

**COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO
UK POLITICS JOURNALISTS**

OCTOBER 2017

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

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COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Summary

Background

PoliticsUKTD GE2017 Analysis

In late June 2017 [Lissted](#) produced an [analysis of influential Twitter users in relation to the UK General Election 2017](#) (Appendix 2). The analysis was based on tweets featured on the [@PoliticsUKTD](#) (Politics UK Distilled) Twitter account. This account is powered by Lissted's [Tweetsdistilled](#) system which estimates and ranks the apparent influence of tweets and then retweets those it ranks the highest.

The PoliticsUKTD study was based on over 3 million tweets by influential Twitter users between 18th April 2017 and 7th June 2017. These tweets included retweets and replies to over 200,000 other accounts.

The Tweetsdistilled application tracked every tweet in real time, using its proprietary algorithm to seek out the ones that looked to have the most potential for influence.

Out of these 3 million tweets over 27,000 were rated of high significance. Based on an analysis of key terms used over 14,000 tweets from 2,756 different Twitter accounts were assessed as directly or indirectly related to the General Election campaign. Between them these tweets were retweeted or liked over 21.2 million times. These 14,000+ high rated tweets were summarised into three Top 100 lists.

All-Male Journalist Top 10

One of the findings of the analysis was that the top ten journalists featured in the rankings were all male. The overwhelming response to the [tweet stating this](#) was one of [surprise](#).



COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Summary (continued)

Background (continued)

All-male Journalist Top 10 (continued)

As is often the case, the resulting Twitterstorm didn't involve a great deal of discussion about the underlying analysis. In fact evidence from the response suggests people mistakenly thought the list had been *curated*, when in fact it was based on objective engagement criteria.

In response we [tweeted an explanation](#) of the basis of the findings and [suggested some possible underlying causes](#).

Some observers did engage with the work, including researcher Laura Jones who highlighted a study on gender bias on Twitter and wrote this post [Authority, Influence and the Twitter Glass Ceiling](#), which we strongly recommend reading.

The analysis carried out looks at the issues raised by Laura's post and the suggestions we made about potential sources of bias.

Data and work performed

The analysis was based on the tweets and retweets of 829 UK journalists (518 male, 311 female) between 18th April 2017 – 7th June 2017 – the same period as the previous PoliticsUKTD GE2017 analysis.

Journalist populations: 518 male journalists and 311 female journalists identified based on a combination of appearance in the GE2017 analysis; crowdsourced suggestions and Lissted's database of 4 million influencers.

Tweets identified: 62,192 tweets by the journalists selected for the analysis based on having been retweeted at least once by one of the tens of thousands of influencers tracked by Lissted. These tweets were retweeted 198,798 times by 10,774 influencers and retweeted or liked over 17 million times by Twitter users as a whole.

NB: Influencer retweets and Retweets and Likes across Twitter as a whole were the main focus of the research as engagement of this nature amplifies the voice and message of the individual concerned. Replies to a tweet and quote tweets, may also do this, but can equally be variable in the extent to which they promote the user concerned.

Gender classification: influencer gender identified based on a combination of name and/or manual verification.

Analysis of the follower relationships of a sample of these influencers in connection with the journalists.

Key findings

Male UK politics journalists received **4.3x more retweets from influencers** than female journalists. They received **4.9x more retweets and likes combined across Twitter as a whole**.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Summary (continued)

Key findings (continued)

Implying male UK politics journalists voices were considerably more likely to be heard than female journalists.

The analysis identified five of the factors that contributed to this disparity:

- demographics;
- following behaviour of influencers;
- retweeting behaviour of influencers;
- opinions in tweets; and
- frequency of tweeting.

Demographics

Summary: Male UK politics journalists on Twitter outnumber female. Around 5 male journalists for every 3 female journalists. On average they have more followers and tweet more often.

The gender imbalance towards male representation in the wider UK political community is an added factor due to male influencers having an even greater propensity to favour following and retweeting male journalists than female influencers do.

Demographics would appear to be one of the most significant area of inherent disadvantage for female UK politics journalists on Twitter. We found less of them with the minimum criteria we set of 1,000 followers (ratio 1.67 male to female). The accounts included in the analysis had less followers on average (ratio 1.18 male to female, based on median followers) and tweet less often (ratio 1.23 male to female based on status updates and profile age).

Third party feedback and additional research after this analysis was carried out highlighted some gaps in the populations totalling 104 more journalists. If these journalists had been included the relative male to female ratio would have fallen to 1.54x from 1.67x. However this feedback was mostly focussed on identifying additional female journalists therefore the 1.67x factor has been maintained within the analysis. Analysis was also carried out on these 104 additional journalists which established that their inclusion in the full analysis would not have materially impacted the reports key findings.

The demographics of the UK political community as a whole would also appear to be a factor. This is illustrated by the make-up of the influencer group. The ratio of male to female influencers was 69 per cent to 31 per cent. This is broadly consistent with studies of gender representation in UK politics. For example in the current UK parliament women account for 32 per cent of MPs.

This representation imbalance is a factor in both following and retweeting behaviour (see below) as male influencers have an even higher degree of propensity to follow and retweet male journalists over female than female influencers do.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Summary (continued)

Key findings (continued)

Following behaviour of influencers

Summary: Both male and female influencer groups analysed exhibited an overall tendency to follow male journalists more frequently than female journalists. Even after adjusting for demographics the ratio was 57:43.

The additional amplification influential Twitter users can give to a tweet can be a causal factor in a tweet gaining greater reaction across Twitter as a whole. Our own tweet that started this conversation is anecdotal evidence of this.

Being followed by influencers is clearly of some advantage when it comes to being retweeted by them. This finding was underlined by regression analysis which showed follower levels were statistically significant as a predictor of retweets and likes.

Analysis of samples of male and female influencers looking at the relative number of male and female journalists they followed found that even after adjusting for the demographic 518:311 split, 82 per cent of the male sample and 66 per cent of the female sample followed more male journalists than female. The overall ratios being 57 per cent male, 43 per cent female for the influencers as a whole and 58:42 for male influencers and 53:47 for female influencers respectively.

To illustrate the impact of this only three female journalists (Laura Kuenssberg, Isabel Hardman and Sophy Ridge) ranked in the top 20 most followed accounts for both male and female influencers. This compares to 11 for the male journalists (Faisal Islam, Michael Crick, Robert Peston, Jon Snow, Fraser Nelson, Paul Waugh, Nick Robinson, Nick Sutton, Andrew Neil, Daniel Finkelstein and David Aaronovitch).

Retweeting behaviour of influencers

Summary: Both male and female influencers as groups showed an overall tendency to retweet male journalists more frequently than female. Even after attempting to adjust for demographics, following preference and tweet volume (see below) the ratio was 63:37.

This tendency was more pronounced in the male influencer group by approximately 7-9 per cent.

Our analysis of retweets by influencers showed that female journalists received less amplification of their tweets by influencers (ratio 81:19 male to female). Even after adjusting for the demographics, following bias issues noted above, and the higher tweet volumes of male journalists, the ratio was 63:37.

This observation was more pronounced in the male influencer group with the analysis indicating approximately a 7-9 per cent increase in the male:female ratio of retweets for male influencers.

The gender split of the influencers themselves was 69 per cent male, 31 per cent female. As discussed above, despite progress in recent years towards greater balance within the UK Politics community evidence such as the relative number of UK MPs - 68 per cent male, 32 per cent female –

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Summary (continued)

Key findings (continued)

Retweeting behaviour of influencers (continued)

indicates a significant gender imbalance still exists. The gender split of the influencers observed in the analysis appears to reflect this.

Combined with the greater likelihood of male influencers to retweet male journalists, this further demographic bias also exacerbates the retweeting effect.

Opinions in tweets

Summary: Tweets where the author themselves expressed an opinion correlated with greater retweets and likes.

A high proportion of both male and female journalists' tweets included opinions. However male (57 per cent) journalist tweets included opinions more frequently than female (48 per cent).

Regression analysis on the tweet data indicated that tweets that include opinions are more likely to correlate with greater retweets and likes across Twitter.

In the samples analysed male journalists' tweets included opinions more frequently (57.0 per cent versus 48.0 per cent).

Clearly this demonstrates that many female journalists in the analysis frequently express opinions. The lower level compared to the male journalists is therefore a further contributing factor to the ultimately lower level of engagement received during the period.

However when quantifying the impact of this factor it appears to be significantly less than the other four. The analysis predicts that if the same proportion of female journalist tweets had been opinionated it **would have resulted in an increase of only 0.5 per cent in total retweets and likes.**

It's important to note that the analysis didn't look at the replies to tweets, focussing on the extent to which a journalist's tweets were amplified. A recent study by Amnesty International looked at the extent to which politicians are harassed or abused on Twitter. It found that women politicians received a much greater level of such response. This apparent bias in online abuse could be a contributing factor to the lower level of opinionated tweets by the female journalists in the analysis. This requires further study to validate.

Frequency of tweeting

Summary: Male journalists tweet more frequently than female journalists. This increases the likelihood that they will be retweeted, enhancing their aggregate Twitter engagement.

Regression analysis on the aggregated journalist results indicated that being male and tweeting more frequently were both positively correlated with having a greater number of tweets that were retweeted at least once by an influencer in the period.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Summary (continued)

Key findings (continued)

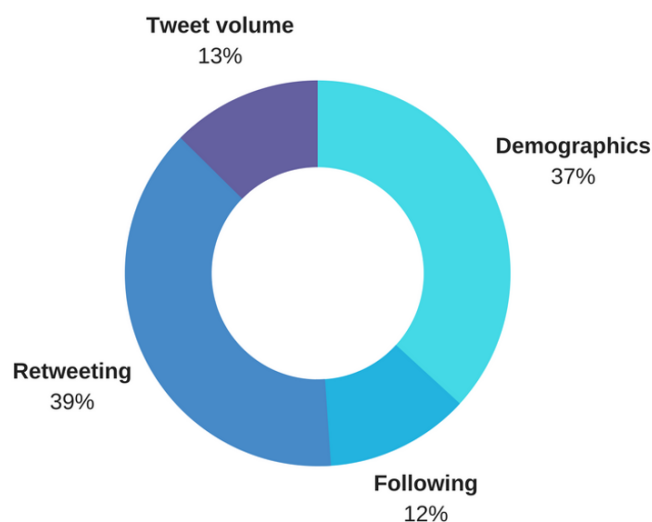
Frequency of tweeting (continued)

The first observation is consistent with the finding regarding influencers being more likely to retweet men and the second demonstrates how the higher apparent update frequency of the male group lead to a greater reaction in the aggregate.

Summary

The relative importance of the four main factors identified above (excluding opinions) in explaining the disparity in amplification between the male and female journalists are summarised below.

Relative importance of gender gap factors



The demographics of the UK political journalist community (36.8 per cent) and retweeting behaviour (38.5 per cent) are the two most significant factors identified that lead to UK Politics female journalists' voices being less prominent in Twitter conversation.

Each of these factors is three times more important than either following preference (12.1 per cent) or the extent to which male journalists tweet more (12.6 per cent).

Implications

Summary: A glass ceiling effect is observed when ranking the influence of female journalists, meaning Twitter conversation in relation to UK Politics is potentially biased in favour of the opinions and reporting of male journalists.

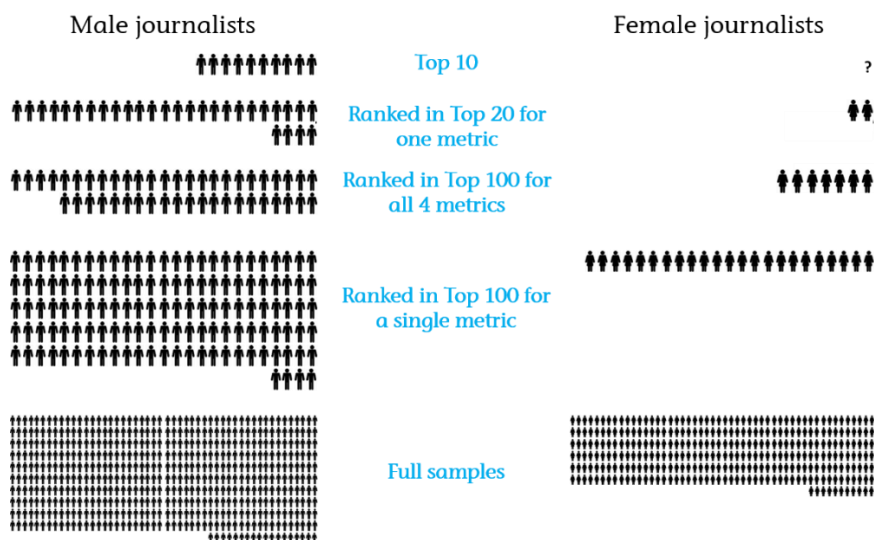
The combination of the factors above has the potential to make male journalists rank significantly higher in analysis of Twitter reaction. This is consistent with what was observed in the PoliticsUKTD

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Summary (continued)

Implications (continued)

GE2017 analysis, effectively producing a glass ceiling effect where the representation of female journalists reduces as you get higher up the rankings.



Whilst there are many female journalists who have high followings and receive a significant level of reaction on Twitter, the factors identified mean there are less of them and they are less likely to achieve the level of aggregate engagement and exposure as their male colleagues.

Twitter conversation in relation to UK Politics therefore potentially suffers from a significant degree of bias in favour of the opinions and reporting of male journalists. As Twitter can often be a source of stories and commentary for the wider media, this may also impact wider political coverage and discourse in general.

Potential action to address the issue

Summary: A more mindful approach to retweeting by a relatively small number of influencers could have a considerable impact.

A shift of 17 per cent in the retweet ratio of the 1,076 (one in ten) influencers who were most active retweeters, and had a male retweet ratio of 50 per cent or more, would have led to a 44 per cent improvement in the relative amplification of female journalists.

As changes in demographics generally take a significant amount of time, the analysis suggests the quickest route to reduce the observed gender imbalance would be a more mindful approach by influencers – male and female – to their following and retweeting behaviour.

Based on the analysis, a change of following and retweeting behaviour of influencers towards female journalists could have a material impact, due to their disproportionate ability to amplify voices. It was interesting to note the heavily male biased retweet ratio of some of those who were most

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Summary (continued)

Potential action to address the issue (continued)

(negatively) vocal in their response to the all-male top 10. This may indicate a lack of mindfulness about their own behaviour in this regard.

For example, a shift of 17 per cent in the retweet ratio of the 1,076 (one in ten) influencers who were most active retweeters, and had a male retweet ratio of 50 per cent or more, would have resulted in a 44 per cent improvement in the relative amplification of female journalists.

Areas for further investigation

More detailed work on tweet content to explain more of the variance in engagement could shed light on other potential causes of gender differences. Areas could include: political affiliation, associated media outlet, topics covered and timing of tweet.

Consideration of the nature of reply engagement towards different genders and how this may impact on tweet frequency and the expression of opinions would also be worthy of further study.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Background

Lissted's PoliticsUKTD GE2017 Analysis all male top ten journalists

In late June 2017 [Lissted](#) produced an [analysis of influential Twitter users in relation to the UK General Election 2017](#) (Appendix 2). The analysis was based on tweets featured on the [@PoliticsUKTD](#) (Politics UK Distilled) Twitter account. This account is powered by Lissted's [Tweetsdistilled](#) system which estimates and ranks the apparent influence of tweets and then retweets those it ranks the highest.

The PoliticsUKTD study was based on the tweets of thousands of the top influencers in relation to UK Politics from right across the political spectrum. During the campaign period (18th April 2017 - 7th June 2017 inclusive) these influencers tweeted over 3 million times, including retweeting and replying to over 200,000 other accounts.

The Tweetsdistilled application tracked every tweet in real time, using its proprietary algorithm to seek out the ones that looked to have the most potential for influence.

To rank highly a tweet needs to be getting the attention of a lot of influential people, the wider Twitter community or preferably both.

Out of these 3 million tweets over 27,000 (around 500-600 per day) were rated of high significance. Based on an analysis of key terms used over 14,000 tweets from 2,756 different Twitter accounts were assessed as directly or indirectly related to the campaign. Between them these tweets were retweeted or liked over 21.2 million times.

NB: Unsurprisingly, a significant number of high rated tweets in the campaign period were related to the tragic events in Manchester and London. Tweets that referenced parties and/or their leaders in relation to the attacks were included within the 14,000+ tweets used to produce the lists.

We summarised the 14,000+ high rated tweets into three Top 100 lists. To qualify for consideration an account needed to have a minimum of four tweets rated as high significance with an aggregate retweet and like count of greater than 1,000.

One of the findings of this analysis was that the top ten journalists featured in the rankings were all male. The overwhelming response to the [tweet stating this](#) was one of [surprise](#).

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Background (continued)

Potential explanations (continued)



As is often the case, the resulting Twitterstorm didn't involve a great deal of discussion about the underlying analysis. In fact evidence from the response suggests people mistakenly thought the list had been *curated* when in fact it was based on objective engagement criteria.

Potential explanations

In response we [tweeted an explanation](#) of the basis of the findings and suggested some possible underlying causes.

The suggestion the *relative frequency* of opinions being expressed by male and female journalists may be one of the factors explaining the male journalists' higher engagement was miss-interpreted by some as [women journalists don't voice opinions](#).

We subsequently expanded the list of potential reasons for the all-male top 10 to include:

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Background (continued)

Potential explanations (continued)

- 1 - Twitter demographics (Inherent population bias)
 - 2 - UK political discussion demographics e.g. Partisan makeup (Specific population bias)
 - 3 - Who people follow (Follow bias)
 - 4 - Who people retweet/like (Engagement bias)
 - 5 - Who is doing the retweeting/liking (Participation bias)
- Not biases in themselves but could result in differences in reaction in conjunction with the above:
- 1 - Topics people tweet about
 - 2 - Content of tweets e.g. opinionated, media, hashtags, links etc
 - 3 - Make up of followers e.g. partisan

Some observers did engage with the work, including researcher Laura Jones who highlighted a study on gender bias on Twitter:

 **Laura Jones**
@laurabrandonj [Follow](#)

@lissted all male should be seen in broader context. Academic evidence shows men in general RTed/followed more than women.

Glass Ceiling: The Effect of Perceived Gender on Online Interactions

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Abstract

a new public sphere where people can, in
anonymity, interact with each other regardless of their
social categories like gender may still bias
interaction, replicating offline disparities. **Example:**
(Twitter users we investigate the association
of gender and measures of online visibility:
if users are followed, assigned to lists, and
analysis shows that users perceived as female
are less visible, similar to the barriers women face
in positions in companies. For users in lower
visibility, being perceived as female is associated
with lower visibility. However, this tendency flips among the
users where being perceived as male is strongly
associated with higher visibility. Our results suggest that gender
social media profiles likely frame interactions,
reproducing old inequalities online.

'real world' reputations, such as political
online visibility (Morales et al. 2014).
However, how social status
affects online attention. Difference
exists in two ways: first, an individual's
online behavior, which then can affect
an individual's demographic information
profiles may impact the amount of a
female user, for example, might act
cause of gender bias. The "action-is
offer is that the decision to follow a
user is affected by the user's behavior
information they offer about themselves
profile. In other words, actions and
visibility. This theory speaks to previous
individuals communicate online identity
behavior (Kim, Zhang, and Gupta 2011).

8:48 AM - 28 Jun 2017

2 Retweets 1 Like



1 2 1

Laura also wrote this post [Authority, Influence and the Twitter Glass Ceiling](#), which we strongly recommend reading. The analysis we've carried out looks at the issues raised by Laura's post and the suggestions we made about potential sources of bias.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Work carried out

Period of analysis

18th April 2017 – 7th June 2017 (UK General Election campaign period). Set to be consistent with the previous PoliticsUKTD GE2017 analysis.

Journalist identification process

The journalists identified for analysis were based on a combination of those who were:

- featured in the GE2017 analysis;
- suggested by Twitter users in response to the GE2017 analysis; or
- extracted from Lissted's database of 4 million influencers based on bio details and/or analysis of relevant networks on Twitter.

Accounts needed to have a minimum of 1,000 followers to be included.

This resulted in the identification of 518 male journalists and 311 female journalists.

Follower analysis

For a sample of 112 male and 56 female influencers who were amongst the most active retweeters during the period, the number of the male and female journalists from the populations they follow was identified.

Tweet and retweet data identification

Lissted's database of tweets by tens of thousands of influential Twitter accounts was utilised to identify the following:

- all the influential retweeters from this dataset that retweeted at least one member of the journalist populations; and
- the tweets the influencers retweeted for each member of the journalist populations.

The process identified 62,192 tweets by the journalists selected for the analysis. These tweets were, retweeted 198,798 times by 10,774 influencers and retweeted or liked over 17 million times by Twitter users as a whole.

NB: Retweets and Likes were the main focus of the research as engagement of this nature amplifies the voice and message of the individual concerned. Replies to a tweet and quote tweets, may also do this, but can equally be variable in the extent to which they promote the user concerned.

Gender classification of influencers

Each influential retweeter account was classified as either *Male*, *Female*, *Organisation* or *Unknown* based on a combination of name and/or manual verification. Examples of organisation accounts include brands or media outlets. Unknown accounts are where despite reviewing the avatar, name, bio and/or Google searches we were still unable to verify the gender or nature of the tweeter with a high degree of confidence.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Work carried out (continued)

Gender classification of influencers (continued)

The breakdown of the 10,774 influencers was as follows:

Influencer	Number	% of Total people	Male Journalist RTs	Female Journalist RTs	Total RTs	Average RTs	% Male RTs	% Female RTs
Male	6,575	69.3%	106,921	22,226	129,147	19.64	83%	17%
Female	2,911	30.7%	35,278	10,531	45,809	15.74	77%	23%
Total people	9,486	100.0%	142,199	32,757	174,956	18.44	81%	19%
Organisation	1,178		15,534	3,848	19,382	16.45	80%	20%
Unknown	110		3,847	613	4,460	40.55	86%	14%
Grand total	10,774		161,580	37,218	198,798	75.44	81%	19%

The gender split of influencers of 69:31 is broadly consistent with [studies looking at female representation in UK Politics](#).

Extension to journalist populations

Where the relevant journalists in the samples appeared themselves as influencers in our dataset, we also identified the number of times they themselves retweeted others and how many unique accounts they retweeted. 242 of the 311 female journalists and 409 of the 518 male journalists were covered.

NB: @AbiWilks, @RupertMyers, @BraidenHT results were incomplete due to their tweets no longer being accessible due to either deletion of tweet history or the user opting to suspend their account.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

UK Politics journalists demographics on Twitter

Sample membership and comparison

The groups analysed comprised 518 male journalists and 311 female journalists.

	Male	Female	Ratio Male:Female
Group population	518	311	1.67:1
Median followers	15,008	12,714	1.18:1
Median updates (all time)	13,103	10,620	1.23:1
Median age of account	2,853	2,852	1.00:1
Median RTs in period*	73	54	1.35:1

*Based on subset of 409 male and 242 female journalists for which Lissted had existing data during the period.

These figures suggest an inherent weighting towards male journalists on Twitter in the field of UK Politics. There would appear to be more of them, they have greater followings and tweet more frequently than their female colleagues.

Third party feedback on selection

It's important to note the difference in populations may reflect a limitation in the scope of our research rather than an actual demographic under representation.

To test how comprehensive the lists were we shared them confidentially with a number of third parties. Their responses did highlight some gaps, particularly with regards to a large proportion of the groups being Westminster political journalists, with limited representation from regional media outlets, Wales and Northern Ireland, and to a lesser extent Scotland.

Additional analysis was carried out to investigate this feedback. In total a further 104 journalists were identified as potential candidates to have been included in the analysis. Of these 47 were male and 57 were female. Their inclusion would have reduced the demographic disparity factor to 1.54 from 1.67. However they would have had an immaterial impact on the remainder of the analysis. In addition as the primary focus of the feedback was identifying omitted female journalists the decision was taken to maintain the demographic factor of 1.67x in the analysis.

There were also some questions regarding the criteria for inclusion.

The basis applied to selection was to include individuals who:

- have a journalism background;
- whose journalistic role is their primary one; and
- either their focus is politics or they appeared prominently in our GE2017 analysis as contributing to the political conversation.

For example, under the first and last criteria Boris Johnson and Michael Gove would be included, but not under the second.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

UK Politics journalists demographics on Twitter (continued)

Third party feedback on selection (continued)

Two significant accounts – Katie Hopkins, @KTHopkins and Jack Monroe, @BootstrapCook - were identified as excluded from our analysis around which there was debate about whether they should be included on these criteria.

Katie Hopkins was not included under the journalism background criterion. She was considered to be a media personality, rather than a journalist, though the counter argument that she contributes a column to the Daily Mail was also noted.

Jack Monroe was not included as her primary focus in her writing is food as the Bootstrap Cook. However again a counter argument here is that she is consistently outspoken politically.

However again the inclusion of these two individuals would have made no material difference to the overall conclusions.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Potential gender bias in follower activity

Demographic adjustment

In an attempt to adjust for the **potential** inherent demographic bias the follower counts in relation to the female journalists in this section have been adjusted by the population factor identified earlier of 1.67x.

Influencer following activity by gender

Summary: Male UK political journalists 1.22x more likely to be followed by influencers than female journalists after adjusting for demographic factor

Random samples of 112 male and 56 female influencers were taken from the 1,282 most active influencers in the data set (see 'Variation in influencer male to female retweet ratio' below).

The number of members of the male and female journalist populations they followed was then identified.

Group	Ratio of follows of male journalists to female journalists	Ratio of follows of male journalists to female journalists (demographic adjustment)
All Twitter influencers	67:33	55:45
Female influencers	65:35	53:47
Male influencers	68:32	56:44

Even after adjusting for the demographic 518:311 split, 82 per cent of the male sample and 66 per cent of the female sample followed more male journalists than female. The overall ratios being 55 per cent male, 45 per cent female for the influencers as a whole and 56:44 for male influencers and 53:47 for female influencers respectively.

This produces a follower adjustment factor of 55/45 (1.22x). This is similar to the difference in median follower numbers for the two groups of 1.18x.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Potential gender bias in follower activity (continued)

Most followed journalists by the samples

Top journalists followed by female influencers

% of influencer sample who follow them	Screen Name	Name	M/F
70%	faisalislam	Faisal Islam	M
66%	MichaelLCrick	Michael Crick	M
66%	bbclaurak	Laura Kuenssberg	F
64%	Peston	Robert Peston	M
64%	jonsnowC4	Jon Snow	M
63%	paulwaugh	Paul Waugh	M
59%	bbcnickrobinson	Nick Robinson	M
57%	IsabelHardman	Isabel Hardman	F
55%	suttonnick	Nick Sutton	M
55%	afneil	Andrew Neil	M
55%	SophyRidgeSky	Sophy Ridge	F
55%	BethRigby	Beth Rigby	F
54%	krishgm	Krishnan Guru-Murthy	M
54%	jimwaterson	Jim Waterson	M
54%	Dannythefink	Daniel Finkelstein	M
54%	FraserNelson	Fraser Nelson	M
54%	DAaronovitch	David Aaronovitch	M
54%	gabyhinsliff	Gaby Hinsliff	F
52%	davidallengreen	Law and policy	M
50%	janemerrick23	Jane Merrick	F

8 of the top 10 and 14 of the top 20 most followed journalists by the female influencers were male.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Potential gender bias in follower activity (continued)

Most followed journalists by the samples (continued)

Top journalists followed by male influencers

% of influencer sample who follow them	Screen Name	Name	M/F
65%	Peston	Robert Peston	M
63%	MichaelLCrick	Michael Crick	M
60%	bbclaurak	Laura Kuenssberg	F
60%	faisalislam	Faisal Islam	M
59%	FraserNelson	Fraser Nelson	M
58%	IsabelHardman	Isabel Hardman	F
58%	paulwaugh	Paul Waugh	M
57%	suttonnick	Nick Sutton	M
57%	afneil	Andrew Neil	M
57%	DAaronovitch	David Aaronovitch	M
55%	bbcnickrobinson	Nick Robinson	M
54%	jonsnowC4	Jon Snow	M
53%	cathynewman	Cathy Newman	F
52%	ShippersUnbound	Tim Shipman	M
52%	EvanHD	Evan Davis	M
52%	paulmasonnews	Paul Mason	M
51%	patrickwintour	Patrick Wintour	M
51%	Dannythefink	Daniel Finkelstein	M
51%	mrjamesob	James O'Brien	M
50%	SophyRidgeSky	Sophy Ridge	F

8 of the top 10 and 16 of the top 20 most followed journalists by the male influencers were male.

Only 3 female political journalists appeared in both top 20 lists: Laura Kuenssberg, Isabel Hardman and Sophy Ridge.

This compares with 11 male journalists: Faisal Islam, Michael Crick, Robert Peston, Jon Snow, Fraser Nelson, Paul Waugh, Nick Robinson, Nick Sutton, Andrew Neil, Daniel Finkelstein and David Aaronovitch.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Potential gender bias in follower activity (continued)

Following analysis of Top 100 influencers (people) in GE2017 analysis (ADDED DECEMBER 2017)

Username	Gender	% Adjusted M	% Adjusted F	Raw % M	Raw % F	# M from sample	# F from sample
RuthDavidsonMSP	F	75%	25%	84%	16%	56	11
Kevin_Maguire	M	71%	29%	80%	20%	52	13
Hepworthclare	F	70%	30%	79%	21%	127	33
Nigel_Farage	M	69%	31%	79%	21%	53	14
PeteWishart	M	67%	33%	78%	22%	45	13
JuliaHB1	F	67%	33%	77%	23%	79	23
AngelaHaggerty	F	67%	33%	77%	23%	57	17
bbcnickrobinson	M	67%	33%	77%	23%	83	25
rosscolquhoun	M	66%	34%	76%	24%	106	33
PeterMurrell	M	65%	35%	76%	24%	63	20
ChristinaSNP	F	65%	35%	76%	24%	50	16
MhairiHunter	F	65%	35%	76%	24%	99	32
PolhomeEditor	M	65%	35%	75%	25%	174	57
AngusRobertson	M	64%	36%	75%	25%	54	18
johnprescott	M	62%	38%	73%	27%	58	21
joannaccherry	F	62%	38%	73%	27%	44	16
alisonthewliss	F	60%	40%	72%	28%	48	19
bbclaurak	F	60%	40%	71%	29%	113	46
SarahChampionMP	F	59%	41%	71%	29%	22	9
SiobhanRobbins	F	59%	41%	70%	30%	45	19
MichaelLCrick	M	59%	41%	70%	30%	99	42
Peston	M	58%	42%	70%	30%	119	51
JenWilliamsMEN	F	58%	42%	70%	30%	107	46
SuzanneEvans1	F	57%	43%	69%	31%	115	51
mattzarb	M	57%	43%	69%	31%	145	65
johnmcdonnellMP	M	57%	43%	69%	31%	160	72
EmilyThornberry	F	56%	44%	68%	32%	111	52
NicolaSturgeon	F	56%	44%	68%	32%	118	56
IsabelOakeshott	F	56%	44%	68%	32%	99	47
JeremyCliffe	M	55%	45%	67%	33%	143	69
CarolineLucas	F	55%	45%	67%	33%	103	50
jimwaterson	M	55%	45%	67%	33%	237	116
GuardianHeather	F	55%	45%	67%	33%	63	31
campbellclaret	M	55%	45%	67%	33%	129	64
JamesCleverly	M	54%	46%	66%	34%	193	100
ruth_wishart	F	54%	46%	66%	34%	50	26
MarinaHyde	F	53%	47%	66%	34%	159	83
tnewtondunn	M	53%	47%	66%	34%	155	81

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Potential gender bias in follower activity (continued)

Following analysis of Top 100 influencers (people) in GE2017 analysis (continued)

Username	Gender	% Adjusted M	% Adjusted F	Raw % M	Raw % F	# M from sample	# F from sample
kezdugdale	F	53%	47%	65%	35%	144	76
YvetteCooperMP	F	53%	47%	65%	35%	75	40
carolecadwalla	F	52%	48%	65%	35%	112	61
JonAshworth	M	52%	48%	64%	36%	174	96
WomaninHavana	F	52%	48%	64%	36%	65	36
BethRigby	F	52%	48%	64%	36%	191	106
ThatTimWalker	M	51%	49%	64%	36%	56	32
faisalislam	M	51%	49%	64%	36%	285	163
jessicaelgot	F	51%	49%	64%	36%	234	134
joncstone	M	51%	49%	64%	36%	143	82
MrHarryCole	M	51%	49%	64%	36%	237	136
JamieRoss7	M	51%	49%	63%	37%	117	68
GuardianAnushka	F	51%	49%	63%	37%	197	115
jeremycorbyn	M	51%	49%	63%	37%	53	31
IsabelHardman	F	50%	50%	63%	37%	192	114
SarahLudford	F	50%	50%	63%	37%	237	142
Rachael_Swindon	F	50%	50%	63%	38%	10	6
FraserNelson	M	49%	51%	62%	38%	183	114
cathynewman	F	49%	51%	62%	38%	96	60
georgeeaton	M	49%	51%	61%	39%	274	172
PickardJE	M	48%	52%	61%	39%	275	175
Ed_Miliband	M	48%	52%	61%	39%	53	34
SamCoatesTimes	M	48%	52%	61%	39%	219	142
JamesMelville	M	48%	52%	61%	39%	43	28
ShippersUnbound	M	48%	52%	60%	40%	249	163
paulwaugh	M	48%	52%	60%	40%	290	191
MichaelPDeacon	M	48%	52%	60%	40%	223	147
davidschneider	M	48%	52%	60%	40%	62	41
SophyRidgeSky	F	47%	53%	60%	40%	231	156
IanDunt	M	47%	53%	60%	40%	195	132
timfarron	M	47%	53%	60%	40%	215	146
LOS_Fisher	F	47%	53%	60%	40%	206	140
AdamBienkov	M	46%	54%	59%	41%	190	131
JolyonMaugham	M	46%	54%	59%	41%	113	78
AaronBastani	M	46%	54%	59%	41%	42	29
rachshabi	F	46%	54%	58%	42%	94	67
lucianaberger	F	46%	54%	58%	42%	171	122
paulmasonnews	M	45%	55%	58%	42%	86	62

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Potential gender bias in follower activity (continued)

Following analysis of Top 100 influencers (people) in GE2017 analysis (continued)

Username	Gender	% Adjusted M	% Adjusted F	Raw % M	Raw % F	# M from sample	# F from sample
davidallengreen	M	45%	55%	57%	43%	96	71
krishgm	M	44%	56%	57%	43%	204	155
DPJHodges	M	43%	57%	56%	44%	267	208
OwenJones84	M	43%	57%	55%	45%	173	140
jonsnowC4	M	42%	58%	55%	45%	40	33
gabyhinsliff	F	42%	58%	55%	45%	103	85
janemerrick23	F	42%	58%	54%	46%	282	237
aljwhite	M	42%	58%	54%	46%	145	122
thecarolemalone	F	41%	59%	54%	46%	71	61
youngvulgarian	F	40%	60%	53%	47%	161	142
helenlewis	F	39%	61%	52%	48%	117	109
liamyoung	M	34%	66%	47%	53%	14	16
MissEllieMae	F	34%	66%	46%	54%	58	67
Claire_Phipps	F	33%	67%	45%	55%	107	130
JaneyGodley	F	28%	72%	39%	61%	13	20

Accounts that follow less than 10 male or female journalists from the samples.

Username	Gender	% Adjusted M	% Adjusted F	Raw % M	Raw % F	# M from sample	# F from sample
AMDWaters	F	37%	63%	50%	50%	4	4
LesleyRiddoch	F	100%	0%	100%	0%	3	0
AngryScotland	M	54%	46%	67%	33%	2	1
theresa_may	F	0%	0%	0%	0%	0	0
KTHopkins	F	0%	0%	0%	0%	0	0

Implications

As the potential to be retweeted is increased where an account is followed this apparent following bias is an additional negative factor for the female journalist group.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Potential gender bias in retweet activity

Adjustment for existing differences identified

In an attempt to adjust for the demographic and follower factors identified above the retweet counts in relation to the female journalists in this section have been adjusted by:

- population factor of 1.67x (to account for demographics as above); and
- follower factor of 1.22x (to account for apparent bias in followers as above).

To account for the greater volume of tweets from male journalists, which increases the opportunity to generate retweets, they were also adjusted by a median updates comparison factor of 1.23x (see demographic table above).

This produces an overall adjustment factor of 2.51x ($1.67 \times 1.22 \times 1.23$).

Influencer reaction by gender

Summary: Male UK Politics journalists retweeted over four times more than female journalists and 1.7x more even allowing for demographic, follow and tweet volumes.

Twitter influencers tracked by Lissted retweeted the male UK Politics journalist group significantly more than female journalists during the period.

Before adjusting for the demographic, follower and tweet volume factors the retweet ratio was 4.3x (male retweets 4.3 times greater than female). Even after applying the adjustment factor of 2.51 the ratio was 1.70x.

This was the case for both female and male influencers, though significantly more pronounced in relation to male influencers at 1.94x compared to 1.33x for female influencers.

Group	Ratio of retweets of male journalists to female journalists (no adjustment)	Ratio of retweets of male journalists to female journalists (adjusted)	Male retweets as a multiple of female retweets (adjusted)
All Twitter influencers	81:19	63:37	1.70x
Female influencers	77:23	57:43	1.33x
Male influencers	83:17	66:34	1.94x

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Potential gender bias in retweet activity (continued)

Influencer reaction by gender (continued)

As an illustration, the following are some examples of individuals within the influencer set:

Influencer	Male Journalist RTs	Different Male Journalists RT'd	Female Journalists RTs	Different Female Journalists RT'd	M/F Ratio RTs	M/F Ratio RTs (adjusted)	M/F Ratio Different Journalists (adjusted)
Lily Allen	40	27	12	12	77:23	57:43	47:53
Kay Burley	77	43	28	6	73:27	52:48	74:26
YvetteCooper	22	17	1	1	96:4	90:10	88:12
Bonnie Greer	383	96	37	28	92:8	80:20	58:42
Emily Maitlis	70	37	17	10	80:20	62:38	60:40
Claire Phipps	90	56	55	28	62:38	39:61	45:56
Andrew Neil	119	24	8	4	94:6	85:15	70:30
Paul Mason	94	53	17	15	85:15	69:31	58:42
Owen Jones	161	77	39	18	81:19	62:38	63:37
Jeremy Vine	26	23	15	12	63:37	41:59	43:57
Sathnam Sanghera	156	70	58	33	76:24	52:48	46:54

It's noteworthy that some of the influencers who were most vocal in their response to the PoliticsUKTD top 10 being all-male, were also individuals with highly male biased tweet ratios in the analysis. This suggests they are unconscious of the apparent bias being shown.

Journalist behaviour towards other journalists

Summary: Journalists also showed a similar tendency to retweet male journalists more than female

Similar behaviour was observed in relation to retweets by journalists of other journalists. Though in this case once the demographic adjustment was made the female journalist ratio was closer to 50:50.

Group	Ratio of retweets of male journalists to female journalists (no adjustment)	Ratio of retweets of male journalists to female journalists (median adjustment)
Female journalists	75:25	53:47
Male journalists	82:18	64:36

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Potential gender bias in retweet activity (continued)

Relative reaction towards each group across Twitter as a whole

Summary: Overall engagement in retweets and likes showed a similar male to female ratio

Total aggregate retweets and likes by all Twitter users for tweets that were retweeted by at least one influencer also showed a similar relationship with a male:female ratio of 83:17 or 4.9x pre demographic adjustment. After adjustment the ratio was 65:35 or 1.86x.

Group	Ratio of male journalists to female journalists (no adjustment)	Ratio of male journalists to female journalists (median adjustment)
Total retweets	85:15	68:32
Total likes	82:16	63:37
Retweets + Likes	83:17	65:35

Variation in influencer male to female retweet ratio (Appendix i for results)

Summary: Male influencers male to female retweet ratio 6.7 per cent higher than female influencers

Regression analysis was carried out on the male to female retweet ratio of the influencers. A minimum number of retweets of 30 was set. This was done to try and avoid the scenario where a particular influencer's ratio was unrepresentative of their wider behaviour. The resulting 1,282 influencers accounted for over 73 per cent of the male and female influencer retweet activity.

In order to carry out regression based on gender category tweets by male journalists received a value of 1 and tweets by female journalists received a value of 0.

An R-squared value of 0.0576, P-value of < 0.05 and a positive coefficient of 0.067 (6.7 per cent) were observed implying that *male influencers in the analysis were even more likely to retweet other males* than female influencers were. This is consistent with the retweet analysis above.

Variation in individual tweets

Summary: Gender alone was statistically significant for the performance of individual tweets, but only explained a 0.13 per cent of the variation in the data.

In comparison followers explained 6.2 per cent of the variation in retweets and likes for individual tweets.

Retweets by influencers was the most significant predictor of engagement performance explaining 53 per cent of the variation.

Analysis of likely resulting impressions implies retweets by influencers are also likely to be causal, not simply correlated.

Tweets that feature opinions by the author, and to a lesser extent video, explained 2.9 per cent and 1.8 per cent of the variation respectively. A higher proportion – 57 per cent v 48 per cent – of male journalist tweets were opinionated in nature.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Potential gender bias in retweet activity (continued)

Variation in individual tweets (continued)

Various regression analyses were carried out on the tweet data set to confirm if the factors observed in comparative analysis above were statistically significant.

Full sample

Regression analysis was carried out on the full sample of 62,000+ tweets. As [studies have shown](#) that Twitter engagement generally follows a power law, the total retweets and likes figures were adjusted to the power 0.6.

Gender single regressor (Appendix ii (a) for results)

As above tweets by male journalists were given a gender value of 1 and those by female journalists a value of zero.

The P-value for gender (M/F) of 5.84×10^{-19} being less than 0.05 implies this factor is statistically significant at the 95 per cent confidence level. The coefficient of 2.837981 being positive also means that it is positive for male journalists versus female.

However the R squared value of 0.001271 implies that only 0.13 per cent of the variation in retweets and likes is explained by gender alone and the coefficient says that it accounts for 2.84 additional retweets and likes in total per tweet.

To put this in context for a user such as @BBCLauraK with 491 tweets featured in the analysis this would imply an additional 1,394 retweets and likes combined. An increase of 1.1 per cent. All things being equal this would have resulted in her account's rank based on Total RTs + Likes being unchanged at 36th.

Followers and Status updates added to model (Appendix ii (b) for results)

A second regression was carried out adding in an account's number of followers and total updates as additional factors.

All three factors including gender were statistically significant (P-value < 0.05). R-squared of 0.064121 implies 6.4 per cent of variation explained by these three factors.

Of the three it is followers that explains the majority of this 6.4 per cent variation (validated with separate linear regression on followers alone R-squared 0.0618).

However the vast majority of the variation in engagement (93.6 per cent) is still not explained by these three factors.

Influencer retweets (Appendix ii (c) for results)

A third regression on the tweet population was carried out looking at the number of influencer retweets a tweet received.

In this case a much stronger correlation was observed with an R-squared value of 0.53 and a P-value of 0, meaning it is definitely statistically significant.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Potential gender bias in retweet activity (continued)

Variation in individual tweets (continued)

Influencer retweets (continued)

The issue here is one of correlation versus causation. It's an unsurprising conclusion that there would be correlation between the retweets by this subgroup of Twitter users and the total engagement a tweet *receives* across Twitter as a whole.

But is it the case that the influencer retweets *result in* greater engagement across Twitter as a whole?

Many of the influencer accounts concerned have a high number of followers. This means that each tweet they retweeted is likely to be seen by a significant number of other Twitter users. An estimate of these "Impressions" can be calculated for an influencer as:

Impressions = $\sum$ (for all retweets) Number of Followers x Impression Factor

The Impression Factor (IF) represents the proportion of an account's followers who were served a tweet. Without access to the analytics for the individual influencer accounts this cannot be calculated accurately.

In the absence of this data, IFs have been estimated.

The IF for high follower accounts is likely to be very low. This is due to these accounts often having a higher level of spam and inactive followers than accounts with low followers. The influencer retweet data was used to calculate a total estimate of Impressions. The following Impression Factors were used based on Followers in an attempt to take account of this effect.

Followers	> 1,000,000	1,000,000 - 250,000	250,000 - 50,000	50,000 - 10,000	<10,000
Impression Factor	0.04	0.06	0.08	0.10	0.15

This produced a total impressions figure of 1.075 billion across the 66,192 tweets, an average of 17,292 impressions per tweet.

To put this in context to match this figure the remaining 7 million retweets from accounts not tracked by Listed would need to have produced 153.7 impressions per retweet.

[Analysis of the distribution of followers on Twitter](#) would suggest 153.7 impressions is a relatively high value for the vast majority of Twitter users to achieve.

On this basis it seems reasonable to argue there is a good case that retweets by influencers are a causal factor in the variation in Twitter engagement.

Sample analysis of tweet content (Appendix ii (d) for results)

Random samples of c. 1,000 tweets were also selected from both the male journalists and female journalist tweets for more in depth analysis of the content of their tweets.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Potential gender bias in retweet activity (continued)

Variation in individual tweets (continued)

Sample analysis of tweet content (continued)

The tweets were then categorised by human review as follows:

- Opinionated
- Non opinionated.

In deciding whether a tweet was opinionated a reviewer was looking for evidence in either the language used or content shared e.g. image or video. A non opinionated tweet would represent something neutral e.g. reporting an item of news or reporting a quote or opinion attributed to someone else.

The tweets that included either video or image content were also identified.

Regression analysis for the samples was performed looking at total retweets and likes (to the power 0.6 as above) against these three factors, along with the tweeter's gender.

An R-squared value of 0.0534 implies 5.3 per cent of the variation in retweets and likes was explained by these factors.

In this case gender was statistically insignificant as a factor (P-value > 0.05) at the 95 per cent confidence level. Of the remaining three factors, individual linear regressions showed Opinion produced an R-Squared value of 0.029 and video 0.018 and both had significant positive coefficients. Image was statistically insignificant as a single factor.

This suggests opinionated tweets and the use of video were potentially a source of increased engagement.

A comparison of the frequency of tweets rated as opinionated and/or including video is shown below.

Factor	Male	Female
Opinionated	57.0%	48.0%
Video	2.3%	1.9%

The higher frequency of opinionated tweets in particular suggests this could be a further source of variation in engagement performance between the male and female journalists.

However based on the coefficient of 4.5, estimating the impact of the same proportion of female tweets being opinionated as male gives an increase total retweets and likes of just 0.5 per cent.

Variation across journalists at aggregate level (Appendix ii (e) for results)

It was noted in the demographics analysis that male journalists would appear to tweet more frequently than female journalists.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Potential gender bias in retweet activity (continued)

Variation in individual tweets (continued)

Variation across journalists at aggregate level (continued)

The analysis above also indicates male journalists are more likely to receive retweets than female. It seems likely therefore that the volume of retweeted tweets would be greater for male journalists than female.

Regression analysis comparing the number of unique tweets by each journalist retweeted once by an influencer, against gender and total updates produced the following results: R-squared of 0.2986, P-values < 0.05 and positive coefficients for both male gender and updates.

The R-squared value implies these two factors explain nearly a third of the variation in the number of tweets by each journalist to appear in the analysis.

The earlier demographics analysis above indicates updates are generally greater for male journalists as a group. Both of these factors – male gender and updates volume – are therefore positive for that group.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Implications - Glass ceiling effect

Summary: Female representation falls as ranking increases producing an apparent glass ceiling effect as observed in the PoliticsUKTD GE2017 Analysis.

Ranking measures used

The 829 journalists were ranked by the following measures:

- Number of unique influencers who retweeted at least one tweet by an account (Unique Influencer Count)
- Number of tweets retweeted by at least one influencer (Total Period Tweets)
- Aggregate Retweets and Likes by any Twitter users for Total Period Tweets (Total RTs + Likes)
- Total retweets by influencers for Total Period Tweets (Total Influencer RTs)

The objective of these measures is to capture both the quality and quantity of the reaction each account achieved in the period, as well as the extent to which they were actively contributing to the Twitter conversation.

An account that ranked well against all four measures is therefore one that was active in the conversation during the period and achieved significant engagement from both a large group of influential accounts and the wider Twitter community.

Accounts ranking in Top 100 for at least one measure

153 accounts were ranked in the Top 100 for at least one of these measures.

Gender	Number	%	Average Unique Influencer Count	Average Total Period Tweets	Average Total RTs + Likes	Average Total Influencer RTs
Female	28	18.3 %	351	197	64,368	642
Male	125	81.7 %	431	253	104,232	949

Less than one in five of these 153 accounts related to a female journalist. Given that 38 per cent of the journalists analysed were female this represents an under representation factor of approximately 2:1.

The male journalists also average higher values against all four metrics. This indicates the concentration of male journalists nearer the top of the top 100 for each ranking.

Accounts ranking in Top 100 for all four measures

53 accounts were ranked in the Top 100 of **all four** measures. In this case the female proportion falls to 13%, an under representation of 3:1. Again male journalists continue to outperform against all four measures on average.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Implications - Glass ceiling effect (continued)

Accounts ranking in Top 100 for all four measures (continued)

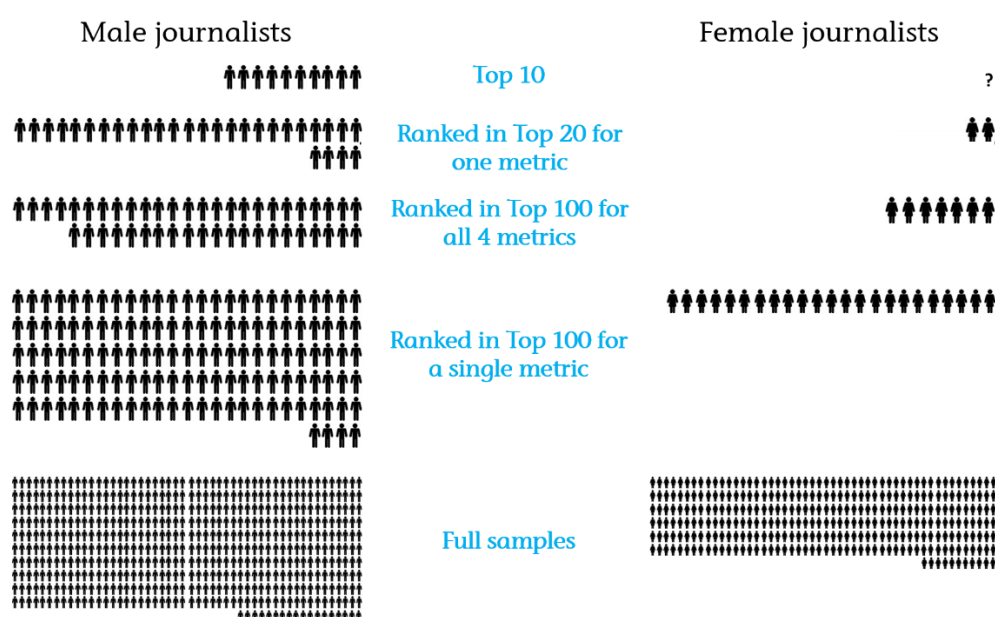
Gender	Number	%	Average Unique Influencer Count	Average Total Period Tweets	Average Total RTs + Likes	Average Total Influencer RTs
Female	7	13%	549	314	110,561	1,236
Male	46	87%	685	374	177,129	1,634

Accounts ranking in top 100 for all four measures and in top 20 for at least one

Finally of these 53 accounts, 31 appeared in the Top 20 of at least one of the four measures. Here the female proportion falls to 6 per cent, two of the 31, an under representation of 6:1.

Gender	Number	%	Average Unique Influencer Count	Average Total Period Tweets	Average Total RTs + Likes	Average Total Influencer RTs
Female	2	6%	662	406	165,771	1,602
Male	29	94%	774	432	229,942	1,942

This gradual reduction of female representation as the rankings get higher is evidence of the presence of a Twitter glass ceiling effect within this community. Illustrated below.



As indicated by the image above, extrapolating the observations would suggest that the top 10 would be approximately 95 per cent male and 5 per cent female. Clearly it's not possible to have half

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Implications - Glass ceiling effect (continued)

Accounts ranking in top 100 for all four measures and in top 20 for at least one (continued)

a person. Effectively this implies an approximate 50:50 chance of having one member of the top 10 be female.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Implications - Comparison to PoliticsUKTD GE2017 Analysis

Summary: The top ranked journalists in the PoliticsUKTD GE 2017 Analysis all appeared in the top 14 accounts in this analysis.

Only one female journalist, @BBCLauraK appeared in the top 14 accounts in this analysis.

Her ranking against the total retweets and likes measures of 36th was lower than all the male journalists who appeared in the GE2017 top 10.

These findings support the validity of the all-male top 10 in the GE2017 analysis.

Membership of PoliticsUKTD top 10

The all-male Top 10 in the PoliticsUKTD GE2017 Analysis generated a lot of discussion. This analysis provides further evidence of the validity of its conclusions.

There are two major differences between the rankings in this analysis and the PoliticsUKTD General Election analysis rankings.

1. No topic filter - this analysis is based on everything an account tweeted during the period, whether it was relevant to the General Election or not.
2. No influence rating for individual tweets – the PoliticsUKTD account rates tweets based on additional factors such as velocity of reaction which may indicate an increased likelihood of influence e.g. being the first to break a story or spark a thread of conversation.

Username	Gender	Count	RTs	Likes	Total RTs+Likes	Influencer RTs	Unique Influencers	Count	Total RTs+Likes	Influencer RTs	Distinct Influencers	Average rank
OwenJones84	M	583	581205	1023063	1604268	3930	1371	6	1	1	1	2
faisalislam	M	857	110594	123511	234105	3336	1118	1	10	3	4	5
IanDunt	M	634	133595	216487	350082	3392	951	3	6	2	7	5
JimWaterson	M	515	79814	112601	192415	3211	1279	10	19	4	2	9
Kevin_Maguire	M	466	167973	216462	384435	2089	785	16	4	10	14	11
DavidAllengreen	M	521	86295	115471	201766	2505	723	9	17	5	17	12
bbclaurak	F	491	50814	71921	122735	1948	942	12	36	12	8	17
paulwaugh	M	609	48106	50649	98755	2146	900	4	46	9	10	17
DPJHodges	M	604	61323	112142	173465	2251	586	5	23	8	34	18
paulmasonnews	M	328	242628	280148	522776	1947	635	32	2	13	24	18
JamieRoss7	M	351	72336	140790	213126	1715	774	26	13	18	15	18
PickardJE	M	476	35853	44782	80635	1985	907	14	51	11	9	21
PolHomeEditor	M	455	53558	84568	138126	1695	661	17	29	19	21	22
MichaelLCrick	M	261	84429	76724	161153	2407	1153	57	25	6	3	23
theJeremyVine	M	273	98046	175300	273346	1384	956	51	8	29	6	24
JeremyCliffe	M	264	80817	108287	189104	2268	773	56	20	7	16	25
MrHarryCole	M	512	45311	50373	95684	1928	619	11	47	14	27	25
AdamBienkov	M	312	59656	62236	121892	1662	787	37	37	20	13	27
JohnRentoul	M	767	29166	32604	61770	1892	702	2	71	16	19	27
Peston	M	208	77082	109178	186260	1764	1058	77	21	17	5	30
SamCoatesTimes	M	395	27767	22854	50621	1908	848	19	85	15	11	33
AaronBastani	M	553	158835	196074	354909	1167	331	7	5	38	80	33
ShippersUnbound	M	337	29081	36001	65082	1446	680	29	67	26	20	36
IainDale	M	391	35000	60538	95538	1195	515	20	48	36	44	37
JuliaHB1	F	321	66273	142534	208807	1255	381	35	14	34	66	37

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Implications - Comparison to PoliticsUKTD GE2017 Analysis (continued)

Membership of PoliticsUKTD top 10 (continued)

Despite the less specific nature of this wider gender analysis we still find the top 10 journalists from the PoliticsUKTD analysis (shown in green above) all appear in the top 14 accounts based on the average rank across the four measures.

One female journalist, Laura Kuenssberg (bbclaurak), makes the top 10 in one of the measures. The only other female journalist to make this shortlist is Julia Hartley Brewer (@JuliaHB1) courtesy of her Top 20 placing in Total RTs and Likes.

Laura Kuenssberg was placed outside the top ten in the PoliticsUKTD General Election analysis mainly due to a greater emphasis being placed on reaction across Twitter as a whole – Total RTs and Likes – rather than reaction from influencers alone. By this measure her account ranks as 36th in this analysis. Looking at this measure we find that **all the members of the PoliticsUKTD Top 10 rank higher against this criterion.**

The same rationale explains the absence of Paul Waugh (46th in Total RTs and Likes) and Jim Pickard (51st) from the top 10.

The other account in the top 14 that didn't appear in the PoliticsUKTD analysis top 10 is David Allen Green. In his case the reason is topic related, with a significant proportion of his tweets not being specifically General Election related in the period.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Conclusion

Key findings

Male UK politics journalists received *4.3x more retweets from influencers* than female journalists. They received *4.9x more retweets and likes combined across Twitter as a whole*.

Implying male UK politics journalists voices were 4-5 times more likely to be heard than female.

When ranking the influence of UK politics journalists on Twitter, the research suggests a glass ceiling effect is observed in relation to female journalists. This is through a combination of:

- demographics of UK Political journalism (and demographics of UK Politics in general);
- influencer following behaviour with influencers in general, and male influencers in particular, following male journalists in preference to female;
- influencer retweeting behaviour with influencers in general, and male influencers in particular, retweeting male journalists in preference to female;
- male journalists generally tweeting more frequently; and

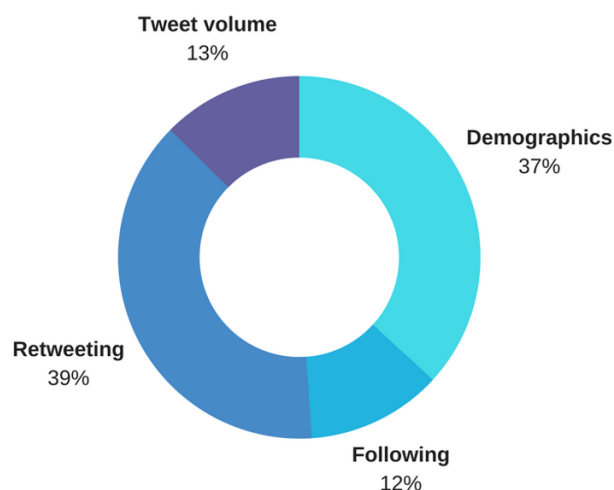
to a significantly lesser extent

- male journalists tweeting more opinions.

The relative importance of each of the four primary factors are summarised below:

Factor	Male to Female multiple	% of imbalance
Demographics	1.67	36.8 per cent
Following preference	1.22	12.1 per cent
Retweeting preference	1.70	38.5 per cent
Tweet volume	1.23	12.6 per cent

Relative importance of gender gap factors



COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Conclusion (continued)

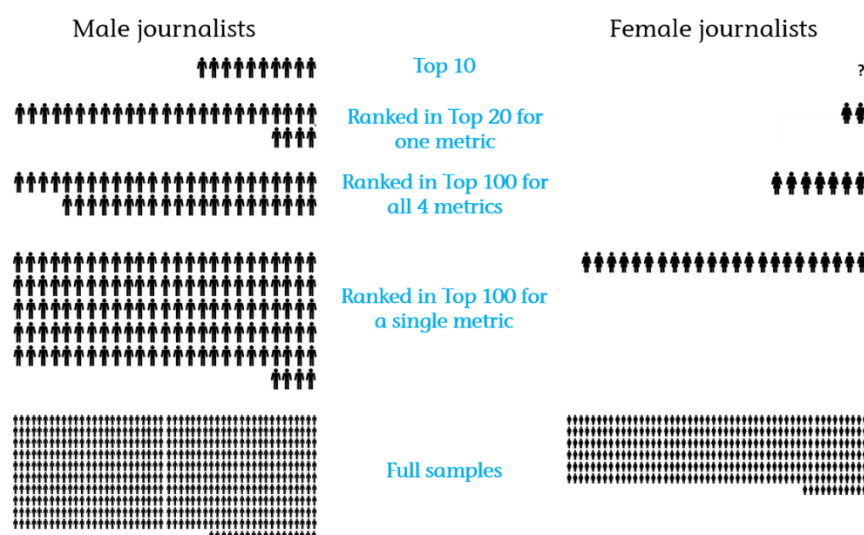
Key findings (continued)

The demographics of the UK political journalist community (36.8 per cent) and retweeting behaviour (38.5 per cent) are the two most significant factors identified that lead to female journalists' voices being less prominent in Twitter conversation.

Each of these factors is three times more important than either following preference (12.1 per cent) or the extent to which male journalists tweet more (12.6 per cent).

Implications

The all-male top ten in the PoliticsUKTD GE2017 analysis reflected the observed glass ceiling effect.



Twitter conversation in relation to UK Politics is therefore potentially biased in favour of the opinions and reporting of male journalists.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Potential action and areas for further investigation

Potential action to address the issue

*Summary: The analysis suggests **a more mindful approach** towards following and retweeting female journalists by influencers is likely to have the biggest impact on the imbalance.*

Based on the analysis an effort by more influencers to retweet female journalists more often compared to male journalists could have a material impact. As over 70 per cent of retweet activity was by less than 13 per cent of the influencers, an adjustment in the behaviour of a relatively small group of people would be capable of potentially making a significant impact on the relative importance of male and female journalist voices.

In relation to this it was interesting to note the heavily male biased retweet ratio of some of those who were most (negatively) vocal in their response to the all-male top 10. These individuals who are passionate about the need to improve gender representation could help to address the issue by adopting this more mindful approach towards women (and other under-represented minorities) when retweeting political journalists.

Illustration

Of the 1,273 influencers who retweeted the journalists 30 or more times, 1,076 had an adjusted male retweet percentage of 50 per cent or more. Adjusted being after applying the demographic, follower and tweet volume adjustment factor.

This represents one in ten of the influencers included in the analysis.

The table below illustrates how an average shift of *17 per cent* in the retweet ratio for this group would result in a 50:50 ratio after adjusting for demographics, follower preference and tweet volumes.

Scenario	Male to Female Retweet ratio	Male retweets as a multiple of Female	Male to Female Retweet ratio (after adjustment factor)	Male retweets as a multiple of Female (after adjustment factor)
Existing position per analysis	81:19	4.3x	63:37	1.7x
Revised position after behaviour change	71:29	2.4x	50:50	1.0x

All other things remaining equal, this would represent an improvement of 44 per cent in the relative amplification of the female journalists.

Areas for further investigation

More detailed work on tweet content to explain more of the variance in engagement could shed more light on other potential causes of gender differences. Areas could include: political affiliation, associated media outlet, topics covered and timing of tweet.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Potential action and areas for further investigation (continued)

Areas for further investigation (continued)

It's important to note that the analysis didn't look at the replies to tweets, focussing on the extent to which a journalist's tweets were amplified. A recent study by Amnesty International looked at the extent to which politicians are harassed or abused on Twitter. It found that women politicians received a much greater level of such response. This apparent bias in online abuse may be a contributing factor to the lower level of opinionated tweets by the female journalists in the analysis. This would also be worthy of further study.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Appendix 1 – Regression analysis results

i. Variation in influencer male to female retweet ratio

SUMMARY

<i>Regression Statistics</i>	
Multiple R	0.240003889
R Square	0.057601867
Adjusted R Square	0.057069438
Standard Error	0.119860154
Observations	1772

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1.55426501	1.55426501	108.1870822	1.23371E-24
Residual	1770	25.428628	0.014366456		
Total	1771	26.98289301			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.756769132	0.005558382	136.1491878	0	0.74586745	0.767670814
M/F	0.067317832	0.006472058	10.40130195	1.23371E-24	0.054624151	0.080011513

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

ii. Variation in individual tweets

a. Gender single regressor

SUMMARY

<i>Regression Statistics</i>	
Multiple R	0.035658
R Square	0.001271
Adjusted R Square	0.001255
Standard Error	32.87544
Observations	62192

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	85569.55	85569.55	79.17283	5.84E-19
Residual	62190	67214598	1080.794		
Total	62191	67300168			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	16.84575	0.281936	59.75035	0	16.29316	17.39835
M/F	2.837981	0.318949	8.897912	5.84E-19	2.21284	3.463122

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

b. Followers and Status updates added to model

SUMMARY

<i>Regression Statistics</i>	
Multiple R	0.253221
R Square	0.064121
Adjusted R Square	0.064076
Standard Error	31.824725
Observations	62192

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	4315345.536	1438448.512	1420.250674	0
Residual	62188	62984822.12	1012.813117		
Total	62191	67300167.65			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	11.9076681	0.3000198	39.6896069	-	11.3196287	12.4957076
M/F	2.2500999	0.3103510	7.2501781	0.0000000	1.6418113	2.8583884
Followers	0.0000572	9.15949E-07	62.43345329	0	0.0000554	0.0000590
Updates	0.0000311	3.44491E-06	9.01523491	2.01862E-19	0.0000243	0.0000378

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

c. Influencer retweets

SUMMARY

<i>Regression Statistics</i>	
Multiple R	0.728055928
R Square	0.530065434
Adjusted R Square	0.530057878
Standard Error	22.55103556
Observations	62192

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	35673492.61	35673493	70147.57	0
Residual	62190	31626675.04	508.5492		
Total	62191	67300167.65			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	8.126057213	0.099410174	81.74271	0	7.931213065	8.32090136
Inf RT	3.515499572	0.013273355	264.8539	0	3.489483768	3.541515376

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

d. Opinionated and video content

SUMMARY
OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.231289239
R Square	0.053494712
Adjusted R Square	0.051641545
Standard Error	12.3432762
Observations	2048

<i>ANOVA</i>					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	4	17592.07509	4398.018771	28.86663658	2.26524E-23
Residual	2043	311264.2627	152.3564673		
Total	2047	328856.3377			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	6.545424528	0.502247637	13.03226545	2.3681E-37	5.560453738	7.530395317
Opinion	4.502587189	0.552654974	8.147193819	6.41473E-16	3.418761271	5.586413107
Video/Gif	12.47952914	1.908280845	6.539671124	7.76756E-11	8.737150375	16.2219079
Image	1.861822465	0.685817296	2.714749941	0.00668837	0.516848484	3.206796446
M/F	1.01183053	0.54785926	1.846880402	0.06490899	-0.06259038	2.08625145

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

e. Variation across journalists at aggregate level

SUMMARY
OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.546496943
R Square	0.298658909
Adjusted R Square	0.296907745
Standard Error	98.89278002
Observations	804

<i>ANOVA</i>					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	2	3335860.466	1667930.233	170.5488163	1.97096E-62
Residual	801	7833605.335	9779.781941		
Total	803	11169465.8			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	3.782786195	6.311085164	0.599387601	0.549083937	8.605432101	16.17100449
M/F	42.89933256	7.255248096	5.912869138	4.97486E-09	28.65778853	57.14087658
Updates	0.002273534	0.000134063	16.9586471	2.38385E-55	0.002010376	0.002536691

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Appendix 2 – PoliticsUKTD GE2017 Analysis blog post

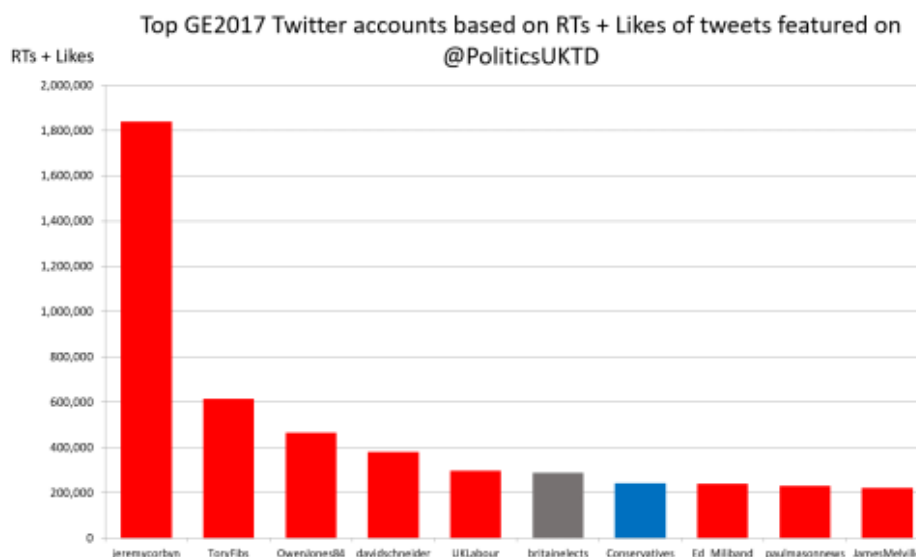
[Top UK General Election Twitter Influencers according to @PoliticsUKTD](#)

Highlights

*Top Influencers based on **total retweets and likes of influential tweets***

The top 5 in this category is dominated by Labour.

1. [@JeremyCorbyn](#)
2. [@ToryFibs](#)
3. [@OwenJones84](#)
4. [@davidschneider](#)
5. [@uklabour](#)



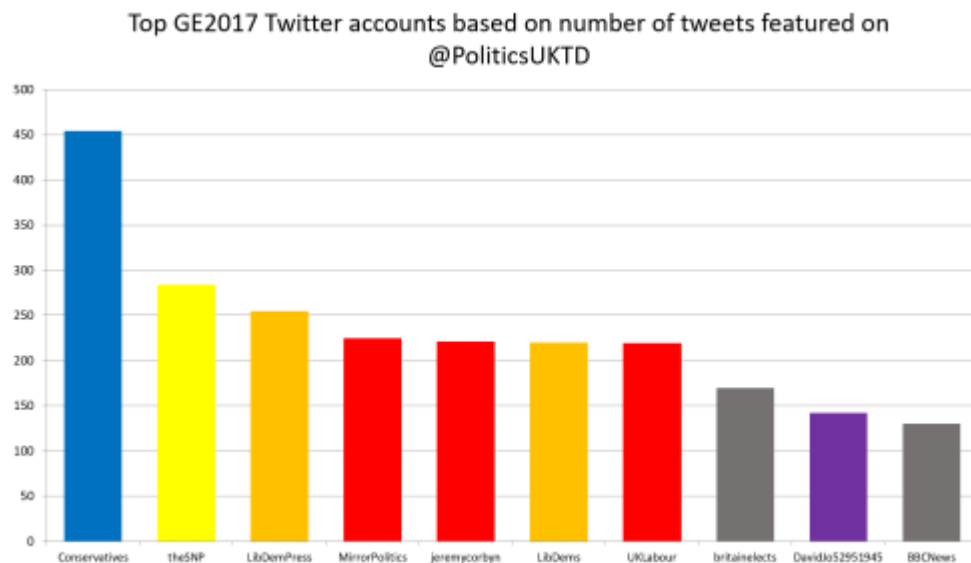
*Top Influencers based on **volume of influential tweets***

The top accounts in this category were from a broader political spectrum, in part reflecting the breadth of the sample of influencers tracked.

1. [@Conservatives](#)
2. [@TheSNP](#)
3. [@LibDemPress](#)
4. [@MirrorPolitics](#)
5. [@JeremyCorbyn](#)

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Appendix 2 – PoliticsUKTD GE2017 Analysis blog post (continued)



Top Overall Accounts

66 accounts appeared in the top 100 of both of these measures.

These were therefore likely to have been the most significant voices as the analysis suggests they were both frequently heard above the noise, either generally or within their relevant community, and achieved a high level of engagement when they were.

Top 5

1. [@JeremyCorbyn](#)
2. [@Conservatives](#)
3. [@uklabour](#)
4. [@ToryFibs](#)
5. [@BritainElects](#)

Top Influencers based on the engagement rate of their influential tweets

This score was based on: $(\text{Retweets} + \text{Likes}) \div \text{Followers}$.

1. [@VoteJezzaCorbyn](#) bio - Vote Labour. Vote Corbyn. This is our last chance to save the UK. Follow for original #GE2017 tweets!
2. [@PoliticaPolls](#) bio - Political twitter page discussing and polling twitter without bias for all things politics. #GE2017
3. [@exiteu3](#) bio - Brexit must mean Brexit. No soft #Brexit. Pro Europe-anti EU. Make Britain GREAT again. Keep the Kingdom United. RTs are not an endorsement. Lists=Blocked.
4. [@NHS_Roadshow](#) bio - "Official Twitter Account for #OurNHS General Election Roadshow. From the team who organised the #OurNHS demo. #VoteNHS ❤️ RTs does not mean endorsement"
5. [@BrianElects](#) bio - Poll aggregator

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Appendix 2 – PoliticsUKTD GE2017 Analysis blog post

Accounts featuring in all 3 lists

Only **two accounts** appear in the Top 100 for all three criteria. These accounts achieved an impressive performance of featuring on PoliticsUKTD over 30 times during the campaign, achieving over 100,000 retweets and likes across these influential tweets despite having relatively low follower counts (compared to many of the other influencers) of circa 20,000 and 15,000 respectively.

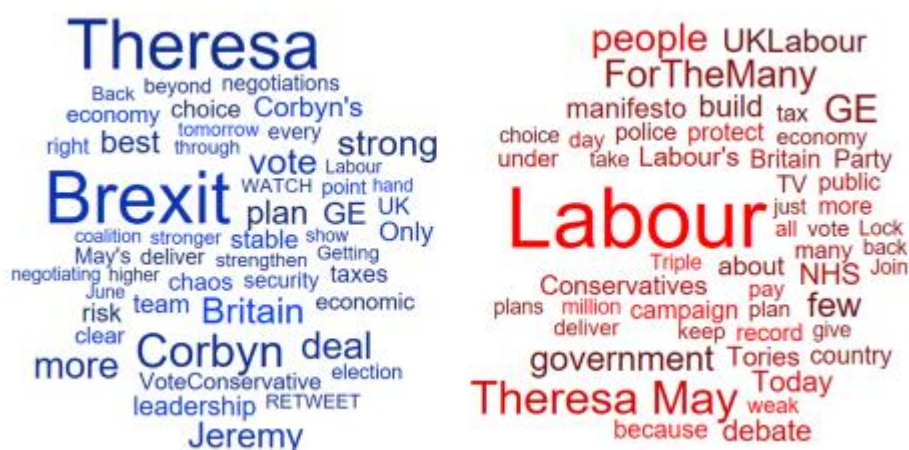
[@LiamYoung](#) bio - Political commentary at @Independent, @VICE, @NewStatesman, @theipaper and others. Also studying at the London School of Economics.

[@EL4JC](#) bio - Their videos are ♥️ " - Owen Jones. "Heroes of the Election" - Red Labour. "Factionalists" - Ealing Labour."

@EL4JC was only created in August 2016 and focuses on sharing video content.

Content comparison - @Conservatives v @JeremyCorbyn

The word clouds below compare the top 50 terms (excluding frequently used terms) featured in the high ranked tweets by the @Conservatives (blue) with those used in the @jeremycorbyn (red) tweets.



The most striking difference is "Brexit". This is the #1 term in the @Conservatives tweets and doesn't even feature in the top 50 of the Jeremy Corbyn tweets.

In fact the term appeared in less than **2 per cent** of his tweets during the campaign.

In contrast *Brexit* appeared in **44 per cent** of @Conservatives account tweets.

General election related tweet with the highest number of retweets and likes

The top ranked tweet based on retweets and likes featured on PoliticsUKTD during the election was this one highlighting the reaction on Facebook to the Prime Minister Theresa May's Facebook live interview with Robert Peston.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Appendix 2 – PoliticsUKTD GE2017 Analysis blog post (continued)

Its viral nature demonstrated by the 135,000 retweets and likes it received, dwarfing creator Ben Skipper's 2,000 followers.



Data and analysis

PoliticsUKTD's results were based on the tweets of thousands of the top influencers in relation to UK Politics from right across the political spectrum. During the campaign period (18th April 2017 - 7th June 2017 inclusive) these influencers tweeted over 3 million times, including retweeting and replying to over 200,000 other accounts.

The Tweetsdistilled application tracked every tweet in real time, seeking out the ones that looked to have the most potential for influence. This assessment is based on a number of factors including who is reacting and the scope and velocity of that reaction.

This means to rank highly a tweet needs to be getting the attention of a lot of influential people, the wider Twitter community or preferably both.

Out of these 3 million tweets over 27,000 (around 500-600 per day) were rated of high significance. Based on an analysis of key terms used over 14,000 tweets from 2,756 different Twitter accounts were assessed as directly or indirectly related to the campaign. Between them these tweets were retweeted or liked over 21.2 million times.

NB: Unsurprisingly, a significant number of high rated tweets in the campaign period were related to the tragic events in Manchester and London. Tweets that referenced parties and/or their leaders in relation to the attacks were included within the 14,000+ tweets used to produce the lists.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

Appendix 2 – PoliticsUKTD GE2017 Analysis blog post (continued)

We summarised the 14,000+ high rated tweets into three Top 100 lists. To qualify for consideration an account needed to have a minimum of four tweets rated as high significance with an aggregate retweet and like count of greater than 1,000.

Full details of the lists are in this [Google Sheet](#) which is also embedded below

- Top 100 Accounts based on the total retweets and likes of their high rated tweets.
- Top 100 Accounts with the most tweets rated as high significance.
- Top 100 Accounts based on the average engagement rate of their high rated tweets. Engagement rate calculated as (Retweets+Likes) / Followers.

Top 66 Accounts

Combined Rank	Username	Name	Profile
1	jeremycorbyn	Jeremy Corbyn	Leader of the Labour Party.
2	Conservatives	Conservatives	Strong and stable leadership in the national interest with Theresa May.
3	UKLabour	The Labour Party	We are the UK Labour Party. Follow us for the latest news, speeches, policies and ways to get involved. #ForTheMany #VoteLabour
4	ToryFibs	Tory Fibs	Grassroots Rebuttal Account that seeks to plug the gaps in rebutting the Tory establishment. Eoin
5	britainelects	Britain Elects	Poll aggregator.
6	OwenJones84	Owen Jones	Author of 'The Establishment' and 'Chavs', Socialist, Guardian columnist. Losing my Northern accent. My views etc... https://t.co/RThqdX7tJ0
7	MirrorPolitics	Mirror Politics	UK politics news and views from the @DailyMirror team - @JBeattieMirror, @Jack_Blanchard_, @benglaze, @danbloom1 and @mikeysmith #GE2017 #Vote2017
8	theSNP	The SNP	Scotland's largest political party and party of Government. Centre left and social democratic.
9	NicolaSturgeon	Nicola Sturgeon	First Minister of Scotland, @theSNP Leader and MSP for Glasgow Southside.

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

10	BBCNews	BBC News (UK)	News, features and analysis. For world news, follow @BBCWorld. Breaking news, follow @BBCBreaking. Latest sport news @BBCSport
11	Kevin_Maguire	Kevin Maguire	@DailyMirror associate editor. @NewStatesman columnist. @sunderlanduni visiting prof. Suburban man
12	LibDems	Liberal Democrats	Change Britain's future with the Liberal Democrats and our leader @timfarron.
13	davidschneider	David Schneider	Actor, writer, director, fool.
14	DavidJo52951945	David Jones	UK government have abandoned Brits. We need to exit EU, ECHR, stop all immigration + look after British people. Like UKIP. All my views. I follow back
15	JamesMelville	James Melville	Proud Father #PR #Sponsorship #SocialMedia Tennis Scotland Rugby Liberal Scottish Contact: james@ninety-five.co.uk
16	SkyNews	Sky News	Stories direct from the @SkyNews newsroom. Tweet us your queries and questions. For breaking news, follow @SkyNewsBreak.
17	LibDemPress	Lib Dem Press Office	The Most Entertaining Thing In British Politics'- https://t.co/rAgoei7hcx Because the next election will clearly be won on twitter.
18	paulmasonnews	Paul Mason	Journalist Film-maker. https://t.co/Hrf4OjoGVt
19	LeaveEUOfficial	LEAVE.EU GB	Ensuring the will of the British people is respected following our historic vote to leave the European Union. In association with @WestmonsterUK. #Brexit
20	faisalislam	Faisal Islam	I'm @SkyNews Political Editor, economic crisis book @theDefaultLine Brexitologist. United ST holder. purveyor of bad jokes.
21	Rachael_Swindon	Rachael	Persistent Blocked by 85 Tory MPs, Paul Nuttall & Mick Hucknall Growing interest in politics Bad driver Mum Cake I blog a bit

COMPARATIVE ANALYSIS OF GENDER ON TWITTER IN RELATION TO UK POLITICS JOURNALISTS

22	IanDunt	Ian Dunt	Editor of https://t.co/wOraaKxK8o . Author of Brexit: What The Hell Happens Now? Host on @RemainiacsCast. Says stuff on TV & radio.
23	BBCBreaking	BBC Breaking News	Breaking news alerts and updates from the BBC. For news, features, analysis follow @BBCWorld (international) or @BBCNews (UK). Latest sport news @BBCSport.
24	DPJHodges	((Dan Hodges)))	Commentator for the Mail on Sunday. 'Worst political pundit in the West' - Glenn Greenwald. El Political Commentator of the Year, 2016.
25	AngelaRayner	Angela Rayner MP	Proud Labour MP for Ashton-under-Lyne, Droylsden and Failsworth. Shadow Secretary of State for Education (E) angela@angelarayner.com
26	jimwaterson	Jim Waterson	Political editor at @buzzfeeduk. Want to talk? Email jim.waterson@buzzfeed.com / @ me / my DMs are open. Follow @BuzzFeedUKPol.
27	JamieRoss7	Jamie Ross	Scotland reporter for @BuzzFeedNews. Send all tips and abuse to jamie.ross@buzzfeed.com .
28	campbellclaret	Alastair Campbell	Writer, communicator, consultant, strategist, Ambassador Time to Change and other mental health charities. Fighting for REMAIN
29	GuidoFawkes	Guido Fawkes	Scuttlebutt purveyor to all. Gathering kompromat. https://t.co/5EyGtTVSVQ
30	MichaelLCrick	Michael Crick	Political Corr, C4 News; PSA Political Journalist of Year, 2014. 3 RTS awards; author - books on Militant, Scargill, Archer, Hezza, Alex Ferguson. MU fan
31	Independent	The Independent	News, comment and features from The Independent.
32	theresa_may	Theresa May	Prime Minister and @Conservatives Leader. Tweets by Theresa signed TM
33	AngusRobertson	Angus Robertson	Angus Robertson is the Depute Leader of the SNP.
34	EL4JC	EL4C	Their videos are ♥□" - Owen Jones. "Heroes of the Election" - Red Labour. "Factionalists" - Ealing Labour."

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35	Nigel_Farage	Nigel Farage	@UKIP MEP. @LBC presenter. @FoxNews contributor.
36	NHSMillion	NHS Million	Looking for a million people who think the NHS is worth protecting. Pls follow to show your support & find out more. Unofficial but run by NHS staff.
37	timfarron	Tim Farron	Official Tweets from the Leader of the @LibDems & MP for Westmorland and Lonsdale
38	johnmcdonnellMP	John McDonnell	Labour MP for Hayes and Harlington and Shadow Chancellor. Join the Labour Party here → https://t.co/vbWxb5FqMM
39	PolhomeEditor	Kevin Schofield	Ex-Herald, Scotsman, Daily Record and Sun. Now editor of https://t.co/DhU0dI4IDE . Husband, dad-of-two and lifelong Celtic fan.
40	JolyonMaugham	Jo Maugham QC	Director @GoodLawProject. Barrister @DevereuxLaw. Blogs https://t.co/KiSlv7FdF1
41	AdamBienkov	Adam Bienkov	UK Political Editor of @BusinessInsider Email: abienkov@businessinsider.com DMs are open.
42	liamyoung	Liam Young	Political commentary at @Independent, @VICE, @NewStatesman, @theipaper and others. Also studying at the London School of Economics.
43	Peston	Robert Peston	ITV (pol ed), Speakers for Schools (founder), writer (How do we fix this mess?), Arsenal (East Stand), Peston on Sunday (Peston) - not always in that order
44	BorisJohnson	Boris Johnson	Secretary of State for Foreign & Commonwealth Affairs. MP for Uxbridge and South Ruislip
45	Channel4News	Channel 4 News	Stories that reveal and inspire, challenging expectations.
46	paulwaugh	Paul Waugh	Executive Editor, Politics, HuffPost UK. News, insight and analysis from the House of Commons
47	WestmonsterUK	Westmonster	Burst the bubble.
48	JamesCleverly	James Cleverly	Conservative Member of Parliament for Braintree.

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49	PeterMurrell	Peter Murrell	Chief Executive of Scottish National Party @theSNP. Passionate about Scotland's future. Married to @NicolaSturgeon. Proud Uncle. Part-time cook and gardener.
50	rosscolquhoun	Ross Colquhoun	Strategist @theSNP HQ, co-founder @wearenational, co-editor of Inspired by Independence (Wordpower) & @eca_edinburgh alumnus. The revolution will be digitised.
51	YvetteCooperMP	Yvette Cooper	Member of Parliament for Normanton, Pontefract, Castleford & Knottingley.
52	MrHarryCole	Harry Cole	Westminster Correspondent @TheSun
53	ThatTimWalker	Tim Walker	A point of view
54	JeremyCliffe	Jeremy Cliffe	Berlin Bureau Chief at The Economist
55	JonAshworth	Jonathan Ashworth	Dad Husband Marathon Runner Labour MP for Leicester South In dreams begin responsibility
56	davidallengreen	David Allen Green	Law and policy commentator at @FT and blogger at @jackofkent. Small 'l' liberal. Account formerly known as @law_and_policy.
57	SamCoatesTimes	Sam Coates Times	Sam Coates, Deputy Political Editor, The Times. DMs open for tips and news
58	labourpress	Labour Press Team	Labour's press team on Twitter
59	MichaelPDeacon	Michael Deacon	Bias 'so called' journalist, Daily Telegraph
60	itvnews	ITV News	Breaking news and the biggest stories from the UK and around the world. Bulletins weekdays at 1:30pm, 6:30pm and 10pm on ITV. Email yourstory@itv.com
61	JeremyCorbyn4PM	Jeremy Corbyn for PM	Team behind #JezWeCan. No one thought we could, but #JezWeDid. Now we're campaigning to win in 2017. Please note, we don't speak for @jeremycorbyn or @UKLabour
62	DVATW	David Vance	A man on a mission in two or three editions. Pro civilisation. Editor of A Tangled Web & Biased BBC. All views my own!

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63	joncstone	Jon Stone	political correspondent at @Independent jon.stone@independent.co.uk
64	FraserNelson	Fraser Nelson	Editor of the @spectator and columnist for the Daily Telegraph. Subscribe to the Spectator (digital and print) from just £1/week https://t.co/MMmL3UUV7H
65	AngrySalmond	Angry Salmond	Sultan of Sexy Socialism. Leader of the Coalition of Chaos. Writer for @ScotNational. Post-truth commentator. Advocate for the Independent Republic of Scotland.
66	RuthDavidsonMSP	Ruth Davidson	Scottish Conservative leader and MSP for Edinburgh Central. Mostly personal musings. For policy, quotes and releases see @ScotTories https://t.co/95zGomklVs

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