative, while ‘The Independent’ has equally made use of positive and negative words.

Word frequency

The Telegraph



INDEPENDENT



Usage of words

The Telegraph



INDEPENDENT



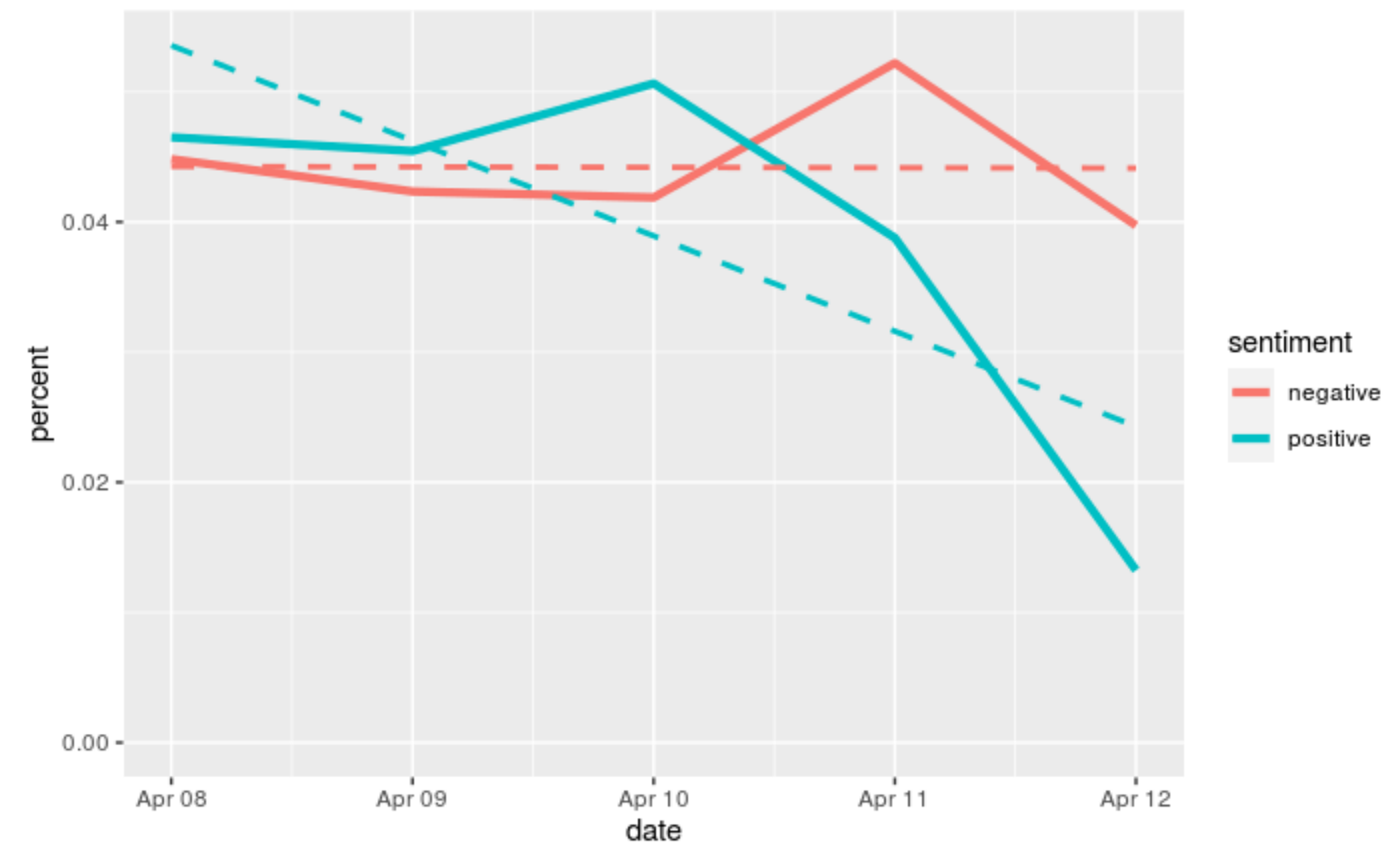
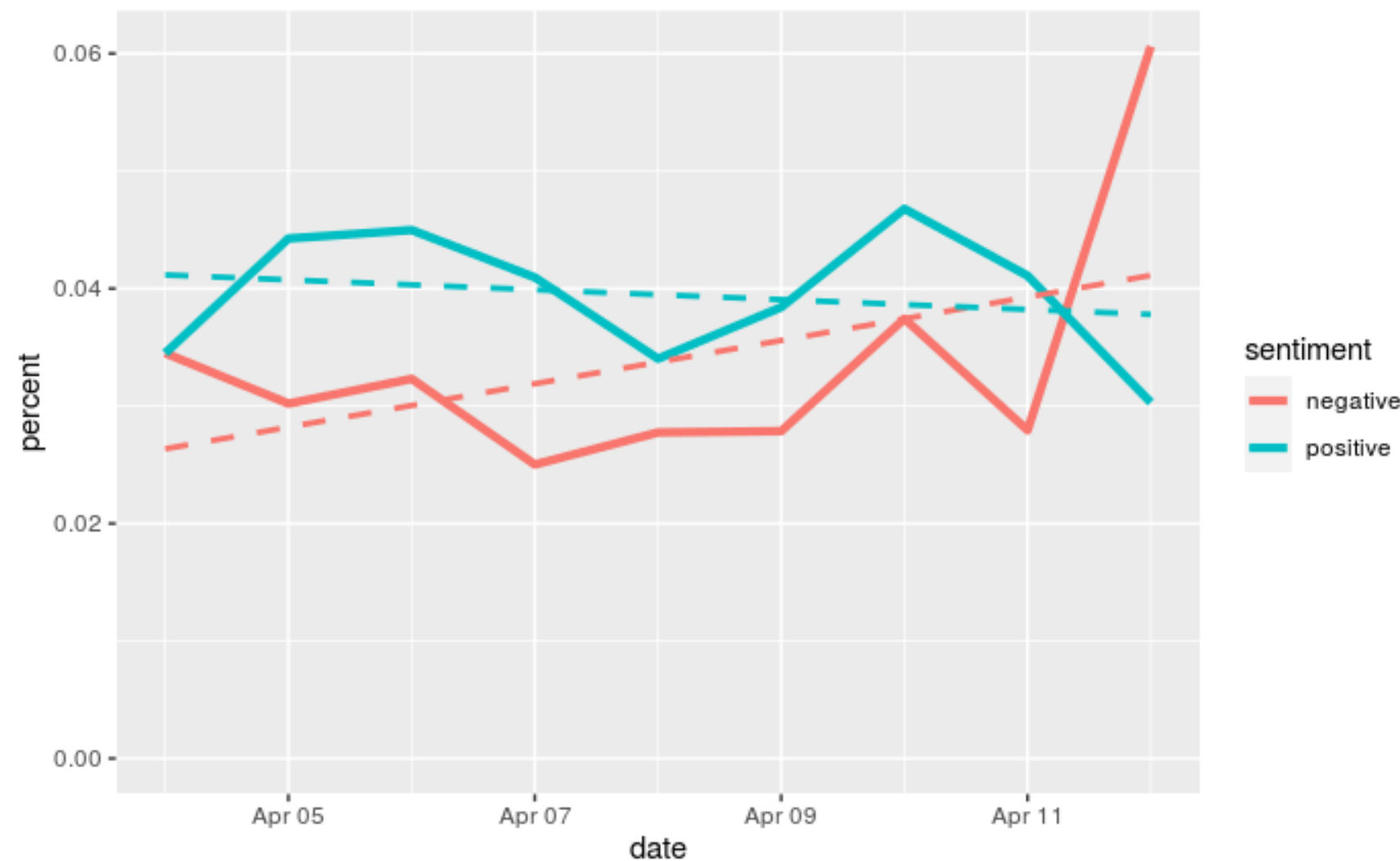
Here are the ways words have been used in context of an emotion. The x-axis has the word frequency while the y-axis displays the word. Similar trends can be seen in the word usage. 'The Independent' uses more words related to in context of 'trust', 'anticipation' and 'fear'.

Tweet Sentiment in the past week

The Telegraph



INDEPENDENT



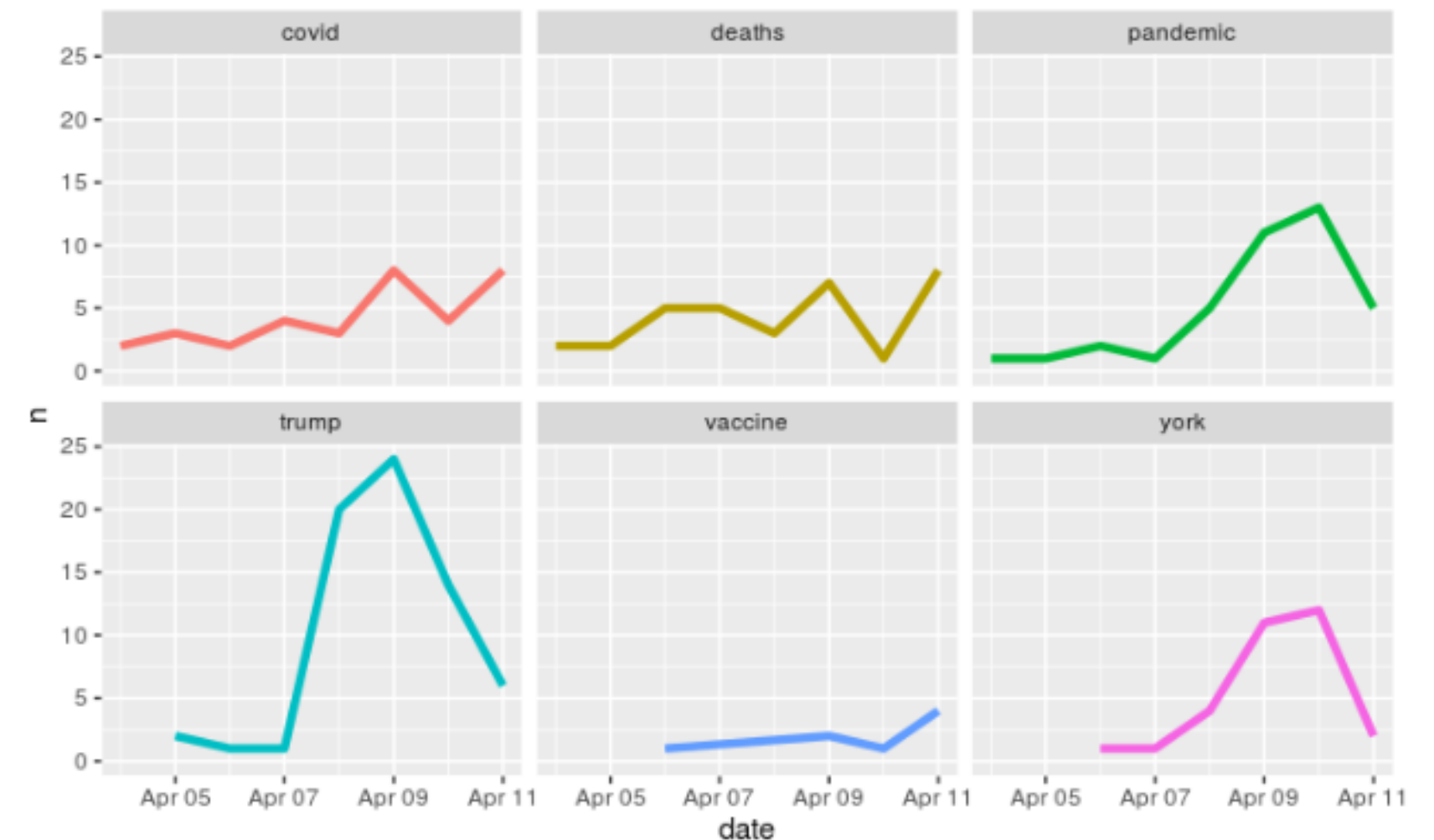
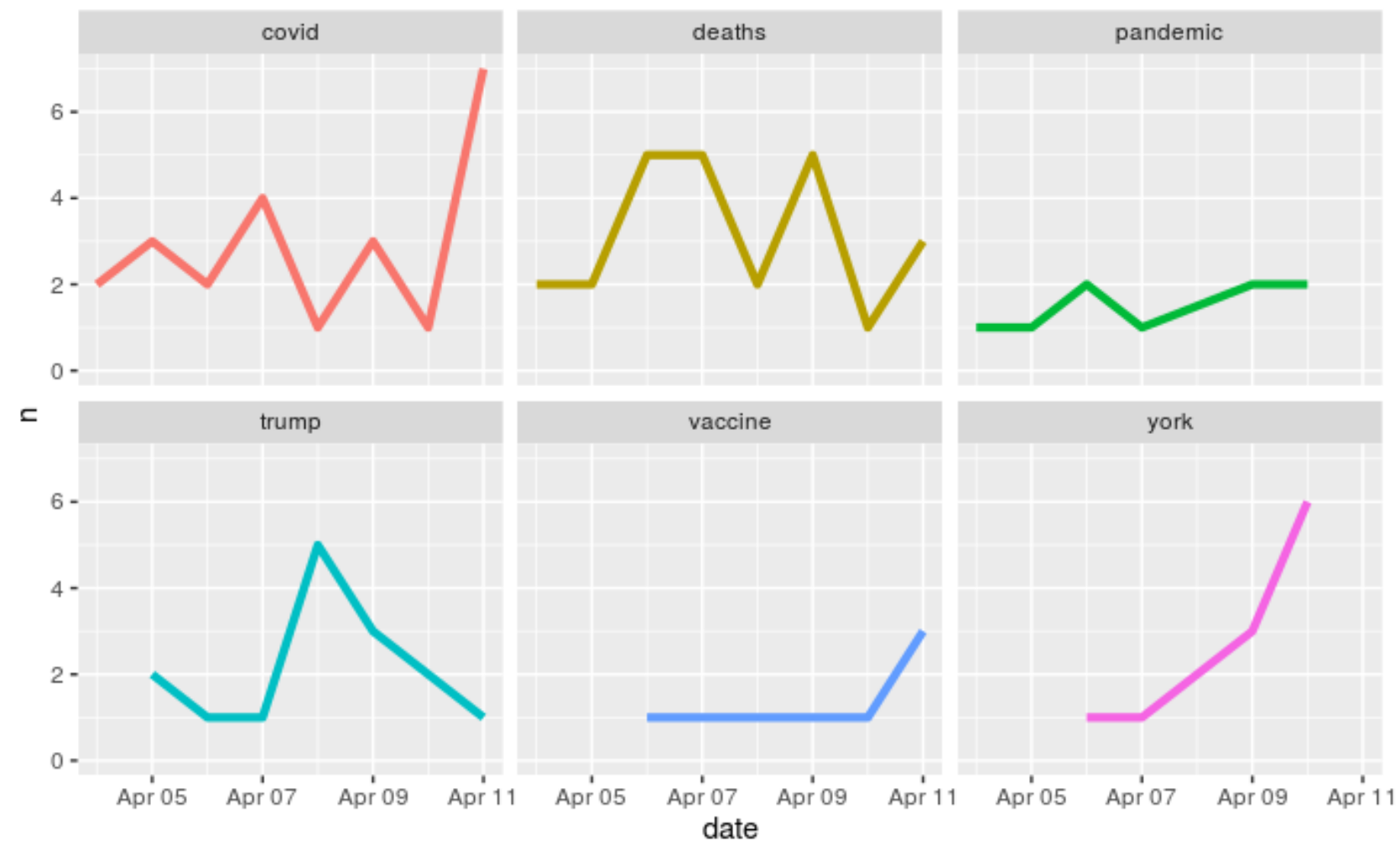
Between April 5th and April 10th, more positive words were being used, while on April 11th, a sudden increase of negative words was seen by 'The Telegraph'. For 'The Independent', the usage of both positive and negative words went down, however more negative word were used in the tweets on April 11th.

Word Usage Trend in the past week

The Telegraph



INDEPENDENT



These graphs show the usage of some common words in the tweets during the week of April 5th.

Bigrams and Trigrams

The Telegraph



INDEPENDENT

boris_johnson	_writes	intensive_care	death_toll	prime_minister
47	34	24	22	19
dominic_raab	keep_track	local_area	latest_symptoms	matt_hancock
19	15	15	15	14

coronavirus_lockdown	coronavirus_crisis	boris_johnson	new_york
26	25	22	20
social_distancing	amid_coronavirus	bernie_sanders	wildlife_trade
19	14	14	12
death_toll	face_masks		
12	12		

telegraph_front_page	timeline_mirrors_china	made_decisive_action
7	6	6
decisive_action_impossible	new_york_city	sir_patrick_vallance
6	6	6
chief_medical_officer	one_hundred_days	coronavirus_death_toll
6	6	5
dominic_raab_says		
5		

amid_coronavirus_crisis	great_ormond_street	ormond_street_staff
9	8	8
coronavirus_death_toll	top_london_restaurants	dr_fauci_says
7	7	6
graham_norton_show	emergency_food_delivery	food_delivery_drive
6	5	5
delivery_drive_kicks		
5		

With these bigrams and trigrams, some common topics that were tweeted by these handles can be found. For example, it is evident that 'The Telegraph', had tweeted at least 47 times about British prime minister Boris Johnson in their recent 1100 tweets.

Similar words

The Telegraph

Most of the tweets that consisted of the word lockdown also had words like coronavirus, queen and hospital among others.

```
word2vec.wv.most_similar('lockdown')
```

```
[('coronavirus', 0.8909106254577637),  
 ('covid', 0.8640251159667969),  
 ('say', 0.814203143119812),  
 ('queen', 0.8127215504646301),  
 ('address', 0.8020801544189453),  
 ('hospital', 0.7978953719139099),  
 ('person', 0.7948880195617676),  
 ('new', 0.793001651763916),  
 ('number', 0.7894929647445679),  
 ('time', 0.786328136920929)]
```



INDEPENDENT

Most of the tweets that consisted of the word lockdown also had words like coronavirus, trump and government.

```
word2vec.wv.most_similar('lockdown')
```

```
[('coronavirus', 0.8392627239227295),  
 ('new', 0.8380482196807861),  
 ('say', 0.763780951499939),  
 ('pandemic', 0.745900571346283),  
 ('tell', 0.7396361827850342),  
 ('government', 0.7362596988677979),  
 ('nhs', 0.7344460487365723),  
 ('person', 0.7330265045166016),  
 ('trump', 0.7293199896812439),  
 ('charity', 0.7211199998855591)]
```


Favorites

The Telegraph

80% tweets have either not been favorited or least favorited, while 20% tweets have been highly favorited.



INDEPENDENT

Between 64% and 76% tweets have either not been favorited or least favorited, while between 24% and 36% tweets have been highly favorited.

Let's look at the recent mentions

The Telegraph



INDEPENDENT



Retweets by topic

The Telegraph



INDEPENDENT

	_via	uk_waters	coronavirus_crisis
	346	273	273
european_supertrawlers	supertrawlers_target	target_uk	
	272	272	272
fishing_industry	industry_struggles	boris_johnson	
	272	272	251
coronavirus_lockdown			
	209		

european_supertrawlers_target	supertrawlers_target_uk	target_uk_waters
	272	272
fishing_industry_struggles	angry_nhs_nurse	nhs_nurse_shouts
	272	194
park_amid_coronavirus	amid_coronavirus_lockdown	thanked_nhs_staff
	194	96
world_health_organisation		
	73	

sir_stirling	stirling_moss	british_racing	racing_legend
	288	262	262
legend_sir	moss_dies	boris_johnson	coronavirus_outbreak
	262	206	164
wildlife_trade	coronavirus_crisis		
	157		144

sir_stirling_moss	british_racing_legend	racing_legend_sir
	286	262
legend_sir_stirling	stirling_moss_dies	true_leader_h
	262	135
japan_pmirks	pmirks_public	footage_shows_ambulances
	113	103
coronavirus_crisis_escalates		
	103	

From these bigrams and trigrams, it can be found which tweets are being retweeted the most. For example, in the most recent 10000 tweets that mention these handles, ‘The Telegraph’s tweet that mentioned ‘fishing industry’ was retweeted 272 times, while ‘The Independent’s tweet that mentioned ‘sir stirring moss’ has been retweeted 286 times.

Devices used by followers

The Telegraph



INDEPENDENT

iPhone<dbl>	Android<dbl>	iPad<dbl>	Web<dbl>	TweetDeck<dbl>
31.72	31.38	7.18	0.88	0.62

Almost equal number of followers of ‘The Telegraph’ have retweeted from iphone and android followed by ipad.

Android users have made more retweets as compared to iphone among the followers of ‘The Independent’ in the recent 5000 retweets.

Android<dbl>	iPhone<dbl>	iPad<dbl>	Web<dbl>	TweetDeck<dbl>
33.72	32.18	6.04	0.38	0.38

End

It is the bleakest of ironies: the biggest news story in a lifetime is killing off the very industry that exists to report it. Coronavirus is destroying newsprint newspapers across Britain, delivering the coup de grace to businesses that were already in the process of dying.

Local and regional newspaper publishers have found it economically unsustainable to go on producing papers. In response, they have suspended the publication of scores of titles and placed hundreds of journalists on paid leave. “Furloughs” have become part of the new pandemic lexicon.

At national level, print runs have been drastically reduced because of distribution problems, most obviously resulting from the widespread closure of retail stores. Edition sizes have also been cut back due to the drop-off in advertisers. Similarly, many magazines are also forsaking print in favor of digital-only publication.

Hence, to generate revenue, these handles will have to tweet more and more with links in order to divert traffic to their online respective publications. This will also help in increasing the number of followers and subscriptions.