COUNTRY-LEVEL REPORT ON DRIVERS OF SELF-RADICALISATION AND DIGITAL SOCIABILITY

United Kingdom

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DARE

Dialogue About **Radicalisation & Equality**

DARE: Dialogue about Radicalisation and Equality

Country level report on drivers of self-radicalisation and digital sociability

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Executive Summary

This report outlines findings of a study of English language speaking Twitter accounts (self-identifying as UK-based) and the networks and narratives associated with them. The focus on Twitter as a platform was determined by the strength of existing literature related to the platform as well as the possibility it affords of efficient and GDPR compliant data access and collection. All accounts in the study sample can be considered 'radical' according to the criteria provided in the introduction and methodology. However, in the UK study, a higher threshold of what constitutes 'radical' online behaviour was adopted than in other country reports in the wider DARE project. This means all accounts categorised as 'Islamist' (IS) were required to demonstrate some level of support for, or sympathy with, Jihadist extremist ideas or key influencers. The right-wing extremist accounts (RWE) were required to demonstrate a similar level of alignment with radical ideas and content.

One of the core findings of this research has been the clear impact that platform migration (away from Twitter) has had on Jihadist users in particular. This is largely a result of changes to Twitter policy and the availability of alternative platforms, which provide more relevant functionality to these types of user. Across both sample sets, the demographic distribution (where characteristics were identifiable) was similar; both the RWE and IS samples had a majority of male users. It proved particularly difficult to surface self-identifying female IS accounts (18% of IS sample).

In terms of user engagement the two samples demonstrated notably different behaviours. The RWE sample was generally more active with regard to direct interactions with other accounts, the IS sample was more isolated and likely to use Twitter as a source of information or content, rather than a network or community. Beyond network interactions the two samples also highlighted a number of core narratives through lexical analysis. Key themes to come out of the IS sample included: victimhood; claims to religious authenticity; and a following around the Jihadist influencer Ahmed Musa Jibril. The RWE sample yielded themes which focused more on identity construction in relation to other individuals. The most prominent themes included: US politics; Brexit and the EU; in-groups with which the users identified; and out-groups that the users opposed.

In summary the results of this report offer a window onto the changing landscape of Twitter in relation to two forms of radical users and content. The impact of Twitter policy changes and user migration to other platforms limited the ability to make firm conclusions about the wider existence of radical online milieus. However, the findings outlined in this report offer interesting insight into a cross-section of the remaining radical accounts and provide clear directions for future research.

1. Introduction

This report focuses on the processes of online self-radicalisation in the UK by studying media participation on Twitter.

1.1 The role of the Internet in self-radicalisation in the UK

Self-radicalisation is understood as a process of individuals becoming familiar with, and being influenced by, radical ideologies without even socialising to radical groups (Al-Lami, 2009). The role of the Internet, and in particular participation in social media, in such processes is paramount. The decision to focus on Twitter is based on a burgeoning body of academic literature highlighting the volume (Berger and Morgan, 2015) and geographic segmentation (Berger, 2018) of radical Twitter networks. In this report we discuss both right-wing extremist and Islamist extremist accounts and investigate their collective actions and interactions as part of wider online communities. Throughout this report the term 'RWE' is used to refer to the study's right-wing extremist sample while the 'Islamist' sample (defined as having met a threshold of Jihadist sympathy or interest) is referred to by the abbreviation 'IS'.[1]

Extremist accounts on mainstream social media platforms such as Facebook and Twitter generally have a short shelf life, with takedowns being widespread (prompting backup and secondary accounts). This has made it more difficult for communities or milieus of extremism to manifest, socialise and expand on such platforms. In the general introduction to this series of country reports, we explain this phenomenon as a result of differences in online moderation for each ideology, with jihadist ideologies being heavily moderated and RWE ideologies barely moderated (up until recent top-down governmental campaigns in certain European countries), leading to a crackdown on RWE (Conway, 2019).

ISIS has encouraged its followers on Twitter and other social media sites to connect with ISIS coordinators and recruiters on Telegram to discuss sensitive matters such as travel to ISIS-held territory. ISIS also created public channels on Telegram to broadcast pro-ISIS news updates and disseminate other propaganda materials through its Amaq News Agency news outlet. In January 2015, an ISIS affiliated channel disseminated a guide of the 'safest' platforms to use (see Plate 1).

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[1] An important distinction is made between 'salafist' or conservative and 'jihadist' in the context of our sample. This is discussed in later sections of the report.

Plate 1: Platform Migration Guidance (IS audiences)

As can be seen in the guide, Twitter or Facebook are noticeably absent - indicative of jihadist audiences' apprehension towards using public platforms. More recently, sites like Telegram announced that they are 'clamping down' on jihadist-affiliated accounts and pledging to remove ISIS accounts from public channels. However, owing to Telegram's encrypted nature, private jihadist groups are still widespread in many different languages on the platform.

1.2 Methodological choices

A pilot study, conducted between September and December 2018, sought to identify and select a sample for the UK of 100 Twitter accounts and 25 Facebook pages for each strand of radicalisation studied, i.e. right-wing extremist (RWE) and jihadist/Islamist extremist (IS). The reason for aiming beyond the minimum sample size requirement was the anticipated impact of account suspensions and platform migration. The actual number of accounts identified is shown in Table 1 below (under 'pilot study'). The 'final sample' is the number of accounts which were not taken down in the time between identification and scraping of content.

At the first stage, our process relied on the automated searching of keywords using tools such as Buzzsumo to identify accounts which featured these keywords in their bio. Examples of these included racial slurs (for the RWE example), violent extremist group names, slogans and pieces of propaganda (such as violent videos and nasheeds), and other ideological identifiers (such as '1488' for the RWE sample). Once a core of active accounts was identified, manual review was carried out to code the self-reported user location; where this was the UK or not identifiable, the account remained in the sample. The second stage was a manual review on the accounts which did not specify a geolocation, accounts which regularly tweeted about UK issues, or retweeted British personalities and influencers remained in the sample. Finally, these remaining accounts were reviewed by the links they shared; if they shared links to stories about UK events from British outlets such as the Daily Mail, Sun, Guardian or similar papers, they remained in the sample. From this point, a snowball technique was used to trawl accounts associated with the core sample. The final sample therefore consists of English-speaking accounts (though some use multiple languages) which are either confirmed to be in the UK, or express an interest in UK issues (see Table 1).

This method proved particularly fruitful when identifying RWE accounts that were not identifiable through the initial approach; in fact some of the most 'radical' accounts were found through this method, and would have otherwise been missed if we had relied solely on user self-presentation in the bio section. IS ecosystems however, were often structured around a small number of overtly extremist accounts, with related accounts failing to show enough evidence of extremist views. Our experience with finding accounts for both ideologies was very different. For the RWE sample, accounts were identified with relative ease as accounts are not suspended or taken down on Twitter at the same rate as accounts relating to our IS sample.

	GREAT BRITAIN									
	RWE					IS				
	Personal			Forum	Total	Personal			Forum	Total
Gender	F	M	N/A	N/A		F	M	N/A	N/A	
Pilot study	43	78	24	74	219	29	49	18	42	138
Final sample	41	64	24	N/A	129	11	45	18	N/A	74

Table 1: Pilot and final samples for UK study[2]

Table 1 provides a breakdown of the samples for both the pilot study and final sample used for this report. 'Personal' refers to Twitter accounts, while 'Forum' refers to Facebook Pages (not personal profiles). Between the pilot study and final sample the decision was made to remove Facebook Pages from the sample due to the limited demographic information that could be gathered from the Pages and questions surrounding the identification of users. Therefore, as explained in the general introduction, the focus was placed solely on Twitter for this investigation. Following selection of accounts by country-based teams, appropriate data visualisations were run on each country's samples by the Computer Science Research Institute of Toulouse and used for analysis by country teams.

1.3 Structure of the report

This report focuses on the study of primary drivers of self-radicalisation at the individual level in each of the seven countries studied in this strand of the DARE project. This specific report deals with the UK case, and is divided into six sections.

The first section provides an introduction to the study, and explains considerations which impacted the composition of the sample. The second section explores digital participation in self-radicalisation by examining the key characteristics of the sample. This includes a critical interrogation of the sample in terms of whether it actually captures an online phenomenon of radicalisation. The levels and modalities of engagement in digital extremism are presented. The third section furthers the study of self-

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[2] Personal = Twitter profiles, Forum = Facebook Pages, F = female, M = Male, N/A = accounts not identifiable by gender.

radicalisation by classifying how each sample engages online through specific repertoires of action, and then considers internal and external labelling processes, contributing to the production of radical postures and identities. The fourth section analyses what users are saying, what events are influencing what users are saying, and who the influencers are. It considers the topics that, according to the users, justify adherence to radical ideologies, the events that trigger participation, and the people who fuel online communication. The fifth section tackles how conversations are being conducted and who is engaging in these conversations. The last section is a conclusion that summarises results and determines whether the material on Twitter represents a threat to national security prerogatives and whether there are elements found online that could incite, stimulate or engage people to commit violent crimes.

2. Sample characteristics

This section provides a description of the sample used to investigate radicalisation in the UK. There are two important clarifications, which should be made prior to considering the findings within this report. The first relates to gender distribution. In addition to the accounts mentioned in the above table, which could be attributed to a gender, there are also 24 RWE and 18 IS accounts that have been included in the analysis that do not have any gender identifiers; it was impossible to categorise these accounts as anything other than 'unknown gender', listed as N/A in Table 1 (above). The reason these accounts have been kept in the sample is because of their clear influence on the wider UK Twitter networks studied.

Second, the accuracy of user self-presentation should be carefully considered. Many users do self-report their gender, and our research is underpinned by the assumption that they have accurately reported this data. Similarly, our research is underpinned by the assumption that users have accurately self-reported their location. While other countries in the sample could generally rely more heavily on language being tied to location, this is not the case in the UK. As will be highlighted later in this report, there is a high level of discourse around American politics among our RWE sample, and on further investigation we found that several users had changed or input their location setting between data collection and the present day, stating that they are in fact based in the United States. Although this only accounts for a relatively small portion of the sample, it does raise questions about the accuracy of a methodological approach which relies on users to accurately self-report information about themselves when attempting to draw geographically specific conclusions.

However, the sample does still provide deep insight into the ways in which users relevant to the UK within these two wider extremist milieus function on a platform such as Twitter, which has become increasingly restrictive over the course of the past four years.

2.1. Distribution and representativeness of samples

As stated in the introduction, the UK combined sample of both strands of radicalisation consists of 161 Twitter accounts which were identifiable by gender, along with a further 42 which did not self-report gender. This made a total of 203 accounts.

2.1.1 Representativeness of gender

The overall distribution is predominantly male; 56% of the overall sample is male; 25% female; and 19% unspecified. Gender balance for each form of radicalisation is also skewed towards male representation, with men accounting for 51% of the RWE sample and 66% of the IS sample. For the RWE side, our sample included 41 female accounts, 64 male accounts and 24 unknown gender accounts. On the IS side, the sample was made up of 11 female accounts, 40 male accounts and 18 unknown gender accounts. Given

that the methodological approach was to identify accounts based on keywords featured in the bio, and connections to known RWE and IS British accounts, it seemed a more appropriate representation of the milieus to gather as large a sample size as possible and then subsequently assess the gender breakdown. Forcing an even split of accounts based on gender would have led to a distorted representation of the actual landscape on Twitter. Furthermore, the number of IS accounts which could be identified as female was very low, and so offered little opportunity for depth of analysis around gender.
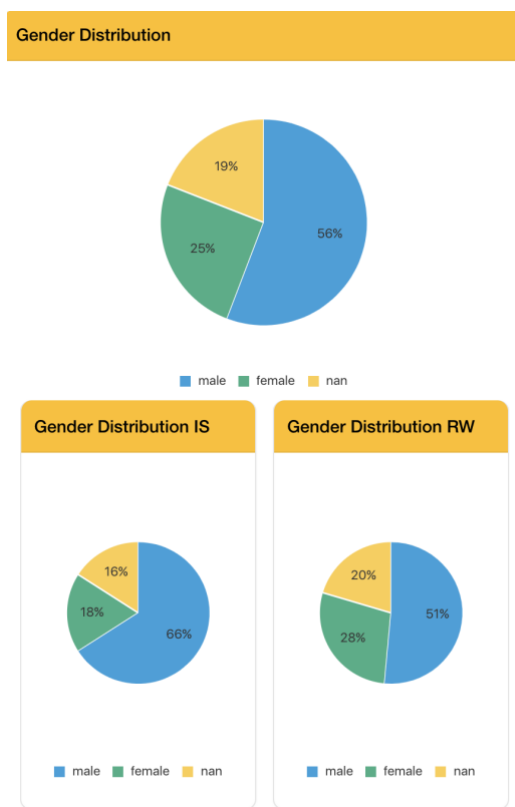
Figure 1: Gender distribution charts

Though we did not set out to identify an even distribution of female and male accounts, we did endeavour to find a minimum of 25 female and 25 male accounts across both ideologies. Additionally, we set out to find a minimum of 10 Facebook Pages for each ideology. Finding Facebook Pages that could be defined as meeting the criteria for inclusion in this study proved difficult, and a decision was made to focus this analysis on the Twitter platform only, as stated earlier. The combination of account suspensions and a distinct lack of female IS accounts on Twitter meant that it was not possible to meet the threshold of 25 female IS accounts, which is reflective of the gender distribution of this Twitter community.

Finding accounts that we could define as IS and matching our initial set of criteria (which will be discussed in later sections of this analysis) was more difficult than for our RWE sample. This is probably due to the rapid rate of suspensions and take-downs for accounts on Twitter meeting the criteria for our IS sample, as discussed above.

2.1.2 Representativeness of extremist ideologies
 The RWE ideology accounts for 70% of our sample, and IS ideology accounts for 30% (see Figure 2).

Ideology Distribution
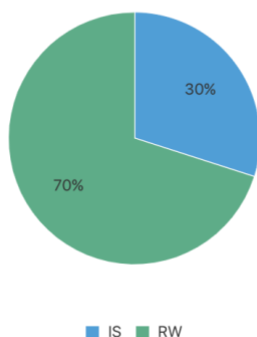
Figure 2: Ideology distribution charts

As noted above, finding IS accounts on Twitter was harder than finding RWE accounts. Our sample of IS accounts was carefully assessed, with a threshold set to ensure that the accounts selected were not purely 'salafist'[3] or conservative, but contained some indication of being aligned to a jihadist outlook or world view[4]. Analysis on each sample was carried out separately rather than as one collective sample.

2.1.3 Language distribution

The language distribution of accounts for the whole sample is presented in Figure 3 and for each of the ideological samples in Figure 4.

Language Distribution
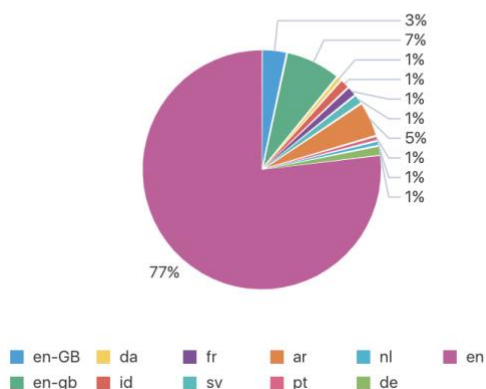
Figure 3: Language distribution chart (whole sample)

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[3] Salafist refers to religiously conservative Muslims who adhere to a purist, more orthodox version of Islam. The term salafist-jihadist is often used to describe members of extremist group, but a clear distinction exists between salafism and jihadism.

[4] This means demonstrating some indication of support for violent jihad or a named extremist group such as ISIS, AL Qaeda etc.

Within the overall sample, 5% chose Arabic as a default language, with the rest (87%) representing accounts self-identified as English-speaking (en-GB, en-gb, and en, all of which refer to the same language). A small percentage (8%) of our sample accounts represent various other global languages, as can be seen in the chart above. Despite this setting, these other global languages do not occur enough in the tweet body text to impact the findings of the lexical analysis.
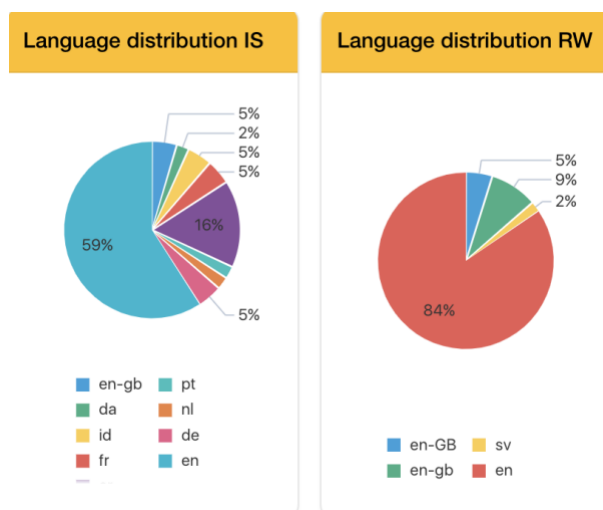
Figure 4: Language distribution charts for IS and RW samples

The language distribution for the IS sample is more diverse than the RWE sample. This may be an indication of our IS sample representing some non-native English speaking communities that are now located in the UK or expressing an interest in the UK.

2.2 Time periods of participation

2.2.1 Longevity of participation

Data have been gathered on the volume of tweets and retweets released by our accounts over the past 10 years up until the point of data extraction (see Figure 5). This study looks at the period of participation between the time of the first tweet on 22nd May 2009, through to 20th February 2019, providing an examination window of just under 10 years. As Twitter was launched in July 2006, this study's temporal focus covers the majority of the period of Twitter's existence. However, the sample was collected recently and so does not account for a changing landscape which has seen high volumes of platform migration among the milieus, particularly on the jihadist side.
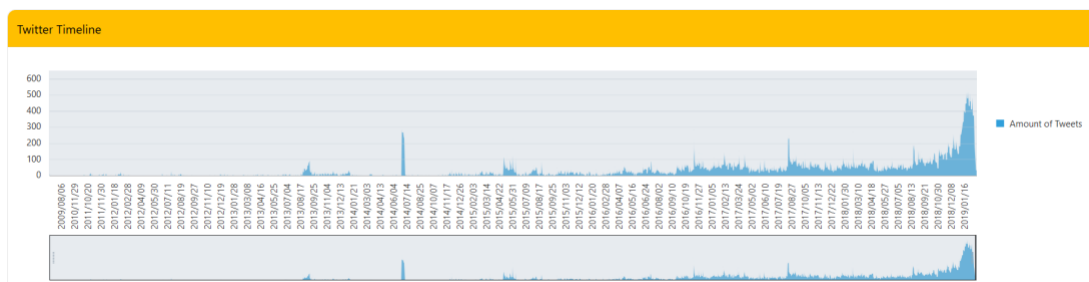
Figure 5: Twitter timeline of activity for the whole sample

The majority of accounts included in this sample were launched after 2016. For this reason, it is not possible to consider the sample as representative of the wider activity levels of the two radical milieus across the past 10 years. A high percentage of tweets were made within the last two years, and even since the data collection in February 2019, over 10% of accounts from the sample have subsequently been suspended (see Figure 6).
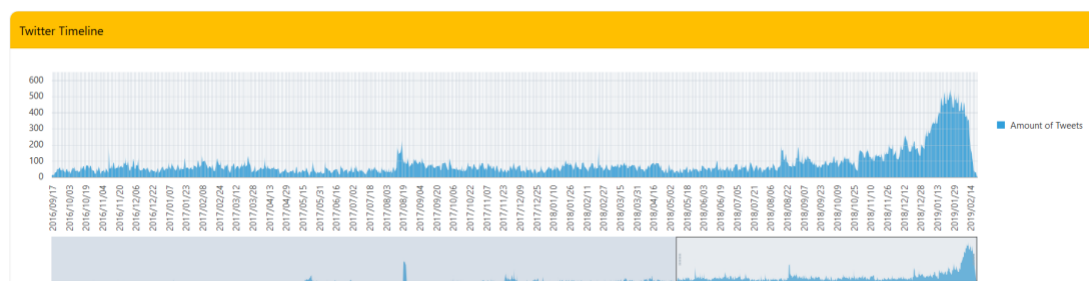
Figure 6: Same timeline as above but zoomed in on a subsection covering the last 2.5 years

2.2.2 Focus on present day phenomenon

Considering both strands of radicalisation separately, we can see that the accounts from the IS side are on average older than those from the RWE side but only by one year. In the text above, we spoke of a first tweet in 2009; this tweet is from the IS sample. The first tweet from the RWE sample occurs on 19th March 2012.

The activity of the RWE sample has been increasing gradually since roughly June 2016. The main findings of this study of RWE Twitter activity are therefore disproportionately weighted toward thematic trends that have emerged over the past few years (see Figure 7).
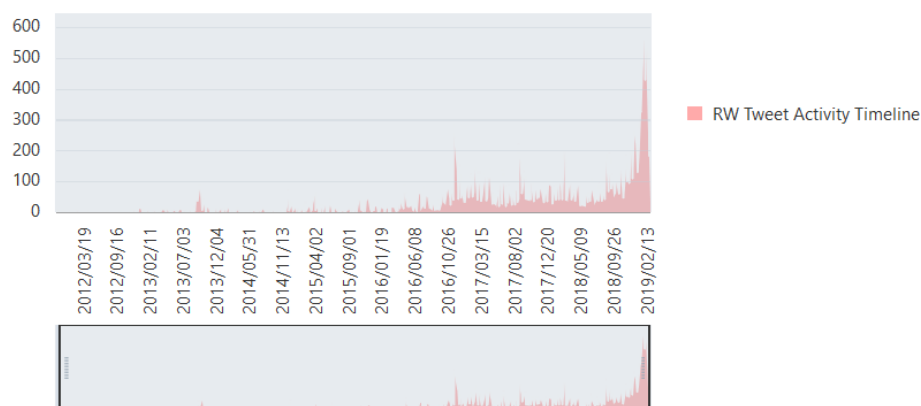
Figure 7: Timeline of RWE Twitter activity from 2012 to 2019

Conversely, when looking at the isolated activity of the IS sample, while there is activity throughout the entire period, there is no clear trend of increasing activity in more recent years - though there are significant spikes around June 2014 and mid-2015 (see Figure 8).
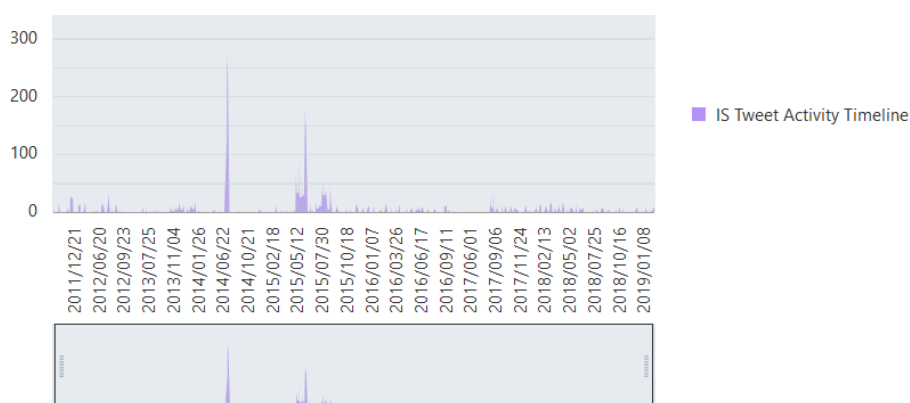
Figure 8: Timeline of IS sample

The spikes in this sample are much sharper, in that they seem to be preceded - and then followed - by sudden bouts of inactivity, possibly due to Twitter's takedown and banning policies. The causes of these spikes and their relation to offline events will be discussed later. In the IS sample we observed more dispersed activity over the years since 2009, meaning that the themes used will likely reflect events and sentiments that have existed over a longer period of time.

2.3 Volume of activity and patterns of participation

To understand the accounts we are using to conduct further analysis, we will consider the volume of activity of each sample and highlight levels of engagement as well as homogeneity of behaviours.

2.3.1 Volume of tweets/retweets and levels of engagement

The accounts studied in this report represent a total of 55,920 tweets and 56,880 retweets across both samples (see Table 2). Tweets can be understood as original messages originating from a user, while retweets correspond to tweets created by another and shared by a user.

Tweet Activity	RT Activity
55.920 Amount of Tweets in DBB	**56.880** Amount of RT in DBB
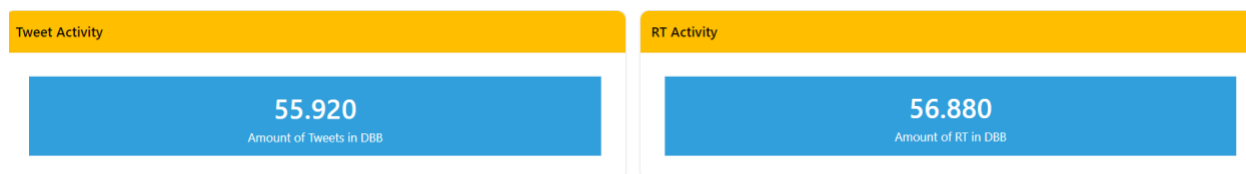
Table 2: Breakdown of tweet and retweet volumes within sample

The IS sample represents 11,736 tweets and 4,693 retweets in our database, while the RWE sample is composed of 44,184 tweets and 52,187 retweets (see Table 3).

IS Amount of Tweets	RW Amount of Tweets
11.736 Amount of Tweets in DBB	**44.184** Amount of Tweets in DBB
RT activity IS	**RT activity RW**
4.693 Amount of RT in DBB	**52.187** Amount of RT in DBB
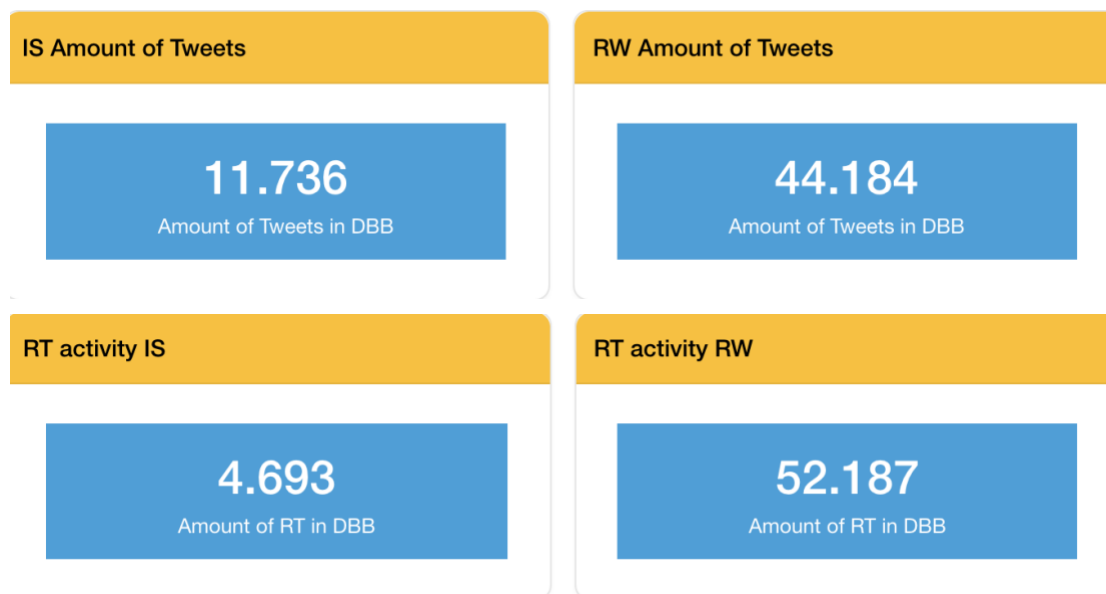
Table 3: Breakdown of tweet and retweet volumes within each IS and RW sample

In later sections of this report we outline how a large proportion of our IS sample are 'fan' accounts dedicated to broadcasting quotes, sermons and videos by a particular radical preacher (Ahmad Musa Jibril) and show that other accounts in our IS sample also republish rather than post original content. Conversely, the RWE sample is more complex in nature, with accounts publishing original content expressing political opinions and engaging in RWE media activism on contemporary topics. Users within the RWE sample appear to have produced much more content (n = 44,184 tweets from 105 accounts) than IS (n = 11,736 tweets from 56 accounts). This is possibly a result of the volume of our samples for each ideology; as previously discussed, IS accounts on Twitter are difficult to find due to takedowns, suspensions and migration to more clandestine platforms.

We also note that the IS sample contains over twice as many tweets (11,736 TW) as retweets (4,693 RT) while the RWE sample contains more retweets than tweets (44,184 TW for 52,187 RT). The higher rate of retweets as opposed to tweets on the RWE side may indicate a more media-engaged and connected Twitter network, while the low rate of retweeting from the IS side suggests a more disengaged and less connected sample. The fact that the level of retweeting among the RWE sample is very high in comparison to that of the IS users suggests an overall higher level of connectivity.

2.3.2 Homogeneous vs scattered patterns of behaviour

If we take a closer look at each form of radicalisation with respect to the proportionality of the number of accounts and user behaviours, we see that the samples differ. The RWE side is composed of users who tend to be active online, or at the very least have produced a large amount of tweets; half (50%) of the RWE accounts produce between 2,098 and 154 tweets with a median value of 1,083. The IS sample, across multiple averages and aggregations, participates less; half (50%) of the accounts tweet between 372 and 10 times with a median value of 75. More importantly, the RWE sample contains a broader range of users outputting at various volumes, in contrast with the IS cohort where there are large discrepancies between the volumes of outputs originating from different accounts. This becomes clear by examining the chart below (see Figure 9). This chart, commonly known as box-and-whisker plot[5] (or boxplot), represents the distribution and dispersion of the full dataset.
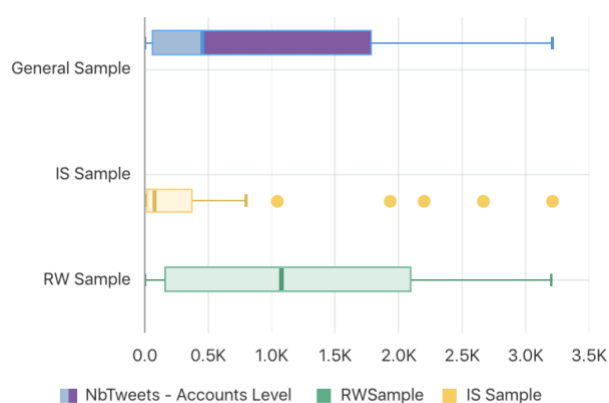
Figure 9: Boxplot of Twitter behavioral patterns

When examining the IS boxplot alongside the RWE boxplot, the RWE sample is condensed, while the IS sample is spread apart. It must be noted that the more the surface of the rectangle is spread out, the more the dispersion of values is important. In the case of IS accounts, it appears that a few accounts publish a great deal, while a fair portion do not publish as much. Also, the more the rectangle is left-skewed, the smaller the activity is and vice versa. In the case at hand, the IS boxplot is clearly left-skewed, while the RWE boxplot is right-skewed.

In short, analysis of the samples via the boxplot shows that the RWE sample contains accounts similar in nature, with a rather homogeneous sample - compared to the IS sample where the accounts are more diverse, heterogeneous and possibly poorly-related to one another. Based on these findings and the analysis outlined above, it appears that the IS sample cannot be considered a single pattern of behaviour, but a wide range of individual practices and digital activities. It appears that contributors within the IS sample do not use Twitter in a similar manner.

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[5] It provides information on how the overall sample is composed with regard to the lowest and highest number of posts for a single account within the whole sample: the median level of posts, how dispersed or homogeneous the material is, and whether accounts respond to a similar pattern or not.

Considering that the DARE study was carried out after large banning campaigns took place on major websites, the absence of a clear-cut jihadist/Islamist extremist phenomenon does not come as a surprise. Yet, these conclusions tend to show that we are studying a sample that does not represent an actual phenomenon in itself but rather brings together a wide range of activities and possibly different formats of participation. Additional analysis in the report should allow us to determine how relevant it is to study Islamist extremist radicalisation from an online perspective, particularly a mainstream social media one, in the current climate, when the target of the study is to examine patterns of behaviour as a whole.

2.4 Modalities of participation and levels of integration

Building on what we have just established regarding patterns of behaviours, we will now explore modalities of participation to see how people are taking part in the online scene. To do this, we continue looking at how people are using Twitter. Are they expressing original content (a tweet), sharing an idea (retweet), publicly approving someone else's contribution (like), or spreading content (share)? Understanding how users contribute will also improve our understanding of the levels of engagement for each form of radicalisation and ultimately provides additional information on whether we are dealing with online milieus or individual patterns of behaviour.

2.4.1 Statistical distribution of tweets/ retweets and levels of integration

When examining the difference in volume between tweets and retweets for both samples, we found that samples contained a total of 55,920 tweets (IS, n=11,736 TW; RW, n=44,184 TW). However, the retweet activity from the RWE sample was 11 times higher than for the IS sample, and the overall volume of tweet activity was four times higher.

The boxplots below (see Figure 10) show the statistical distribution of tweets and retweets for each sample, with, on the left side, a picture of the tweet activity (boxplots on the left chart), and on the right-hand side, a snapshot of the retweet activity (boxplots on the right chart).
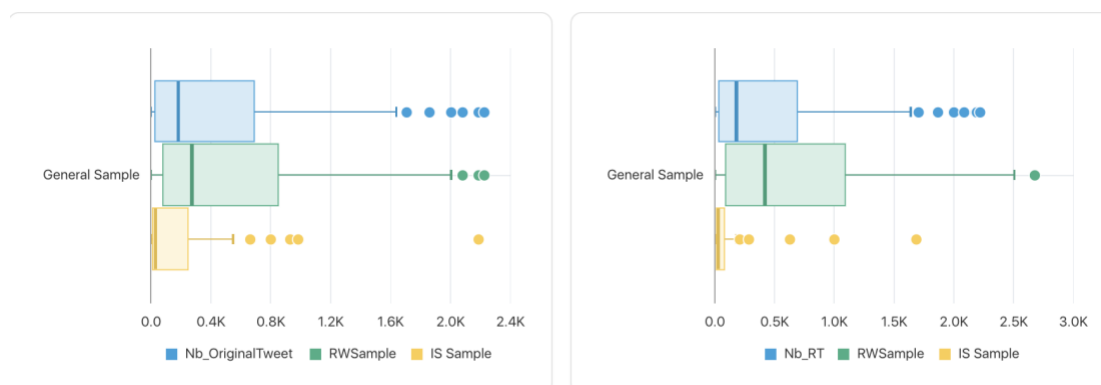
Figure 10: Boxplots of the distribution of tweets and retweets for both samples (top), the RWE sample (middle) and IS sample (bottom).

The fact that the RWE sample favours retweets over original tweets does not tell us much about levels of engagement. However, given that retweeting is an interactive behaviour, it is interesting to see the low number of retweets from the IS sample. This may be indicative of the more interactive behaviours shown throughout this report among the RWE sample. It is however difficult to draw firm conclusions on the reasons behind these different forms of participation without data on a control group for comparison; this is a recommendation for future research into Twitter participation.

2.4.2 'Likes' and levels of integration

The overall volume of likes for samples illustrates another form of media participation. Liking content is a more passive, less public action than retweeting but still shows a manner in which participants can actively contribute to the existence of digital milieus.
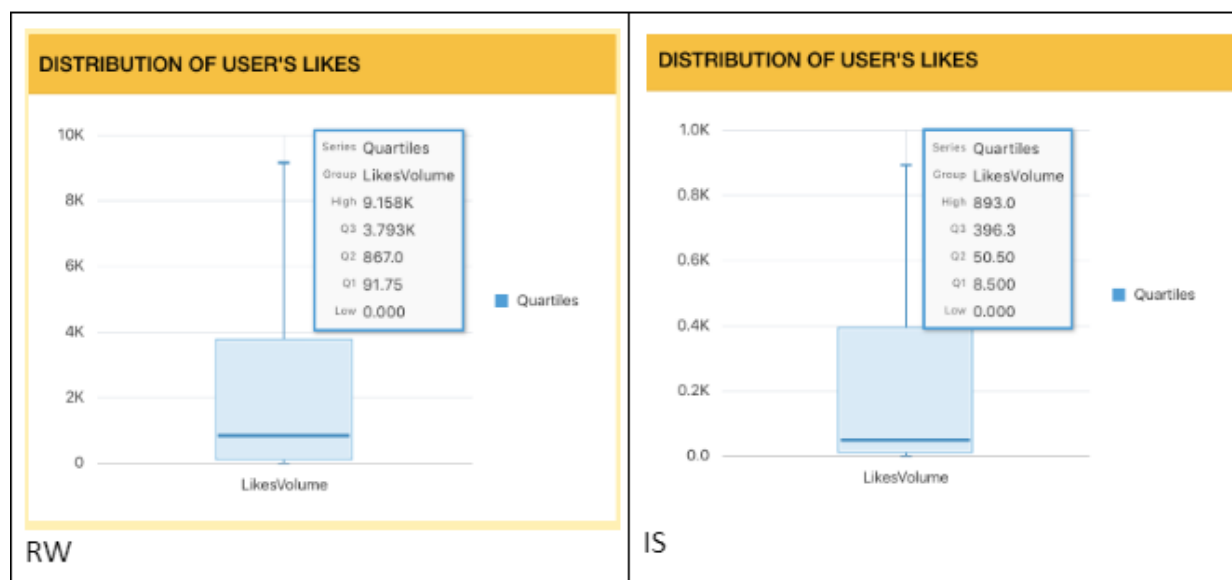
Figure 11: Distribution of user likes

As Figure 11 (above) shows, there is a significant discrepancy in volume of engagement between the two samples. The boxplot on the left shows that, among the RWE sample, 50% of users like between 91.85 and 3,793 tweets, with a median value of 867 tweets liked. The boxplot on the right indicates that 50% of the range of likes of the IS sample fall between just 8.5 and 396.3 tweets liked, with a median value of 50.50 tweets liked. Additionally, the extremes within each sample are also indicative of the discrepancy in the volume of engagement. The most active account within the RWE sample produced 925.5 more likes than the most active account in the IS sample. Our data indicates that the IS sample is more unidirectional in favour of content output and broadcast, whereas the RWE network structures are organically more bidirectional, flowing in both directions at a higher volume by comparison. We accept that this finding may be influenced by sample curation, and therefore points to the need for further research.

2.4.3 Followers/ followings and levels of integration

The last series of indicators we consider are the number of followers and followings for each sample, in order to highlight modalities of participation and evaluate online engagement (see Figures 12 and 13).

For the RWE sample, the median level is around 2,330 followers and 1,729 followings. For the IS sample, median values are considerably lower, with 238 followers and 178 followings.
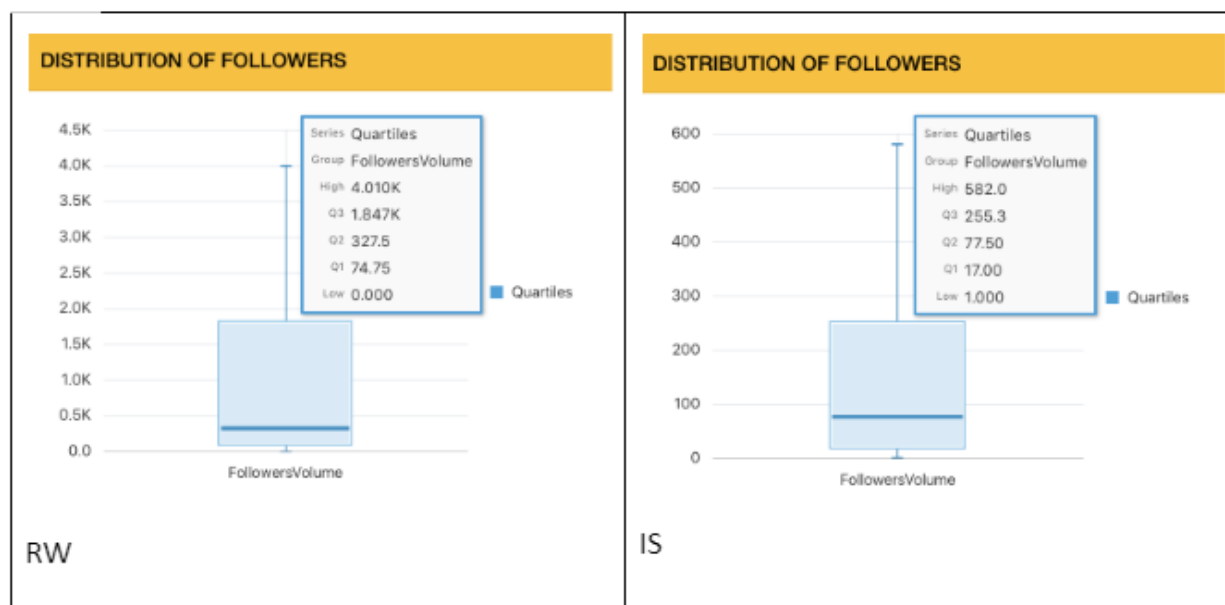
Figure 12: Boxplots of the distribution of followers for both samples: RWE (left side) and IS (right side)
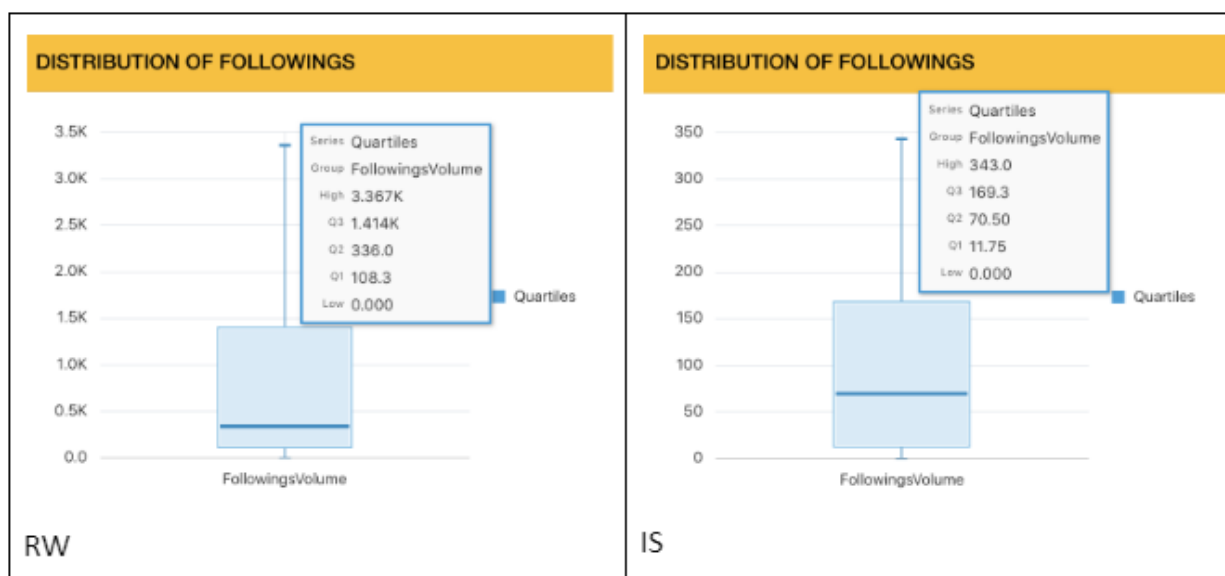
Figure 13: Boxplots of the distribution of followings (users followed by an account) for both samples: RWE (left side) and IS (right side)

Number of followers is a helpful indicator to assess the reach and connectedness of users. It is clear that that the IS sample is not well networked within a wider community online. They may express themselves publicly, but for the most part lack any actual visibility, with low levels of followers. As Boyd points out, publicity is not visibility; publishing online does not mean that anyone is reading or seeing the material a user is sharing. The level of followings and followers for the IS side seems to indicate we are dealing with a sample of active contributors but without a strong echo. In comparison, the RWE sample presents itself as a highly connected group of individuals with a strong level of participation.

2.4.4 Integrated vs disconnected contributors

In light of the findings so far, we can describe the IS sample as users who are disengaged from a larger online community and quite individualistic in their participation activities. These conclusions for the IS sample do not apply to the RWE sample. Strong activity of liking other tweets, following one another, and spreading content demonstrate that RWE users are active and reactive within a wider community online.

3. Staging and framing identities

In Section 3, we study the way in which users within our sample frame their identity as extremists, along with the way in which they are framed by others.

The advent of 2.0 digital technologies, given their participatory nature, where content is user-generated, has redefined the boundaries of the public sphere. In this setting, creating an online profile carries both ideological and political messages. Access to political representation through media arenas, namely websites such as Twitter, facilitates the legitimisation or modification of interpretative frameworks. The rise of participatory media and the use of social media has reconfigured the recourse to legitimacy that certain actors can claim, so much so that new forms of resistance and dissent are taking shape on the web. The Internet has magnified the availability of radical ideas (Dean et al., 2012; Shirazi, 2012; Torok, 2013) and has enabled mobilisation towards extremist ideologies but also facilitated the dissemination of counter-narratives promoting tolerance, support and acceptance (Warschauer, 2003).

Understanding processes of radicalisation on the net thereby involves contemplating whether contributors participate on Twitter through specific repertoires of action, and if so, what the specifics of this type of participation are. It supposes detailing how users stage their identities through general self-presentations to ensure their affiliation to a style recognisable by others as part of an extremist movement. It also entails considering how much those who are stigmatised acknowledge the label they have been given and endorse it for themselves. The analysis presented below offers an insight into the samples' means of self-presentation through exploration of different profile features such as bios, display names, profile pictures and emoticons/emojis.

3.1 Expressing political and religious opinions

We will use this third subsection of the report to question whether radicals use a specific format of participation, and if so, detail the characteristics of the format. By analysing the material retrieved through digital ethnography and paying attention to the content of tweets, interactions between users, as well as the 'about' section of accounts, we can examine the format of participation used by each sample.

3.1.1 RWE sample: forms of user expression

The RWE user sample uses all possible spaces on Twitter to express their views and RWE alignment, even in their names/Twitter handles. While there are some who use their names (or possible aliases), others use the handle to make explicit statements about their identity and political beliefs as evident by the pseudonyms illustrated in Table 4 (below).

#WhiteGenocide makes many appearances in the bios of this sample group, as well as related anti-immigration and anti-multiculturalism hashtags, including: #AntiEU, #ARIACWFAW (Anti-Racism is a Code Word for Anti-White), #DIACWFWG (Diversity is a Code Word for White Genocide), and #SaveEurope. There are also some instances of hashtags used to express more overt subscription to neo-Nazi and white supremacist ideologies, such as #WPWW (White Pride Worldwide).

RWE Twitter users also use their profile pictures to display their beliefs. Some accounts among the sample used the old flag for the British Union of Fascists, founded by Oswald Mosley in 1932, while others used pictures that indicated colonial nostalgia/ideation. Neo-Nazi Celtic/pagan symbolism can also be seen among our RWE sample, including the 'sun cross' (see Table 4). Another significant feature of RWE Twitter user presentation is the willingness for some among our sample to use unobscured photographs of faces as their profile avatars (though these may not be their own). This may indicate that some accounts within our RWE sample perceive their opinions and allegiances to be 'socially acceptable' and more widely held than they actually are, to the extent that they do not fear persecution and are happy to reveal their identity. However, to protect confidentiality as far as possible, in Table 4 we have made small alterations to images and pseudonyms to indicate the kind of imagery and names selected whilst ensuring accounts cannot be identified through standard or reverse image searching.

3.1.2 IS sample: forms of user expression

Account names used in the IS sample are typical of jihadist naming conventions, both in the offline and the online space. Some accounts in our IS sample use a 'nomme de guerre' or 'battle name' which usually indicate a person's nationality, their adoration or affinity for a particular religious concept, the name of their child, or their interests (see Table 5). Examples of account names include: Abu T (most likely meaning 'Father of Tawhid' - the Islamic concept of the 'oneness' of God); PureGreenBird (referencing a Prophetic hadith); in the name of the Ummah; DeenoverDunya (religion above the lifely world). As many accounts in our IS sample are dedicated to sharing content from the extremist cleric Ahmad Musa Jibril, many screen names include his namesake in the title, such as Shaykh AM

3.2 Staging identities

Consciously or not, individuals stage their identities to present themselves to their audience (Goffman, 1965). These cues allow us to characterise a social identity, even in the online space (Merchant, 2006). On Twitter, identities are expressed through emojis, systematic vocabulary and expressions or hashtags in the 'about' section. They are also expressed through profile pictures, profile banners and through handle names. In the following section, we study how users portray themselves on the public stage of Twitter and if there are commonalities within and across ideologies. A particular focus of interest is in identifying common signifiers, that is the use of the same qualifier (e.g. symbols, icons, verbal expressions or hashtags) by different users. These common signifiers show how people unite online, how they co-produce a collective identity and, potentially, the existence of a wider milieu.

3.2.1 RWE sample: self-identification

This section assesses how users within the RWE sample stage their identities on Twitter and offers illustrations of names, symbols and images used in the process (see Table 4). In addition to the names and symbols discussed in Section 3.2.1, emojis feature prominently in the user 'about' section. The ɢʙ emoji is most commonly used, signalling the user's patriotism toward Great Britain. Many users also use the ✖ emoji. This is a protest against Twitter's banning policies, which are perceived as discriminatory; RWE and conservative activists have called on supporters or people who have been 'shadow banned' to place a large red X beside their names.[6] The use of this emoji in this manner is consistent with RWE's wider belief

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[6] See: https://www.albawaba.com/loop/what-does-red-x-twitter-mean-and-why-are-conservatives-using-it-1167028

in rising political correctness and suppression of free speech. A few handles and bios contain the ⚡ ⚡ double lightning emoji, which bears a significant resemblance to the double lightning 'Schutzstaffel' Nazi emblem that appeared on the uniform of SS soldiers during World War II. The 👌 'OK' emoji makes a few appearances, which is a hand gesture that has allegedly come to symbolise 'white power', despite having non-extremist origins. The use of this gesture is common among white nationalist and alt-right audiences in the US, and has grown in popularity since the Christchurch shooting, where the attacker made the gesture to camera crews in court (Feuerherd, 2019).

RWE pseudonyms
- 'Proud White Father' - 'BritUnvanquished' - 'Fascist 11' - 'RedPill' - '14Teut88' - 'EuropeAwakes' - 'NatSocst' - 'BAN EVIL ISLAM'
RWE 'about' section
Emoticons - GB - ✖ - ⚡ ⚡ - 👌 Hashtags - #WhiteGenocide - #AntiEU - #ARIACWFAW (Anti-Racism is a Code Word for Anti-White) - #DIACWFWG (Diversity is a Code Word for White Genocide) - #SaveEurope
RWE profile pictures and banners

Images relating to British fascism

Colonial nostalgia/ideation

Neo-Nazi Celtic/pagan symbolism

Table 4: RW self-identification indicators

3.2.2 IS sample: self-identification

This section assesses how users within the IS sample stage their identities on Twitter and offers illustrations of names, symbols and images used in the process (see Table 5) and discussed in Section 3.2.2. In the IS sample, the use of emojis is limited. Some emojis that do feature in the sample appear to be unique to Islamic concepts and may denote a 'salafist'[7] interpretation of Islam. For example 'the raised index finger' (☝) appears a number of times in the sample and symbolises the concept of 'Tawheed' or the oneness of God. Other emojis are used to explain religious concepts such as Hellfire (🔥) and Al Walaa' Wal Baraa' (🍁⚖💚) - which translates as 'loyalty and disavowal' and signifies loving and hating for the sake of Allah, including showing anger towards those who oppose God. The concept of al wala' wal bara' is one which is applied in order to define and activate boundaries between what users see as 'rightly-guided' Muslims on one side, and 'deviant' sects, as well as non-Muslims, on the other (Hitchens, 2019).

Hashtags representing issues relating to political grievances and the oppression of Muslims feature heavily in the IS sample. The most frequently used hashtags are in both English and Arabic, perhaps reflecting a bilingual component to our sample audience. Hashtags and content discussing the war in Syria are the most popular, with specific city names such as Ghouta, Idlib and Jisr al-Shughur being cited frequently. Additionally, several jihadist groups involved in the Syrian war including ISIS, Jabhat al Nusra (Al Nusra front) and Al Sham brigade are also used. Hashtags surrounding other political grievances linked to the Muslim 'ummah' are also utilised, including those dealing with the Rohingya crisis and Palestine, among others.

Other hashtags that are not necessarily linked to a political grievance but feature prominently include those relating to religion including hashtags such as Islam, Quran, Ramadan, and Hadith. Influential dawa

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[7] Salafism (as mentioned previously) is a more purist and conservative interpretation of Islam which rejects modern innovation in religion.

personality Shaykh Ahmad Musa Jibril also featured among the top used hashtags in a variety of different forms. This is not surprising as a number of the IS sample accounts are dedicated to sharing quotes and prosytelisations of the radical cleric.

Profile pictures and banners in our sample include well-known jihadist leitmotifs, imagery and symbols. The use of black banners (popularised by ISIS as well as many other jihadist groups), masked figures, and weaponry are also prominent in our sample (see Table 5). The 'about' sections of accounts using this imagery include common jihadist leitmotifs such as:

- 'rejecting the oppressors every day. we must speak the haqq and be heard'

- 'Commanding good and forbidding evil'

- 'Seeking Jannah in the beliefs of our prophet and his companions. In Sha Allah I will be with #AlTaifAlMonsoor'

Since many of the accounts in our IS sample are dedicated to extremist cleric Ahmad Musa Jibril, profiles displaying his image are used widely among our sample. For self-identified female accounts, we also have imagery associated with what is perceived as the 'jihadist' ideal for modesty and womanhood (see Table 5). Interestingly, self-identified female accounts carry very similar taglines to 'male' accounts, such as 'We need the system of Islam which is Khilafah !!'. To protect confidentiality as far as possible, in Table 5 we have made small alterations to images and pseudonyms to indicate the kind of imagery and names selected whilst ensuring accounts cannot be identified through standard or reverse image searching.

IS pseudonyms
- Abu T - Pure Green Bird - In the name of the Ummah - Deen over Dunya - Shaykh AM
IS 'about' section
Emojis - ☝ - 🔥 - 🍁💍💚 Hashtags Group-based - #ISIS - #AlNusra

- #AlShamBrigade

Issue-based

- #Gaza

- #Palestine

- #Rohingya

- #Ummah

Religious

- #Islam

- #Quaran

- #Ramadan

- #Hadith

Individuals

- #MusaJibril

IS profile pictures and banners

ISIS related

Cleric tributes

Female

Table 5: IS self-identification indicators

3.3 Co-production of content through framing

In this section we consider how material practices and discourses help consolidate the idea of an online community on Twitter and co-produce the sense of a threat. To do so, we study the significance of internal and external labelling processes in shaping communities.

Howard Becker demonstrated that labelling is a two-step process (Becker, 2003). First, in order to be part of a group or a category of people, one must acknowledge the label. Secondly, those not belonging to the group have to label the person in a similar manner. In other words, being considered a radical is the result of a double process: an endogenous process consisting in self-labelling and an exogenous process consisting in labelling someone from the outside.

3.3.1 RWE forms of participation

Within our sample, the RWE Twitter users' biographies, display names, and profile pictures serve as a primary space for endogenous labelling. Here, display pictures declare ideological allegiance through the use of prominent neo-Nazi and white-supremacist symbolism, such as the sun cross and the British Union of Fascists flag. Furthermore, biographies provide users with a space to openly declare allegiance to RWE movements, such as '1488', 'NatSoc', or announce their racial pride, e.g. 'Proudwhitefather'. The prominent use of the red cross emoji demonstrates another medium through which RWE users establish an identity of victimhood and persecution at the hands of a politically correct liberal elite. The utilisation of available spaces and resources shows the extent to which RWE Twitter users go to define their identities and communicate them to others within their milieus and the Twitter user base in general.

Homogeneous labelling and identification of group boundaries is predominantly done in the user's Twitter activity. The fact that clusters revolving around religious, political, and racial identity make up a significant portion of the corpus's top themes, suggests that the articulation of identities and the propagation of their related terminology is at the forefront of RWE activities of our sample on Twitter.

In addition, the similarly large presence of labels given to those outside of the established in-group aligns with academic theories on the formation of identities and the importance of binaries in establishing group boundaries. External labels and terms such as 'Muslim', 'barbarian', 'Jew', 'rapist', 'attacker', suggest that the perceived threat from the out-group is used to define the identity and position of the in-group. The sample refers to binaries such as 'Christian' and 'Muslim', 'peace' and 'invasion', 'religion' and 'cult'. This creates a dynamic of 'us vs them' which essentialises relative differences between groups, naturalising qualitative dichotomies from 'sacred' to 'barbaric', 'heritage' to 'genocide', and designating everything on the outside as evil and threatening and everything inside as good, virtuous and desirable as a result.

3.3.2 Jihadist forms of participation

The IS sample Twitter users' biographies, display names, and profile pictures also serve as a primary space for endogenous labelling. Here, display pictures for the sample explicitly align themselves with a jihadist worldview through jihadist slogans, jihadist imagery and leitmotifs. This includes figures of masked jihadists, black banners and flags (supportive of ISIS but also other violent extremist groups), weapons and guns as well as images of prominent jihadist figures such as Anwar al Awlaki and Ahmad Musa Jibril. One user's bio reads in transliterated Arabic: 'Allaahumma 'Anta 'adhudee, wa 'Anta naseeree, bika 'ajoolu, wa bika 'asoolu, wa bika 'uqaatilu.' The key message of this bio can be paraphrased as 'Oh Allah...you are my victor...and in your name I strive to kill'. Another user cites in Arabic, 'When injustice becomes law, resistance becomes a duty I would advice u to be practical .because islam needs men not males.' Many of the usernames attributed to the accounts also demonstrate a jihadist affiliation through the use of a 'nomme de guerre', typical of jihadist groups. Names such as 'Abu Hanifah Haqqani', 'Abu Ismail Al Farsi' and 'Umm Mujahid' are used to cement a jihadist identity.

Additionally, exogenous labelling in reference to the out-group or 'enemies of Islam' can be seen prominently in biographies, display names, and profile pictures. Terms such as 'Kuffar' (disbelievers), 'Thaghut' (those who transgress against God's immutable law) and 'Khilafah' (caliphate) are used to portray a common jihadist worldview that pits 'jihadists' as a vanguard protecting the Muslim ummah[8] against its enemies. One user's bio presents the perceived common cause for which jihadists are fighting in the words, 'rejecting the oppressors every day. we must speak the haqq (ultimate truth) and be heard'.

4. Main Themes

In this fourth section, we study key themes and influencing factors in the Twitter communications of our samples by asking: what are users saying; what are the events that are influencing what users are saying; and who are the influencers?

4.1 Content

In this section, the main themes discussed by our RWE and IS samples are outlined. These are extracted, first, through a discourse analysis based on a descending hierarchical classification that can be described as a succession of bi-partitions, carried out by the means of a factorial analysis of correspondences. This analysis was conducted using the Reinert method (Reinert, 1983, 1990) implemented via the free software IRaMuTeQ (Ratinaud, 2014, Ratinaud and Marchand, 2012). This method makes it possible to determine the themes that compose a corpus. The software groups into separate themes the tweets that tend to contain the same words. In this text, these themes can be referred to as lexical clusters, classes of discourse or categories.

From a corpus of tens of millions of words, it is possible to construct a matrix crossing the lexicon (on which a number of automated linguistic operations are carried out) with text segments (one tweet is equivalent to one segment). Each box of this matrix is automatically coded according to the presence (1) or absence (0) of a lexical form in a text or segment. The succession of 0 and 1 defines 'profiles' of shapes and/or segments. The original algorithm makes it possible to group the segments whose profiles are similar and to describe them, not only by the correlated lexical forms (dendrogram), but also by the characteristics of the speakers, if they have been coded (metadata such as socio-categorical variables, psychosociological, chronological, sources). While lexical clusters automatically generate themes, these themes must then be described and interpreted in relation to theoretical and contextual knowledge.

The results are presented below in a dendrogram that classifies the online conversations (tweets across the entire sample activity) into clusters, underlining the main lexical themes of the corpus. It also provides information on the size of each cluster (i.e. percentages and size of the boxes above the branches of words) and the overrepresented lexicon in each cluster (i.e. the more a word is situated at the top of a branch, the more it is overrepresented within a cluster).

4.1.1 RWE narratives and themes

For the RWE sample, the analysis was conducted on 91,482 tweets and retweets, comprising 91,014 text segments (tweets) with a total of 1,663,512 occurrences (words) broken into 78,104 distinct forms (unique words deployed multiple times within the corpus) and 42,246 hapax (unique words that appear only once across the corpus). The difference between the number of tweets and texts can be explained

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[8] The Islamic community of believers is known as an 'ummah'.

by two factors: first, all emojis (recognised by IRaMuTeQ as part of the Twitter or ASCII dictionaries) used to convey sentiment in place of words were removed from the corpus; secondly, only distinct tweets (not retweets or replies to distinct tweets) were accounted for. This was done to ensure that analysis is conducted on the variety of topics rather than the volume of discussions, as would be the case if often long tweet threads were classified. As for the high proportion of hapax and unrecognised words, this would suggest that there are a large number of typing errors. This is relatively common for corpora constructed on the basis of social media participation.

A total of 15 clusters ('classe'[9]) were generated in the RWE corpus (see Figure 14) and are interpreted below as constituting four key themes: current affairs; in-group identity; out-group threat; and ideology.
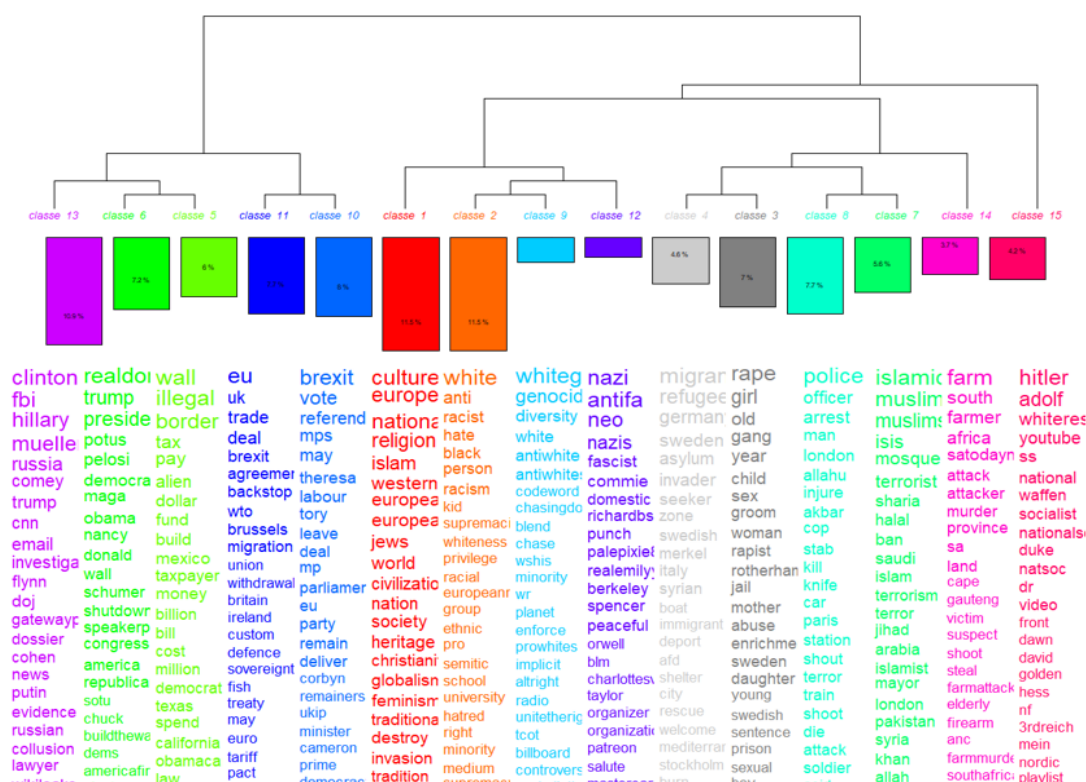
Figure 14: Dendrogram classification tree, produced through IRaMuTeQ, using the Reinhard method

Current affairs: President Trump and the EU Referendum

The first five clusters (clusters 13, 6, 5, 11 and 10) of the dendrogram constitute a total of 39.8% of the corpus and relate to current affairs, most notably the presidency of Donald Trump and the EU referendum. Clusters 13, 6 and 5 relate to US politics, specifically Trump's presidency, his domestic relationship with other parties and politicians and the most salient aspects of foreign policy.

Cluster 13 is most pertinent to President Trump's ascension to power, consisting of terms related to his alleged collusion with the Russian government, the subsequent FBI investigation under 'Comey', the

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[9] The term 'classe' in Figure 14 and Figure 15 refers to a thematic cluster of words and the term 'cluster' is used throughout this section of the report to indicate these clusters of words.

Special Counsel investigation ('Mueller'), and individuals who have been convicted for lobbying, financial, and campaign violations while working for Donald Trump, including Michael Cohen and Michael Flynn. The professional and grammatical nature of the terms in this sample mean that it is likely that many of these terms are taken from retweets.

Users within our sample also talk about allegations against Trump, a much-revered figure in RWE circles for his hardline nationalism and anti-immigration stances, by also referencing controversies related to Trump's adversaries. Examples include 'email' (a reference to Secretary Clinton's private email scandal) and 'Wikileaks', which President Trump and his supporters initially lauded due to the negative effect it had on Democratic presidential candidates and their campaigns. Cluster 6 meanwhile focuses more on President Trump and significant Democrats such as former US President 'Obama', Speaker 'Nancy Pelosi', and Minority Leader 'Chuck Schumer'. The frequency of these terms, along with other indicators of American politics such as 'congress', 'dems', 'Speaker', and 'president', as well as prominent aspects of Trump's political rhetoric such as 'maga', and 'build the wall', indicate that much of the tweet and retweet activity of our sample is taken from - or relates to - American current affairs. This is also evident in cluster 5, which relates to aspects of Trump's domestic and foreign policy, with the most prominent words being 'wall', 'illegal', 'alien', and 'mexico' (most likely in the context of illegal immigration, a common justification for proposing a border wall with Mexico).

Clusters 10 and 11 are similarly political in nature but focus on the issues of Brexit and the European Union. Cluster 11 consists of mainly international narratives surrounding 'Brexit', the 'eu', 'trade', and the 'wto' (the World Trade Organisation), 'Brussels', and 'Ireland' (as well as the border 'treaty' with Northern Ireland, and the prospect of a 'backstop' wherein Northern Ireland remains in the EU following Brexit). Additional terms in this cluster indicate an occupation with themes of sovereignty and migration, in line with many of the other themes reported in the proceeding clusters discussed in this section. Cluster 10 however, shows a more domestic selection of themes surrounding Brexit. Here, the search terms refer to prominent groups, individuals, and terms involved in Brexit and the British political system in general, such as 'MPs', 'Labour', 'Tory', 'party', 'parliament', 'Ukip', 'leave' and 'remain' (as the opposing movements in relation to Britain's position in the EU).

In-group identity

The next grouping in the dendrogram (clusters 1, 2, 9 and 12) constitute 27.5% of the corpus and relates to the establishment of group boundaries, denoting the in from the out groups, and establishing grievances and identity.

Clusters 1 and 2 are the two largest groupings in the sample, both holding an 11.5% (23% combined) share of the sample. They both contain similar words, themes and narratives, and serve as a crucial insight into what the RWE sample talks about. The most prominent words include in-group signifiers such as 'Europe', 'Western', 'Christianity', 'Traditional', 'Whiteness', 'White' and 'Nation', in addition to signifiers of out-group identity and existential threat including 'Islam', 'Jews', 'Invasion' and 'destroy'. There are additional identifiers of perceived threats to in-group (white European) identity, including 'globalism' and 'feminism', both of which are frequently cited by RWE circles as significant threats to white/western political hegemony. These clusters, and the grouping in general, carry a distinct theme of racial politics, displaying essentialist notions of heritage, birthright and race.

This notion of threat is continued in the neighbouring cluster 9, which specifically focuses on the 'White Genocide' conspiracy theory. White genocide is a combination of several theories of the 'Great Replacement', or the 'Grand Replacement', warning of the gradual extinction or genocide of the white race at the hands of forced immigration and declining birth rates (Institute for Strategic Dialogue, 2019).

The theory channels centuries of racist and anti-Semitic discourses that blame critical theory, post-modernism, and civil rights for the rise in social degeneracy, and the subsequent withering of traditional western society and racial boundaries (Moses, 2019). Here, fears of a campaign of violent eradication are reflected in terms such as 'antiwhite', which is the perceived real meaning of 'diversity'. The appearance of the word 'diversity', 'code', 'codeword' and 'antiwhite' also suggests that a common term used by believers of white extinction theories is also being used by this sample: 'diversity is code/is a codeword for anti-white'.

In this worldview, diversity, multiculturalism and immigration are not beneficial aspects of modern society, but are instead deliberate policies devised by Jewish elites and modern political institutions to debase white purity and undermine western hegemony. These narratives are common precursors to political violence and terrorism, referenced in the manifestos of terrorists Anders Breivik, Brenton Tarrant and John Earnest, in addition to constituting core elements of National Socialism and the Nazi regime.

Cluster 12 depicts an exchange of markers of political identity from in- and out-group positions. 'Nazi', 'Antifa', 'Fascist' and 'commie' occur as the most common terms in this cluster, showing the polarised view of political identity held by the sample, while the salience of 'Punch' amongst these terms suggests sentiments of violent antipathy between these groups. The cluster's keywords also signify violent protests such as 'Charlottesville' and 'Berkeley' within the United States (in addition to 'unitetheright', which the Charlottesville demonstration was originally named), which saw clashes between far-left and far-right groups. This cluster can therefore be categorised as a space in which the RWE sample conceptualises its position vis a vis its immediate political enemies and reflects upon instances of violence as a means of solidifying binaries and hostilities, encouraging defiance and resistance. Discursive arenas like this serve to reinforce the RWE worldview that they are at war and are threatened.

Out-group threat

In clusters 4, 3, 8, 7 and 14 (constituting 28.6% of the corpus), we see how perceptions about outgroup activity frame the internal beliefs of the RWE in-group and affirm the coherence of their own identity as threatened individuals. Existential fears for the 'white race' and national identity are commonly provoked by - or used to frame - contemporary issues surrounding immigration, the refugee crisis, Islamic extremism and terrorism. Such fears are clearly present in cluster 4 and 3, where prominent terms include 'rape', 'girl', 'gang', 'woman', 'immigrant', 'sex', 'groom' and, most notably, 'Rotherham'. These terms relate to Islamophobic fears of foreign sex-grooming gangs, a phenomenon that grew in prominence following a specific case in Rotherham, which sparked debate around immigration and Islam in the UK (BBC News, 2019). Additionally, the refugee crisis and mass migration is placed alongside words like 'invader', indicating the belief that migration into the country is viewed by the RWE sample as an invasion. The countries most commonly spoken about in this context are Italy, Sweden and Germany. The appearance of the word 'Zone' is also significant, reflecting a common RWE belief that mass immigration of Muslims has led to the creation of 'Muslim ghettos' or 'no-go zones', where non-Muslims are not allowed, and where Sharia Law is allegedly practised. Stories of 'Islam patrols' are commonly misrepresented by disinformation campaigns, which seek to install the belief that Muslims are 'taking over' and undermining national sovereignty while enforcing their beliefs on others. This is usually used to engender anger and resistance.

Similarly, clusters 7 and 8 are almost entirely made up of words related to violence and terrorism, including 'terror', 'attack', 'terrorist', 'injure', 'bomb', 'shoot', which are attributed to Muslims with the words 'ISIS', 'Islamic', and 'Allahu Akbar'. Geographic references are also made to 'London' and 'Paris', where attacks by ISIS have occurred in recent years.

Cluster 14 exclusively pertains to the recent phenomenon of farm attacks in South Africa, which is commonly interpreted by our RWE sample as evidence of a deliberate and systematic genocide of white people. Many aspects of white genocide conspiracies claim that there is a gradual and covert mechanism of white replacement and extinction, entailing immigration policies and the endorsement of critical theory that deconstructs traditional norms to undermine western hegemony. Cluster 1 includes terms that references these fears, such as 'south africa', 'farm', 'murder', and 'Gauteng', the South African region where most of these attacks have allegedly taken place (Sowetan, 2019).

Ideology

Cluster 15 (constituting 4.2% of the corpus) demonstrates the sample's preoccupation with themes, terminology and material that is explicitly associated with National Socialism. The most obvious indicator of this is the presence of 'Adolf', 'Hitler', 'natsoc', 'nationalsocialist' as some of the top words, followed closely by 'whiteresister', a prominent Nazi website that publishes extremist propaganda and merchandise. Additional mentions of 'waffen' and 'ss' (as in the Schutzstaffel, Hitler's paramilitary organisation), as well as '3rdreich', 'hess' (referencing prominent Nazi party official Rudolf Hess), and 'Golden Dawn', shows a general fixation on Nazi themes, groups and symbolism.

4.1.2 IS narratives and themes

Similar to the lexical discourse analysis of our RWE sample, we used IRAMUTEQ - a software that enables the processing and statistical analysis of texts, and organises the distribution of vocabulary in a comprehensive and visually clear way (Costa, Reis and Moreira, 2019) - to process our IS sample of Twitter accounts. For the IS sample, the analysis was conducted on 16,235 tweets, amounting to 15,969 texts representing 178,308 occurrences (21,636 distinct forms, 12,010 hapax).

A total of 15 clusters were generated in the IS corpus (see Figure 15), which are interpreted here in relation to master narratives that draw on stories and leitmotifs that resonate with some core ideas within Islam.
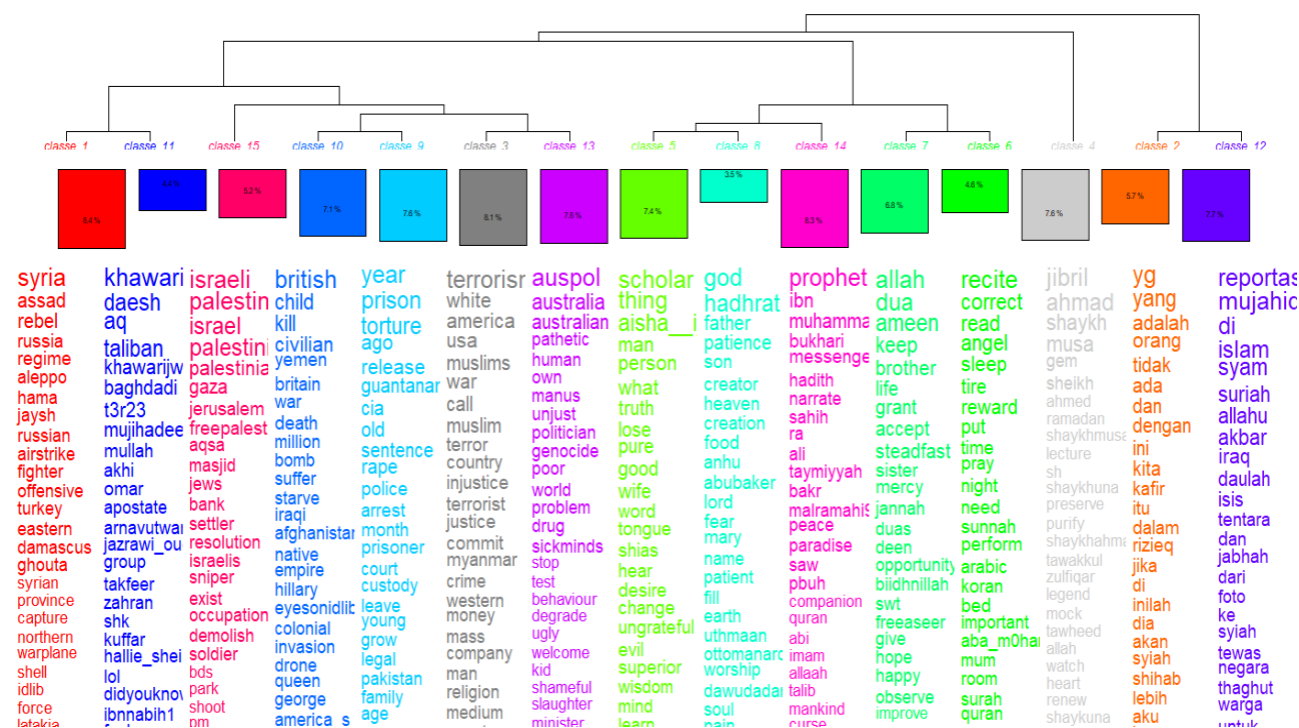
Figure 15: Dendrogram classification tree, produced through IRaMuTeQ, using the Reinhard method

Broadly speaking, the stories in these master narratives (and more generally in jihadist cultivation and manipulation of narratives) can be categorised as: victimhood; religious authenticity; martyrdom; and apocalypse. However, the two most prominent master narratives shown in our dendrogram are those that deal with the themes of victimhood and religious authenticity in addition to narratives of endorsement for the popular, radical cleric Ahmad Musa Jibril. Stories in the master narrative of victimhood revolve around the suffering of Muslims around the world. Kashmir, Palestine, Syria, and other places where Muslims are persecuted are highlighted as places under attack alongside the Muslim 'ummah' in general. Backlash against repressive, 'unislamic', 'thaghut' (those who transgress God's law) governments and individuals is also highlighted in this master narrative of victimhood. These stories evoke a strong sense of injustice. Religious authenticity is articulated through the contrast drawn in core messages of jihadist groups between the moral corruption of man-made and temporary laws and Allah's perfect immutable law. In this way, jihadists seek to create a stark choice between the out-group and the in-group.

Religious leitmotifs and narratives

In our sample, clusters 5, 6, 7, 8, and 14 (identified by green and pink) are grouped into a single category based on their common theme of religious identity and authenticity. The terms shown in this cluster are Islamic phrases and concepts familiar to Muslims. Cluster 6 and 7 contain words and themes pertaining to living an authentic Islamic lifestyle, including phrases such as 'Koran', 'Quran', 'Allah' 'recite', 'pray', 'angel' and 'mercy'. Clusters 6 and 7 also contain transliterated Arabic phrases that are common parlance among all Muslims regardless of the language they speak. Terms such as 'deen' (religion), 'dua' (supplication to Allah), and 'bidhnillah' ('If Allah permits it') are listed in this grouping. Cluster 8 contains terms such as 'worship', 'God', 'heaven' and 'patience' - all themes that are familiar to an Islamic religious audience.

Cluster 14 shows words and phrases associated with the Prophet Muhammad and Prophetic hadith (i.e. the prophetic sayings and teachings of the Prophet). This cluster contains terms such as 'sunnah' (the way of the Prophet), 'SAW', which is a commonly used acronym meaning 'sala allah alayhi wa sallam' or 'Peace be upon him', typically used and written after the Prophet Muhammad is mentioned. The term 'sahih' and 'bukhari' also appear in reference to Imam Bukhari, who is viewed as one of the most authentic 'hadith'[10] collectors in the Muslim world, as well as 'hadeeth' and 'hadith' (variant spelling).

Interestingly, 'Taymmiyah' appears in cluster 14 in reference to the historical Islamic jurisconsult, theologian and Islamic thinker. 'Ibn Tayimmiyah' is commonly spoken about in terms of 'inspiring 'salafist' and more violent extremist understandings of Islam propagated by groups such as ISIS, but to others he is seen as 'shaykh al Islam' (teacher of Islam), the reformist of a pure form of Islam (Turner, 2019).

Victimhood and grievance narratives

Towards the left-hand side of the dendrogram, in clusters 1, 3, 9, 10 and 15, we can see terms and topics related to the 'victimhood' narratives discussed above. Cluster 1 contains terms and phrases pertaining

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[10] A 'hadith' refers to the recorded collection of the Prophet's sayings and teachings. There are thousands of 'hadith' recorded today - all underpinned by a system of authenticity and attributability - according to scholarly Islamic tradition.

to the Syrian civil war such as 'Assad', 'rebel', 'Idlib'(Syrian city), 'aleppo' (Syrian city), 'russia', 'fighter', 'ghoutha', 'airstrike', 'hama' (Syrian city), 'shell' and 'warplane'. This cluster reaffirms the continued prominence of the Syrian civil war as a point of grievance in 'victimhood' narratives. Cluster 3 appears to shift the focus of grievance to the 'West'; here we find terms such as 'western money', 'america', 'usa', 'white', 'terrorism', 'war' and 'crime'. This cluster also contains the term 'myanmar' which points to the transnational and geopolitical nature of these contemporary grievances against the Muslim ummah. Cluster 9 continues the grievances trend with terms such as 'torture', 'guantanamo', 'CIA' and 'prisoner'.

Cluster 10 appears to carry a domestic element of grievance with terms such as 'british', 'colonial', 'child', 'bomb', 'suffer', 'afghanistan', 'queen', 'drone', 'empire' and 'invasion'. Cluster 13 indicates a grievance narrative linked to Australia with terms such as 'auspol', 'Australia' 'australian', 'unjust', 'genocide', 'shameful' and 'slaughter'. This cluster is likely pointing to discussions around the New Zealand Christchurch attacks - the attacker (who is Australian) may explain this link, but it can also be indicative of discussions surrounding other events/attacks.

Cluster 15 contains terms pertaining to the Palestinian occupation with terms such as 'Palestine', 'Israel', 'settler', 'colonial', 'gaza', 'free palestine', 'illegal', 'occupation' and 'Jerusalem'. This is not surprising as the Palestinian issue is one that is central to jihadist grievance narratives as well as the Islamic world more broadly.

Ahmad Musa Jibril - narratives of support

Ahmad Musa Jibril, the radical Palestinian-American preacher, appears in Cluster 4 This is not surprising given the proportion of our sample accounts that are either dedicated to the preacher, or that reshare and mention the extremist cleric. 'Musa', 'Jibril', 'youtube' all appear along with phrases emphasising an affinity to the 'Sheikh' such as 'Shaykhuna' (Our Shaykh) or 'preserve' ('May God preserve him' - a commonly used Islamic phrase connoting respect). This is again indicative of the purpose of some of the accounts in our IS sample which only serve to propagate the preacher's narratives, sermons and messages.

Twitter account mentions and foreign languages

Cluster 11 of the dendrogram consists of mentions of other user accounts that are outside our IS sample. Many of the account names in the second and third clusters suggest an aligned ideation with the rest of our IS sample. Account names such as 'khawarij' (those who have left or are outside the fold of Islam)[11], 'apostates' and 'takfeer' are listed. These account names are leitmotifs, indicative of a jihadist worldview which reinforces an 'us versus them' narrative. Other clusters in this theme are clusters 2 and 12, which collate non-English terms. Some words appear to be in Bahasa Indonesia (language) such as 'Negara (country)', 'tentara' (army), 'adalah' (is/are, 'untuk' (for), and 'orang' (person). This is interesting as it potentially adds to the transnational complexity of our IS sample, although it may simply be indicative of certain accounts within our sample having a high volume of foreign language content. Other phrases in this cluster are also connected to Bahasa Indonesia through the variant spellings of Arabic terms which are transliterated into Bahasa such as 'daulah' (state), 'syaikh' (sheikh), and 'suriah' (syria).

4.1.3 Lexical proximity and relationship between themes
The analysis presented in this section maps the dendrograms presented above and can be considered as a similarity analysis or a network of co-occurring words analysis. This is not a word cloud but a graphic representation of lexical clusters; words are not selected by the analyst according to what they mean nor

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[11] In-group jihadists refer to the wider population of Muslims/non-muslims alike as 'khawarij'.

selected at random but bound by their co-occurrence and their position with regard to one another. The size of the font is proportional to the importance of the words in the corpus. The colours represent communities identified automatically. This graph is made from the lexical clusters that form each of the categories presented in the dendrogram above, so it provides another reading, more focused on lexical proximity and relationships between topics. It constitutes another way of looking at the conversational material collected on Twitter, focusing on how themes are articulated to one another in relation to interpretative communities.

To be precise, the graph below is generated by selecting the 700 words that appear the most in the corpus, keeping only nouns and verbs. The spatialisation layout used is called Fruchterman-Reingold; this algorithm helps emphasise clusters of discussions. The coloured areas of the graph were generated by means of the Louvain method, i.e. an algorithm specifically designed to detect interpretative communities and extract them from large networks (Blondel, 2008).

Lexical Analysis Methodology

Our lexical analysis builds on the notion of concurrency, or co-occurrency; the frequency of particular phrases and terms deployed adjacent to and alongside other terms. Where phrases are used more often alongside one another, the co-currency relationship between these terms increases and with adequate data sources and exploratory tools the exact values of this concurrency can be expressed in quantitative terms. Examples of phrases with high-concurrency in a mundane context would be terms such as 'happy' and 'birthday' or 'heavy' and 'metal'. Where language exposes sentiment, beliefs and perspectives on concepts, the concurrency of particular instances of language can be an effective proxy through which to explore the relationship between concepts based upon the organic interactions of an audience or community itself.

Groupings of terms emerge where a community of terms each have a high concurrency with one another, and the statistical significance of these terms imply a meta-relationship between a set of terms. These groupings are denoted by shaded 'halos'. These sets of terms can be identified and flagged by software although explaining the reasons for their high cross concurrency requires in-depth analysis and social contexualisation. Where we observe the overlap between 'halos' we see how expressions of particular perspectives or ideological positions relate to one another. Shared terms, which bridge 'halos' imply some co-dependency or close interaction between the concepts or audiences behind them while distinct, segmented halos can indicate the independence or isolation of particular concepts. In our exploration of each ideology there are multiple themes of discussion which appear to be co-enabling.

Further, the keywords and terms which present most prominently within given halos are those which are used most commonly and can be understood as 'root' terminology conveying concepts around which the broader conversation is framed and contexualised by the members of our sample. The connections between terms are visualised below by the yellow branches between terms and at base; following these links can contribute to a broader understanding of how different topics of discussion and themes relate to one another.

The volume of sources required to construct a representative corpus using this methodology also demands a suitable categorisation and structuring of findings for meta-analysis of the wider corpus. For the purposes of exploring this lexical profile in the context of radicalism and extremism, language has been categorised within the context of stages in the radicalisation process. The categories are built upon the affirmation of crisis, in-group and out-group identity definition and radical solution constructs as a result. These mandatory stages in the radicalisation process have been credibly proposed and offer a firm

foundation to understand the role of language in propelling and unveiling the radicalisation of audiences online.

RWE corpus

Starting with the exploration of the RWE corpus, using this methodology elicits four key processes taking place linguistically through the conversations captured in our corpus: identity construction; crisis construction; in-group definition; and crisis-solution synthesis. These processes are explored below and illustrated in Figure 16.

The process of identity construction centres on the two key, most frequently used, terms at the heart of the corpus - 'white' and 'person'. As all other terminology flows from these origins, this suggests the significance of racial identification in underpinning RWE discourse. These phrases appear more frequently than any other as well as having the highest concurrency relationship with one another when compared with any other terms. In simple terms, this is the first evidence of the crucial inseparability of race and ethnicity and that personhood shapes the presentation of radicalism and extremism within the RWE sample.
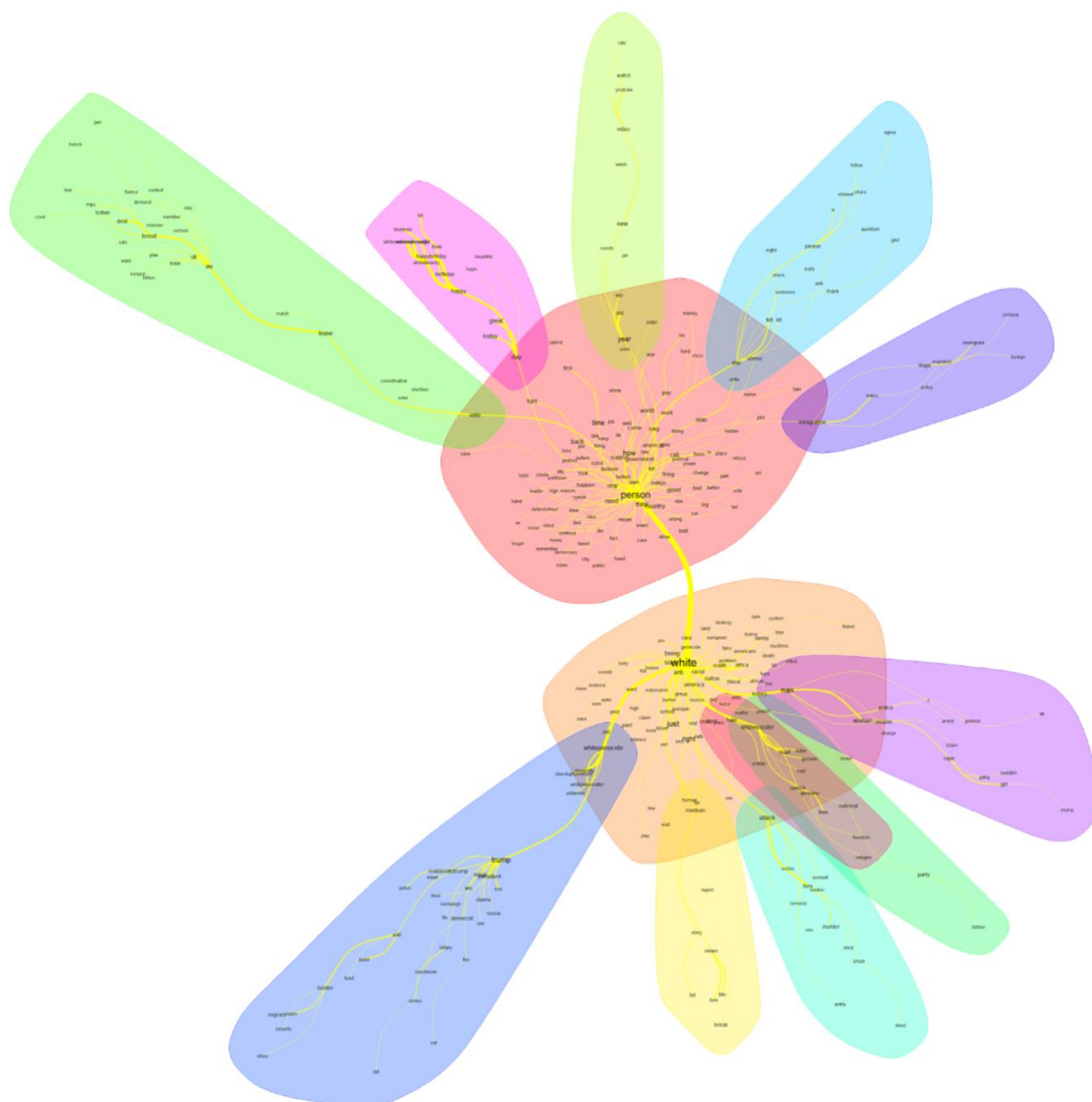
Figure 16: RWE sample lexical breakdown

Figure 16 also shows the construction of crisis through lexical proximity. Looking at the terms surrounding 'white' we see phrases such as 'south africa' and 'farmer', which connect the perspective of our RWE sample with global narratives of 'anti-white' persecution. This is further confirmed by the terms 'anti', 'genocide' and 'destroy' in proximity, corroborating the perception of a present and existential threat among the RWE audience. The concept of 'white genocide' is so represented in the lexical corpus of the RWE audience that it appears not only in the context of another halo but spawns its own independent halo stemming from the term 'whitegenocide'. This itself is in proximity to the term 'diversity', which is identified as the root cause and instrument of persecution. Within the context of 'white-genocide', any

international events framed as 'anti-white' can reach across borders within the sample. This is evident from the presence of the term 'South Africa' in the corpus, creating a link to the ongoing situation of Afrikaners (Boer) farmers and further confirmation of existential threat and crisis. The phrases deployed most prominently alongside 'muslim' in the corpus - 'rape', 'gang', 'sweden, 'girl' and 'young' - are clear indicators of sentiment. Emphasising the extent of the crisis, there is a halo centered around the term 'immigration' with the phrases 'mass', 'immigrant', 'criminal' and 'illegal' providing the strongest indicators of our sample's perception of the sources of threat. Here, we also identify another instance of transnational linkages where events in Sweden regarding refugees are observed to penetrate and shape the discussions of users.

The third identifiable process is that of in-group and out-group definition. Looking at identity constructs, we see terms such as 'european', 'america' and, in terms of in-groups and out-groups, binary camps such as 'nationalist' and 'liberal', 'black' and 'white' are evident. This suggests the deep entrenchment of out-group and in-group definitions. Identity constructs built upon immutable characteristics such as nationality or ethnicity offer some of the most fertile ground for radicalisation and extremism. In the context of race or ethnicity, where a given characteristic is impermissible but cannot be removed from the out-group, the remaining alternative presented to the radicalising individual is the removal of the out-group itself.

This is indicative of the final identifiable emergent process – crisis-solution. Figure 16 shows a cyan halo of terms centred on the concept of proactive, violent action. The defining terms are 'attack', 'victim', 'assault', 'murder', 'steal', 'shoot' and 'dead'. The existence of a halo community of these terms is indicative of their significance within the corpus and may represent a mainstreaming of violent rhetoric within the corpus or views of a radicalised extreme subset within our RWE sample.

IS corpus

Similar to the RWE text corpus, Figure 17 (below) is generated by selecting the 371 words that appear the most in the IS text corpus, using the Ruchterman-Reingold spatialisation layout discussed above (an algorithm which helps elucidate clusters of discussions). As stated above, the coloured areas of the graph were also generated using the Louvain method (Blondel, 2008).

The most prominent keywords within the halos shown represent the core discussion themes from our IS sample. The branching connections between these terms (indicated by the yellow branches) show the organic connections (concurrency) between and within the halo clusters. The discussion themes shown are typical of our IS sample and can be grouped into four main clusters: grievance/crisis terms; crisis-solution constructs; identity constructs; and Musa Jibril.

Grievance/crisis terms refer to words that follow the 'grievance' narratives discussed in section 3.2.1. Typically, these are words pertaining to conflict or to grievances afflicting the Muslim ummah such as 'Syria' (the most prominent keyword in this halo), 'Iraq', 'rebel', 'Assad', 'child' and 'massacre'. These words are connected to a more militaristic language halo, which contains terms such as 'kill', 'military', 'base' and 'attack'. The link between these two themes of discussion (grievances and war) are not surprising as the former is typically a byproduct of conflict. There is also overlap between the 'Syria' halo and terms linked to Islam such as 'muslim', 'mujahideen', 'Allah' and 'religion', further emphasising the unifying connection between grievance narratives afflicting the Islamic ummah and its intersection with religious discussion.
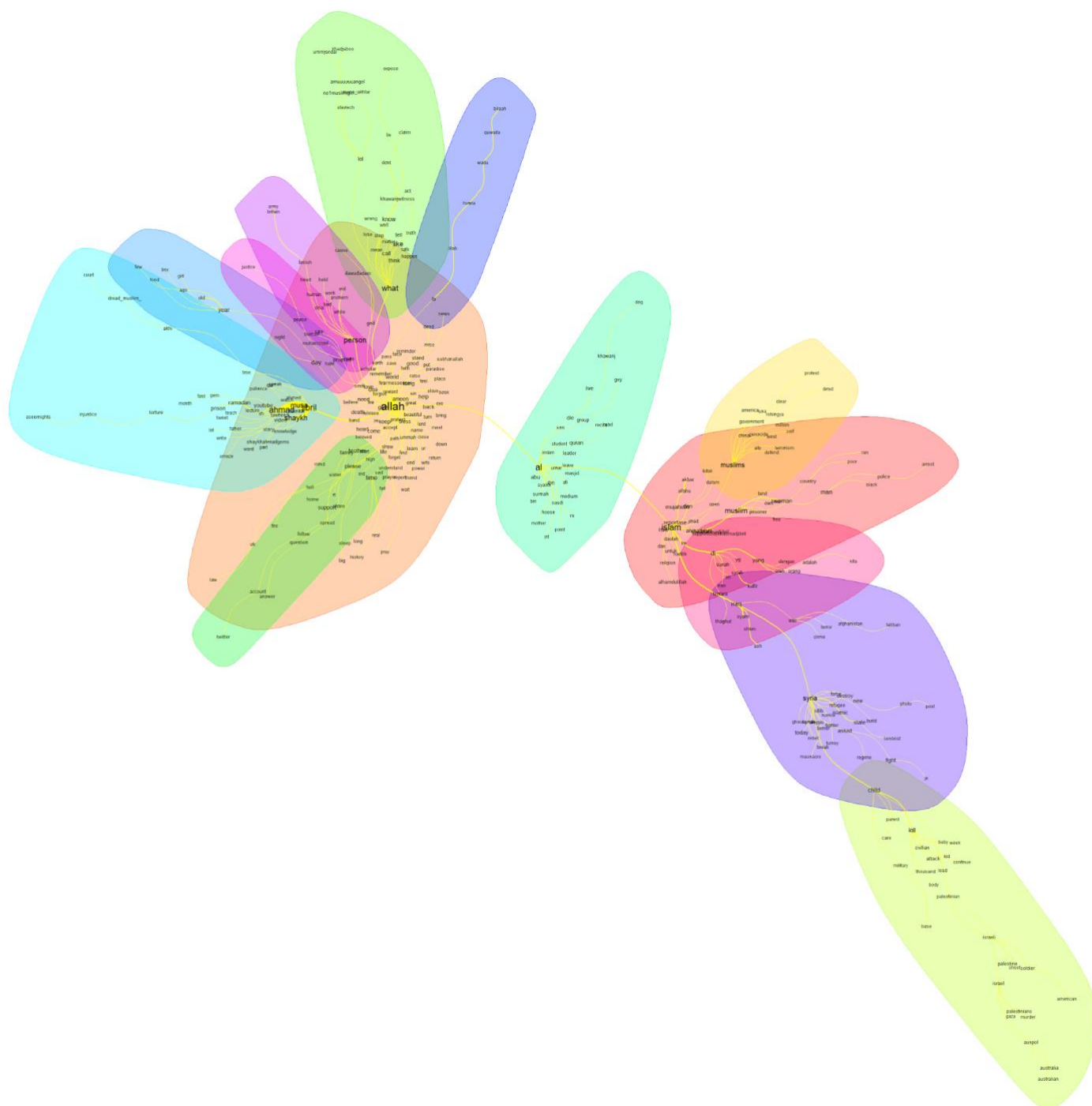
Figure 17: Jihadist sample lexical breakdown

Crisis-solution constructs refer to phrases which denote some action in response to the perceived threat or crisis (Berger, J.M., 2017). In the case of our IS sample these terms include phrases such as 'fight', 'kill', 'care' and other action verbs linked to the 'grievance/crisis terms' halo describing the perceived 'enemy' or 'thaghut' (those who transgress against God's immutable law).

Identity constructs refer to terms in the IS corpus that represent an Islamic identity, including characteristics and key identity traits which are used to define the out-group or in-group (Blondel, 2008). A distinguishing narrative of Muslim self-identification is entrenched throughout the discussion halos with religious terminology and phrases being prominent. This includes terms such as 'khwarij' (a derogatory term referring to those no longer considered to be Muslim) [12] or 'kuffar' (unbelievers), but also to transliterated Islamic Arabic phrases such as 'subhanullah' (God is perfect), and 'alhamdulillah' (praise be to God).

Unsurprisingly, discussion surrounding the radical cleric Ahmad Musa Jibril feature heavily in the IS corpus. Terms indicating respect such as 'Shaykh' are prominent and there is a strong concurrency (represented through yellow branches) between the 'Musa Jibril' halo and the 'Identity constructs' halo. Ahmad Musa Jibril dedicated fan-page accounts are a significant component in our IS sample with interactions between networks discussing, re-sharing and mentioning content attributed to the Palestinian-American preacher.

Comparison across ideologies

Broad parallels can be drawn on the contents and categorisations of the IS and RWE corpuses. This aligns with the observations of co-enabling partnerships between IS and RWE recruitment narratives and realities. We observe this similarity in our findings if we consider the discussion topics as classifiers for those topics which resonate the most with extreme or at-risk individuals. Topics which resonate strongly with individuals can also be thought of as points of vulnerability. It is here that communities may be susceptible to extremist influence upon reality-construction through radical recruitment narratives by offering an extreme contextualisation of significant offline events and individuals.

4.1.4 Gender-oriented discussions

To understand the structure of debates within the samples, another interesting variable to consider is gender. The relative representation of male and female users in different lexical clusters are illustrated below in Figure 18 (RWE sample) and Figure 19 (IS sample). The lexical clusters that are more discussed by either male users (green), female (red) and unknown gender (blue). Links are estimated through a chi-squared test on the modalities of a given variable throughout the corpus, which reflects the statistical overrepresentation (a higher proportion) or a statistical underrepresentation (a lower proportion) of tweets produced at each date. The bars going upwards signal an overrepresentation of tweets from one gender over another in the cluster. The bars going downwards signify an underrepresentation.

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[12] The term Kharijite, historically, refers to the Islamic groups who rejected the third and fourth caliphs (successors) of Islam. The term has been co-opted by Jihadist groups to refer to the wider Muslim population (who reject their Jihadist world-view). The term is also used by mainstream religious authorities in Islam to refer to extremist groups such as ISIS.
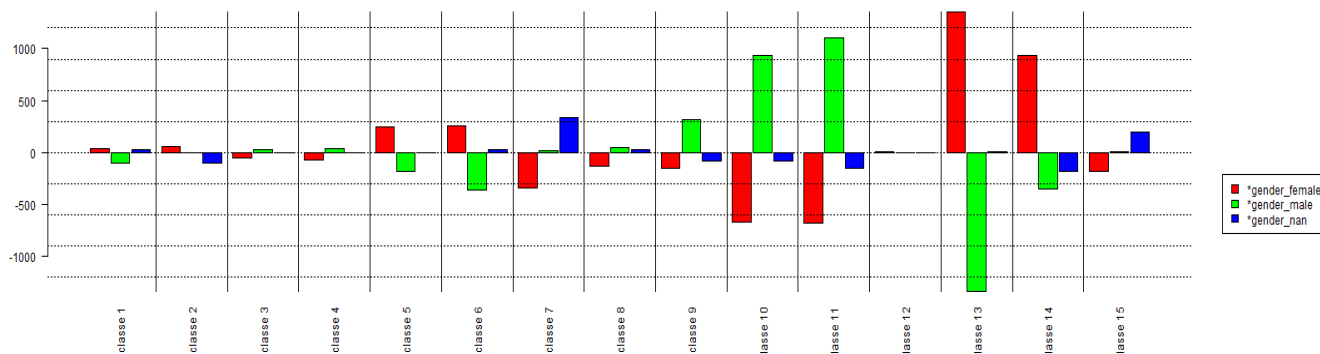
Figure 18: Links between lexical clusters and gender in the UK RWE sample (Chi2)
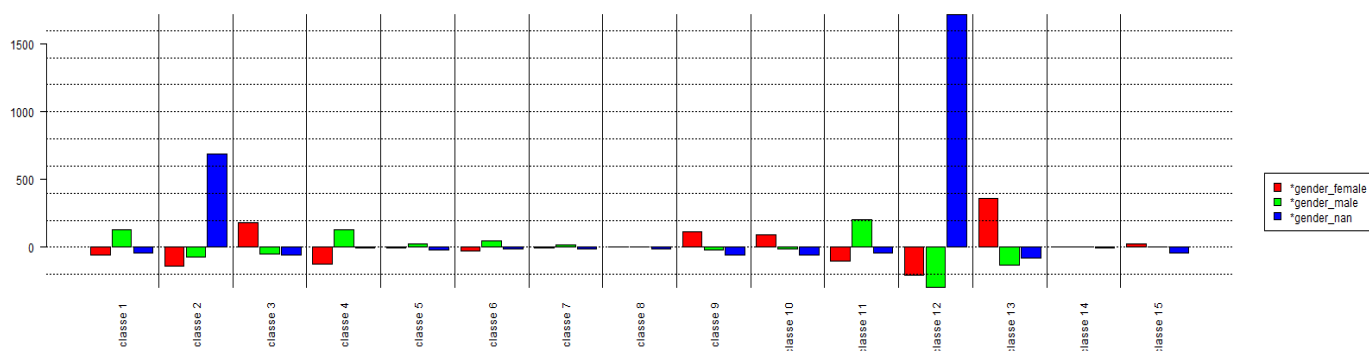
Figure 19: Links between lexical clusters and gender in the UK IS sample (Chi2)

The clusters which show under- or over-representation between men and women are of key interest here. This is because they indicate which themes, topics and discourses are more gendered in terms of their relative importance to the samples, and its constituent members' identity and extremist worldview.

In the RWE sample, the clusters that show the greatest level of gender divergence (from left to right) are clusters 10, 11, 13 and 14, as well as, to a lesser extent, clusters 5 and 6. The content of these clusters and the type of divergence (overrepresentation of men or women) are detailed in Table 6.

Female overrepresentation

Cluster 13 shows the biggest disparity between male and female representation. When referring back to the dendrogram (Figure 14), the cluster is part of the 'current affairs' group, referring specifically to US electoral politics. The top words in this cluster are Clinton, FBI, Hillary, Mueller, Russia, Comey and Trump. This cluster displays a key focus on issues and controversies surrounding Trump's presidency, namely allegations of collusion with Russia, and ensuing investigation from Robert Mueller and James Comey.

Clusters 5 and 6 also received greater levels of female representation, and also relate to US current affairs. Cluster 5 revolves around President Trump and his relationship with other US politicians, including President Obama and Nancy Pelosi, while cluster 6 refers more to Trump's policies.

The overrepresentation of female users in these clusters is more significant considering their size relative to the rest of the corpus (Cluster 13=10%, 6=7.2%, and 5=6%, total = 24.1%).

The other cluster that received a significantly disproportionate amount of attention from female users was Cluster 14. This cluster is from the 'group threat' grouping, and exclusively pertains to alleged racially motivated farm attacks in South Africa. 'Farm', 'Farmer', 'Attack', 'Murder', 'Victim' indicate a large volume of tweets referencing alleged violence against whites in South Africa ('sa'), most of which has occurred in the 'gauteng' province. The framing and misreporting of the South African farm attacks have become an important and influential device used by RWE figures to convince followers of an impending and systematic genocide or the white race. This theme fits into the wider narrative of the 'great replacement' that reinforces feelings of victimhood among RWE milieus. The size of this cluster is less significant than the other clusters that overrepresent female users, at 3.7%.

	Male overrepresentation
brexit eu whiteg vote uk genocid referend trade diversity mps deal white may brexit antiwhite theresa agreemer antiwhite: labour backstop codeword tory wto chasingdo leave brussels blend deal migration chase mp union wshis parliamer withdrawal minority eu britain wr party ireland planet remain custom enforce deliver defence prowhites corbyn sovereignt implicit remainers fish altright ukip treaty radio may unitetherig	The two clusters that received the highest levels of male representation are clusters 10 and 11, which are both in the current affairs group, and both pertain to the issue of Brexit and the EU Referendum. The other cluster that received more male representation was cluster 9, which refers to themes of White Genocide. When contrasting this with the themes in the clusters that overrepresent the tweets of female users, we can infer that male users talk more about current UK-related issues, while female users tend to talk more about current affairs related to the United States and South Africa. Male users also appear to be more engaged with the articulation of perceived threats to identity (such as white genocide), which is more theoretical in nature, while female engagement with concerns for the white race take the more case-based focus on violence against whites in South Africa.
hitler adolf whiteres youtube ss national waffen socialist nationals duke natsoc dr video front dawn david golden hess nf 3rdreich mein nordic playlist	**Unknown-gender overrepresentation** Interestingly, the last cluster (cluster 15), and the one with the most explicit association with the violent ideology of neo-nazism, overrepresents users in the sample whose gender was unidentifiable. This is likely to be a strategy taken by open followers of nazism within our sample to mitigate risks of exposure, by way of obscuring key features of their identity, including their gender. This could mean that, within our sample, the RWE accounts may be aware of the negative consequences of associating with nazism and the socially unacceptable nature of their beliefs, leading to them deliberately conceal aspects of their identity.

Table 6: Demographic overrepresentation in RWE sample

In the IS sample, the clusters that show the greatest level of gender divergence (from left to right) are clusters 2, 11 and 13, as well as, to a lesser extent, clusters 1, 3, 4, 9 and 10. The content of these clusters and the type of divergence (overrepresentation of men or women) are detailed in Table 7.

| syria jibril khawari
assad ahmad daesh
rebel shaykh aq
russia musa taliban
regime gem khawarijw
aleppo sheikh baghdadi
hama ahmed t3r23
jaysh ramadan mujihadee
russian shaykhmus mullah
airstrike lecture akhi
fighter sh omar
offensive shaykhuna apostate
turkey preserve arnavutwar
eastern purify jazrawi_ou
damascus shaykhahm group
ghouta tawakkul takfeer
syrian zulfiqar zahran
province legend shk
capture mock kuffar
northern tawheed hallie_shei
warplane allah lol
shell watch didyouknov
idlib heart ibnnabih1
force renew
shaykuna | Male overrepresentation

Clusters 1, 4, and 11 make up the male overrepresentation in our IS sample. These clusters are comprised of three main narratives from our dendrogram (Figure 15) - namely, the 'victimhood and grievance narrative', the 'Ahmad Musa Jibril' narrative of support, and the 'mentions of accounts' outside our IS sample. Interestingly, the grievance narrative of the Syrian civil war, with its militaristic language, dominates this cluster. This may not be linked to 'male overrepresentation' in the cluster but is an interesting point to highlight. |
| terrorisr auspol
white year british australia
america prison child australian
usa torture kill pathetic
muslims ago civilian human
war release yemen own
call guantanar britain manus
muslim cia war unjust
terror old death politician
country sentence million genocide
injustice rape bomb poor
terrorist police suffer world
justice arrest starve problem
commit month iraqi drug
myanmar prisoner afghanistar sickminds
crime court native stop
western custody empire test
money leave hillary behaviour
mass young eyesonidlit degrade
company grow colonial ugly
man legal invasion welcome
religion pakistan drone kid
medium family queen shameful
age george slaughter
america s | Female overrepresentation

Clusters 3, 9, 10 and 13 received the largest levels of female overrepresentation in our dendrogram (Figure 15). These clusters all fall under the victimhood and grievance narratives. Interestingly, terms linked to a domestic and transnational victimhood narrative, which includes the US, Australia and the UK, are prominent in the female overrepresentation category. Terms such as 'injustice', 'suffer', 'starve', and 'torture' all feature in these clusters. |

		Unknown gender overrepresentation
yg yang adalah orang tidak ada dan dengan ini kita kafir itu dalam rizieq jika di inilah dia akan syiah shihab lebih aku	reportas mujahic di islam syam suriah allahu akbar iraq daulah isis tentara dan jabhah dari foto ke syiah tewas negara thaghut warga	Clusters 2 and 12 comprise the' unknown gender' overrepresentation category, which falls under 'foreign language' grouping. The volume of users whose gender could not be identified may indicate an intentional effort by these users to obscure their offline identity. This is a common trend seen not only in 'jihadist' profiles in the online world (with the use of a 'nomme de guerre' etc.), but is also prevalent in both our IS and RWE samples. This may be indicative of an awareness among this area of the sample that their views are extreme, socially unacceptable and liable to bring suspicion and potential surveillance.

Table 7: Demographic overrepresentation in IS sample

4.2 Events

The offline and online spaces are a continuous, united domain. Bidirectional in influence and consistently co-enabling, online digital media typically serves to embellish daily offline realities while offline events themselves are intentionally framed to live up to the standards and pressures of relentless interconnectivity and intense competition for attention in the online space. Developments such as the 'livestream attack' and pre-release of mixed-media digital manifestos attempt to capitalise on this integration

The bottlenecks of traditional media structures could serve to limit the 'virality' of emerging narratives ahead of them 'breaking'. Where traditional reporting and print media could implement a top-down approach to influence information dissemination, the evolution beyond this model and decentralisation of journalism, engagement, publication and reality-construction permits any individual a global platform with which to garner mass-appeal and gain legitimacy therein. In the face of identity-crisis, digital networks can offer substantial incentives to substitute internal identity security for a wealth of external validation, with incrementally more drastic action merited to maintain it.

To unite these dimensions, our lexical analysis was structured to include the categorisation of any clear references to offline events and individuals with particular focus on observing linkages presented as transnational. Where events can be correlated across the offline and online domains, we can better gauge the extent of international and transnational linkages of events with digital participation and engagement.

4.2.1 RWE offline events

For the RWE sample, the most significant offline events stimulating discussion on Twitter were the election of US President Donald Trump and the result of the EU Referendum, both taking place in 2016. Such is the impact of these two events on the sample discourse, that each of them were ascribed 3 distinct clusters of words, phrases and discussion points that relate to them explicitly, or to closely associated stories and events.

Clusters 15, 9, and 8, pertain to Trump's ascension to power, and his relationship with other American politicians including Barack Obama, Hillary Clinton and Nancy Pelosi. Meanwhile, other words in the neighbouring clusters show a receptiveness to emerging events and controversies involving allegations of Trump's collusion with Russia, and Mueller and the FBI's investigation into said allegations.

The lexical analysis also reveals other events that influence the development of the RWE sample's world view. Though the quantitative weight of this influence is smaller than that of Trump's presidency and Brexit, there is additional evidence to suggest the impact the events have had on the formation of group identity, designation of out-groups and the communication of grievances. For instance, Cluster 1 contains references to rape, grooming and Rotherham (referring to the Rotherham child sexual exploitation case) as well as similar instances abroad. The event engendered a wave of islamophobia in the United Kingdom, propagating the narrative that 'Muslim men are a threat to British women and children' (Tuffal, 2015). Similarly, cluster 13 contains terms that refer to terror attacks in London, Paris, and Manchester, which are synonymised with their 'Muslim' attackers and used as examples of the dangers of immigration and the incompatibility between Islam and 'Western' values. In a wider context, Cluster 16 demonstrates the impact of the events such as the alleged racially motivated murders of farmers in South Africa have been interpreted by the RWE sample in the context of white genocide and the perceived existential threat to European racial heritage.

4.2.2 IS sample Twitter activity and events

Our IS sample's Twitter behaviour between 2010 and 2019 is characterised by erratic peaks and troughs in activity, with no clear discernable patterns in terms of increase or decrease over time. However, there are two highly significant spikes in activity (see Figure 20). A closer analysis of these periods suggest that the rapid increase may correlate to notable offline events. The first and largest peak occurs between 24/06/2014, and 08/07/2014, coinciding with the height of ISIS's expansion into Syria and official declaration of the Caliphate between June and July 2014 (Wilson Center, 2019). This is further supported by the prominent topics that were found on these dates through lexical analysis of the sample group's tweets, where the top words suggest a focus on matters going on in Syria, including 'ISIS', 'Syria', and 'Aleppo'.

The second peak, occurring roughly between 28/04/2015 and 17/09/2015, similarly corresponds to a heightened period of violent activity in Syria and Iraq at the hands of ISIS and their affiliate groups. Prominent themes in this period are characterised by words including 'Syria', 'fight', 'die', 'kill', 'attack', 'Turkey', 'war', and 'fighter', suggesting a proactivity among our sample with themes of violence, war, and confrontation.
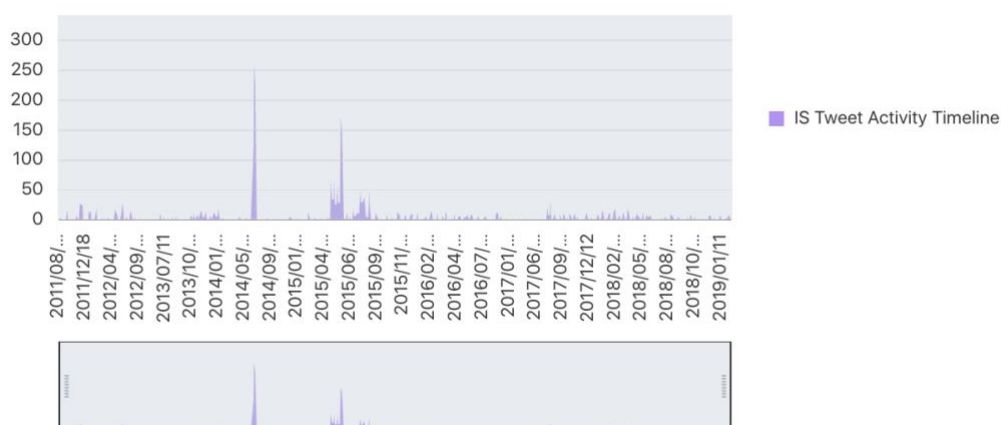
Figure 20: IS sample Twitter activity timeline 2011-2019

4.2.3 Offline events leading to changes in platform policies

A recent identity construct has emerged amongst RWE audiences around the perception of targeted, mass-deplatforming along ideological lines with phrases such as 'shadow-banning', rapidly entering mainstream discussion. These are factors which contribute to platform-flight and migration to offline, deregulated and isolated spaces. Broadly, in these spaces, which are removed from wider discourse and insulated with ideologically homogeneous extremist perspectives, radical, extreme and violent rhetoric is more easily normalised and the ideologies behind these sentiments more openly validated. Crucially, in these spaces there is a decreased capacity for intervention to divert at-risk audiences from the trajectory of radicalisation. Immersed among the identified in-group in an exclusive space, extremism is encouraged as a response to the perceived persecution by actors acting on behalf of the out-group pursuing an agenda to drive the particular in-group from a given social platform and more broadly from society.

4.3 Influencers

Some Twitter users, such as celebrities or famous politicians, have very large audiences of followers with whom they share no personal ties. If their relationships are primarily unidirectional and outbound, their messages can take centre-stage and shape public debates. Others, with little to no platform prior to the web, can nonetheless develop strong ties with like-minded people around the same foci of interest and gain notoriety online - to the point of becoming digital influencers who have the ability to give high visibility to a series of topics. This section focuses on the first of these types of user, those whose activity has had a notable influence on our sample, despite them not necessarily being extremist in nature.

Our sample sizes for both RWE and IS are too small to draw any broader conclusions about the wider impact of key influencers for both ideologies. We can only consider 'influence' within our sample level which, crucially, may not be representative of extremist audiences outside of our selected samples.

4.3.1 Key influencers on Twitter

Among the RWE sample, the account of Donald Trump is by far the most retweeted. It is important to note that retweets do not always correspond to endorsements and that the tools available did not allow for any form of sentiment analysis to be carried out on retweets and replies, and so it is impossible to say whether or not high numbers of retweets are indicative of approval or disapproval. That said, the prominence of the US President's account provides further evidence that the RWE sample is not limited to any one national context and instead regularly engages in global discussions.

Future research into key influencers should consider the nature of the tweets which are retweeted and replied to. The 50 most replied-to tweets by our sample all come from Trump's account, with his tweet 'SEE YOU IN COURT THE SECURITY OF OUR NATION IS AT STAKE!' generating the greatest response. Other popular tweets included reference to 'fake news', 'crooked Hilary', 'build a wall' and festive greetings around Christmas and New Year. The impact of Trump is likely due to a combination of factors including his expansive follower base, regular activity, and often controversial tweets, although without in-depth analysis of which tweets resonated and the nature of the replies, it is impossible to say confidently how much each of these factors contributed and exactly how Trump has influenced the activity of this sample.

The top three UK influencers who had the greatest impact on the sample, in order, are: Nigel Farage, Katie Hopkins and Piers Morgan. Again, the nature of their impact is difficult to gauge, but each make regular (and often intentionally provocative) Twitter contributions to debates which have been shown to be of importance to the RWE sample in the earlier lexical analysis. Ultimately, to truly understand the impact of mainstream influencers on radical online communities, more must be done in future to analyse the nature of replies and retweets.
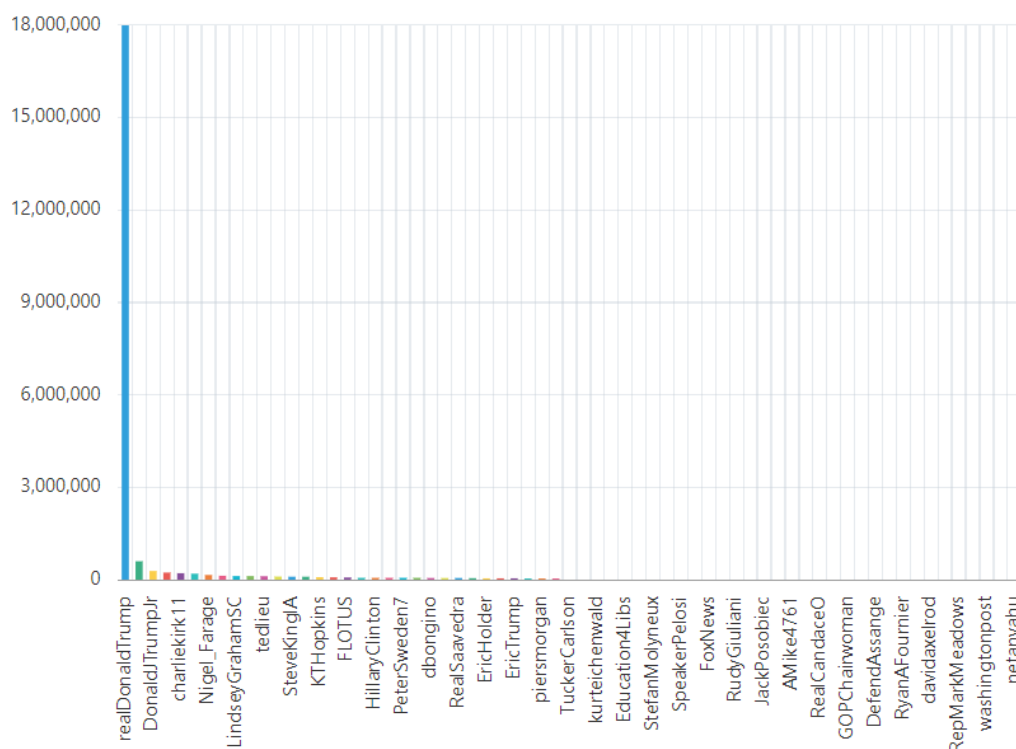
Figure 21: Accounts most replied to by the RWE sample (that are not included in the sample)

The list of accounts which generated the biggest response from the IS sample are far more difficult to group by any common themes or worldviews. An account promoting cryptocurrency investment generated the most responses, while media figures and channels such as ABC and Channel 4 News featured in the top 25. Edward Snowden and Julian Assange also feature, along with an account dedicated to supporting Assange, which could be indicative of at least an interest, if not support, for high-profile leaks and increased government transparency. However, it is again impossible to gauge the true nature of replies, and, therefore, analysis here is somewhat limited to broad assumptions about the types of accounts which have the greatest reach to the sample.
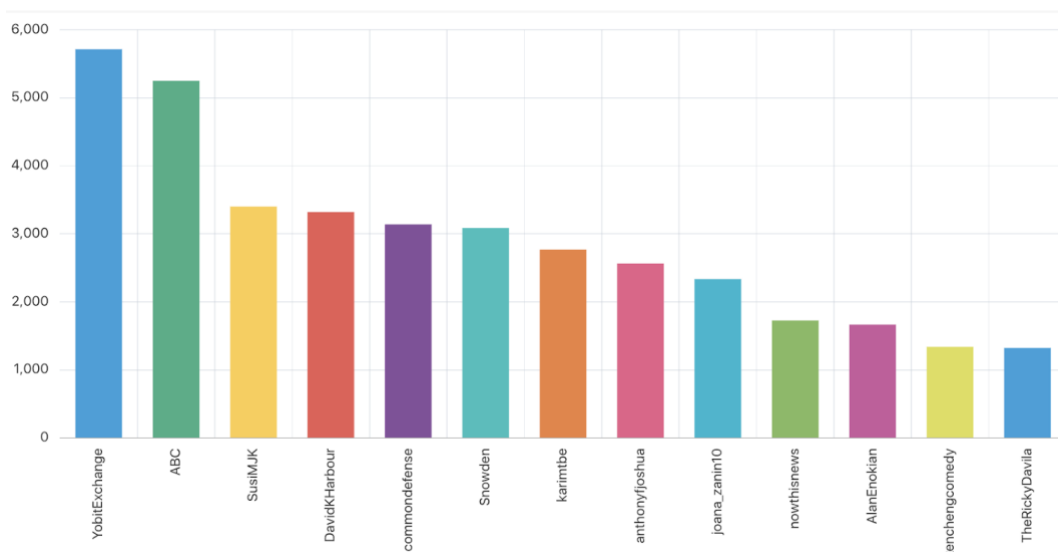
Figure 22: Accounts most replied to by the IS sample (this refers to external influencer accounts, not contained within the sample or categorised as radical)

5. Networks: analysing how people engage

This section focuses on network analysis by examining the interconnectivity of individual accounts within our sample. This allows us to build on earlier exploration of the key topics of discussion by illustrating the different ways in which people use the platform. Some may use the platform to increase their exposure to a variety of viewpoints while others may use them to keep track of news and events relevant to themselves. Others may treat the platform as a blog to amplify their views; these users may aim to become influential sources of information rather than prioritising peer to peer network building.

Both strands of radicalisation will be approached from three levels of analysis: i) on a sample level; ii) on a retweet level; and iii) on a mention level. These three perspectives were chosen to cover the variety of ways in which the activity of individual users can amplify to create dynamic digital communities.

In our analysis, we make a distinction between our sample and the full scale of the DARE sample. When discussing our sample we are referring to those accounts identified as being in the UK or demonstrating an interest in UK issues. When talking about the 'DARE sample' we are referring rather to the whole sample from all seven European countries in which this part of the DARE research was conducted. We discuss how our UK sample sits within this wider picture.

5.1 On the sample level

We have analysed the interconnectivity between users in both the IS and RWE digital communities of our sample. The graphs below (Figures 23-26) contextualise these relationships within a wider landscape. This contrasts with the IS sample network which has a more insular structure where connections outside of the UK are far more limited. Accounts from just three other DARE countries are connected to the UK IS accounts, while all DARE countries have some degree of connection to the UK RWE accounts.

Analysis has been carried out primarily through the use of the Gephi network exploration tool. Gephi is a well-supported open-source network analysis and visualisation software package with a natural affinity for social science research. Taking all entities in a given context as nodes (e.g. users), and all interactions

or relationships between those nodes as 'edges' (e.g. follows/followed-by), a broad range of analysis models and insights can be deployed to explore the true extent, nature and structure of any form of network. Gephi has been deployed here to explore the behaviour of accounts, the influence and connectivity of particular profiles and elucidate the relationships across the community of users at a larger scale than the records of 1:1 Twitter communications from which the network is built.

The size of the nodes are representative of in-degree relationships and indicates the number of relationships with the given node that other nodes possess, for example: 'Follows', 'Followed-by' or 'Retweeted'. Where the 'edge' relationships between nodes is the act of being a follower, the bigger the node is represented, the more the account is followed. Measuring connectivity through follower networks is a good entry point, allowing for reach to be shown not only at the user level, but at the network level within the wider European environment. Below, each colour represents a different country; users highlighted in violet purportedly represent UK-based accounts. However, as discussed in an earlier section in this report, we are unable to verify whether all of the accounts in our RWE sample are indeed UK-based, or are simply 'English-speaking' or demonstrating an interest in the UK. Nonetheless, the majority of our analysis for the RWE sample below will focus on these violet accounts. The spatialisation layout is a force-directed algorithm (Force Atlas 2); it helps visualise the level of connectivity among our sample and identify the people who act as points of passage between otherwise independent user clusters, also with the potential to identify users who are either totally isolated from others or at the very heart of a network.

Where networks are segmented with regards to national community, e.g 'GBR', 'NOR' or 'GRC' as in the visualisations below, this categorisation has expanded upon the original samples curated by researchers by applying language detection algorithms accounting for the original researcher's tagging and further incorporating self-declared reporting of language and location. In the case of ambiguity, these metrics have been interleaved to categorise particular nodes.

5.1.1 The network of the RWE sample

The first finding to stand out from the visualisation of the network of the RWE sample is that users predominantly follow other violet (GBR) coloured profiles (see Figure 23). There are numerous connections with profiles from other samples, including Norway, Greece, and the Netherlands. However, these associations are peripheral, and in most cases isolated (see Figure 23). The high levels of connectivity concentrated on the central accounts suggest that the profiles share followers and are familiar with each other, at least online.

The central cluster of the network contains several large nodes; node size illustrates the degree of interconnectivity that an account has with other users. The high number of large nodes demonstrate that there are several influential accounts which are connected to both a high number of users, and other influential accounts within the network. This high degree of interconnectivity implies some similarity and overlap in the perspectives of users within the network.

	GBR	(63.39%)
	NOR	(8.93%)
	GRC	(8.93%)
	NLD	(8.04%)
	FRA	(4.46%)
	BEL	(3.57%)
	DEU	(2.68%)
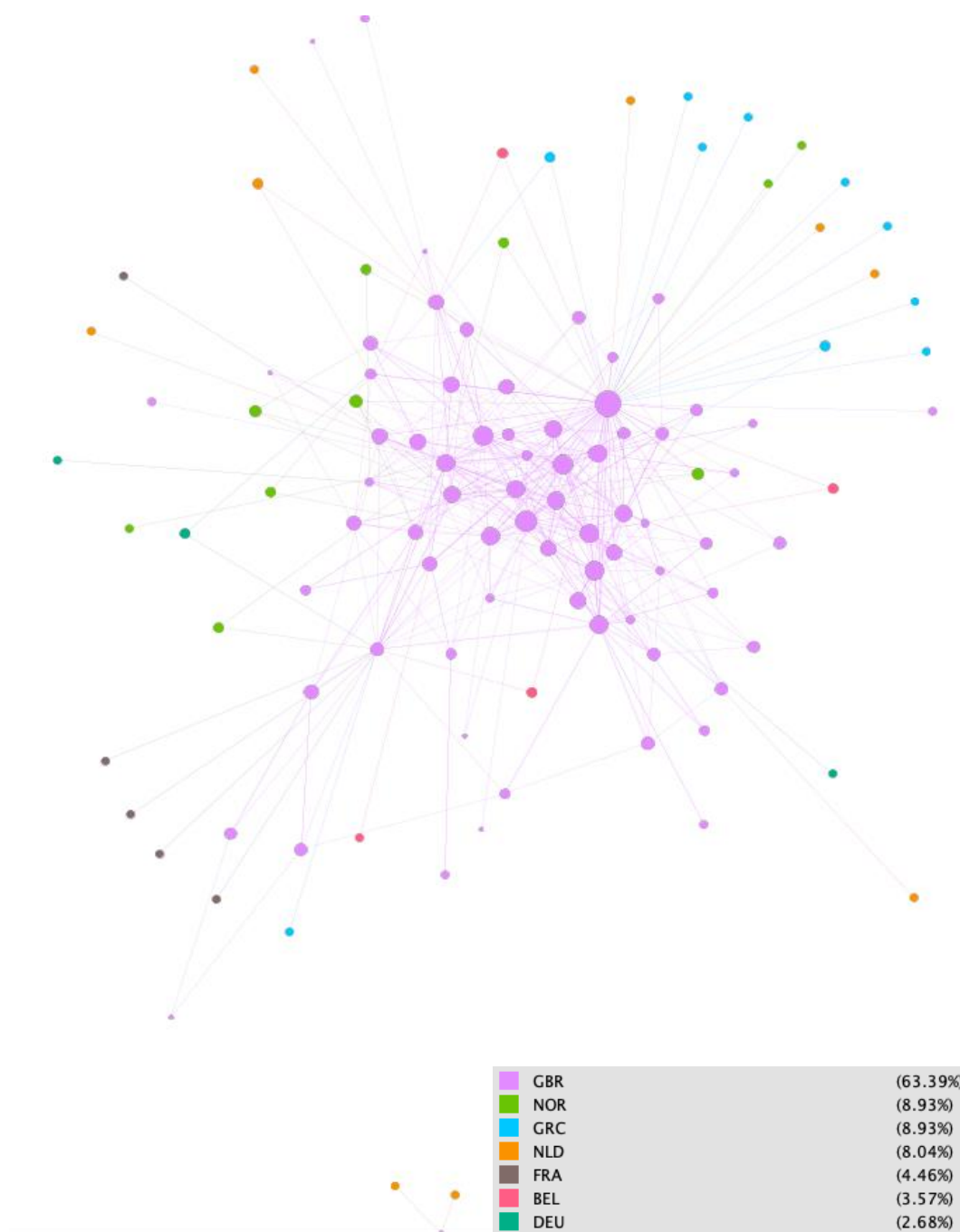
Figure 23: Geographic network mapping - RWE sample

A 'normal' user, following an influential account within the RWE network, has sight of other 'normal' users who follow the same account. This gives the influential account legitimacy by increasing its follower base and its influence within the RWE ideology. However, as the network demonstrates, a normal user will follow several influential accounts. The legitimacy and influence of each of these accounts is increased in a similar way. In addition, each of these influential accounts are also connected. This recognition between accounts of a similarly high status in the network hierarchy has an exponential effect on their legitimacy within the network. Key connected influencers at the centre of the network with a wider circle of interconnected users surrounding them helps build the 'symbolic foundations' of an online RWE

community (Jackson, 2011). This community is concerning as it can have an effect of 'cumulative extremism,' where the networks' homophily reinforces and amplifies extremist beliefs within the network (Blanquart and Cook, 2013).

The high level of interconnectivity in the RWE sample compared to the IS sample could be explained by the difference in suspension and banning of accounts by Twitter. Tech companies like Twitter have failed to remove RWE accounts with the same frequency as IS accounts (The Verge, 2019). The unintended consequence of this is that RWE accounts may feel emboldened and immune to censorship; this is revisited below.

5.1.2 The network of the IS sample

The first observation to make in relation to the visualisation of the network of the IS sample is the poor level of interconnectivity and outbound nature of communication (see Figure 24). Within the entire DARE sample there are five distinct networks of UK IS accounts connected to users from the other DARE countries. Of the five clusters, one is significantly more interconnected than the others, while the remaining four depict outbound communications. Outbound communications are networks where communication originates from a single node at the centre, to peripheral users unconnected to a wider network. In these four clusters isolated users usually revolve around a larger, single node with a larger follower base. Interestingly, only one of these four clusters has a smaller central node. This network is also the only isolated network connected to users outside of the British sample. This small, transnational cluster is connected to two German users with larger follower bases. However, even here the network stops at a single degree of separation, with the two German users isolated from each other, or a wider network of accounts.

The single cluster with a higher level of interconnectivity still has a relatively low level of connectedness compared to the RWE sample. Large nodes are connected to accounts with a significantly smaller number of followers. While these less 'popular' users appear to be connected and central to the network, most are only connected to three or four accounts. However, while comparatively less connected than the RWE sample, they are still part of a complex network and the size of these connected nodes is also significant. At the centre of the network are accounts with large numbers of followers. The accounts connected to this network are represented by smaller nodes, meaning these users have far fewer followers. This drop in follower size significantly reduces the cumulative effect of the IS sample's communications from the large, main accounts.

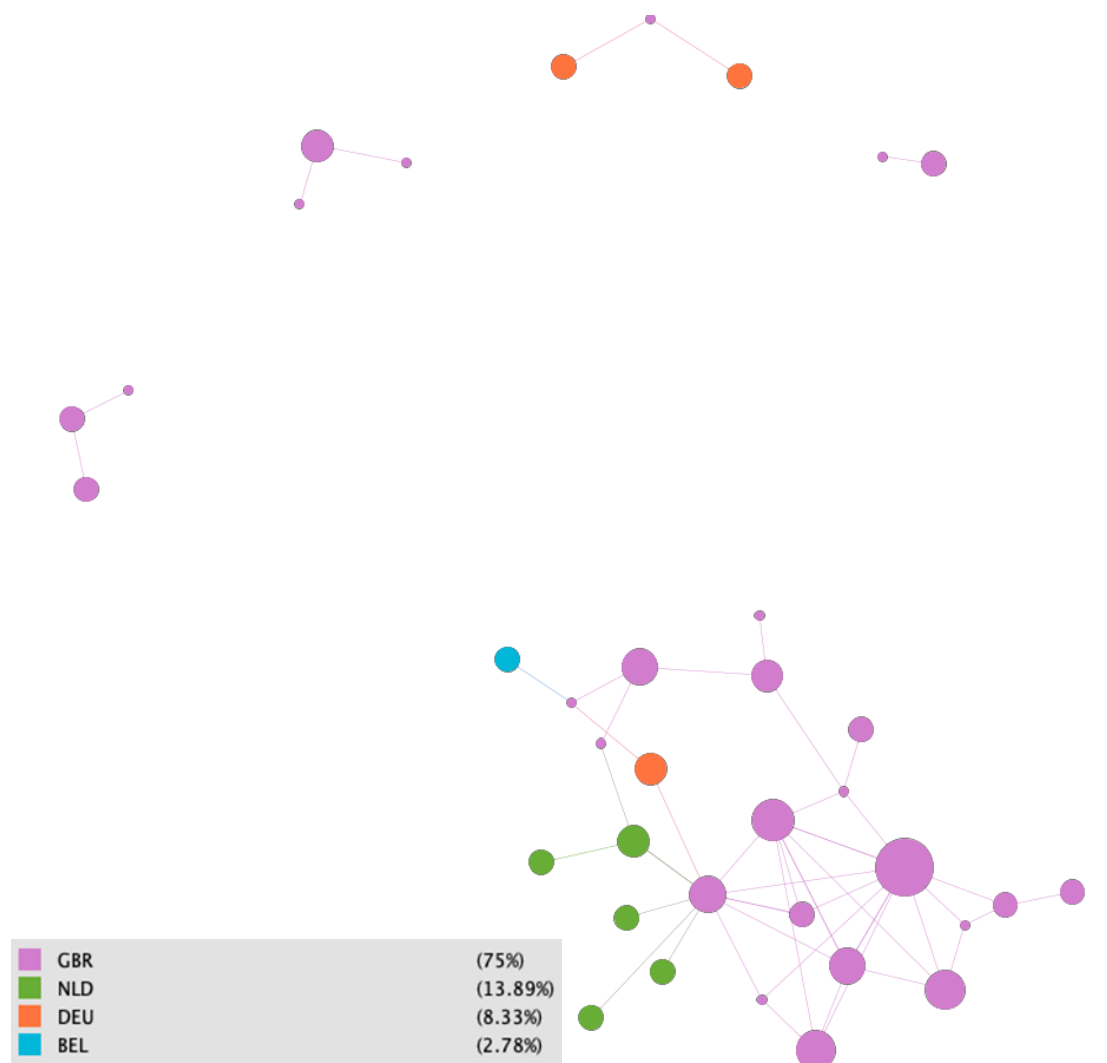|	GBR	(75%)
	NLD	(13.89%)
	DEU	(8.33%)
	BEL	(2.78%)

Figure 24: Geographic network mapping - IS sample

The second finding is that, unlike the RWE sample, there is a low level of transnationality within the IS network. IS sample accounts are connected to a small number of users from other DARE countries: Germany, Belgium and The Netherlands. A majority of the foreign accounts are 'dead nodes' - accounts which are isolated from the broader connectivity of the core network. Dead nodes are defined by their isolation from the interconnectivity we observe in the main body of the broader digital network and can indicate isolated sub-communities of individuals within a wider audience sample. Using the sub-communities of 2-3 nodes shown isolated from the main network in the visualisation as an example (see Figure 24), these European accounts do not act as conversation hubs within the IS sample network, and similarly do not connect European DARE networks with our IS network. Instead, these dead nodes would suggest these users act as a mouthpiece with reach limited to their isolated sub-communities and so only disseminating our IS sample's communication to their immediate users.

Interestingly, the non-UK accounts are some of the largest in the IS network with some being larger than accounts in the IS sample. Three of the European dead node accounts are only connected to the UK IS network by a single, smaller user. In this way, UK IS sample users with a small follower base are having a disproportionately large effect on 'foreign' accounts. Further analysis needs to be done to understand

why these IS sample accounts with a small following are the conduit between the UK IS network and other European accounts.

A third observation relations to source vs target interactions in the IS network sample. When decomposing the structures and nature of digital networks, one of the first stages of analysis is to clarify the distinction between 'source-points' and 'end-points'. These are useful classifications of the nodes of the network to indicate directionality and gauge the flow of information across edges and connection. A source-point refers to the entity that initiated a given network interaction form such as a retweet, 'mention' or 'like' while an end-point or 'target' denotes the entity who is the 'recipient' of a given interaction (for example, the user whose tweets are retweeted or whose handle is mentioned.) This classification is made on the level of every communication with a source and target and this approach is fundamental to understanding how extremist ideology or any form of information traverses the web of nodes that comprise networks.

Our IS sample shows more fragmentation between UK follower bases, with a central bundle of profiles following each other, while some small networks (between 2-3 users) exist in isolation with no link to the larger core group. The international connectivity in the IS sample is also considerably lower, with only a few overlaps with followers from the Netherlands, Germany and Belgium. This may be a result of a small number of accounts from these countries interacting with the UK accounts with the largest nodes (i.e Sheikh Ahmad Musa Jibril dedicated fan page accounts).

Finally, in relation to the transnationality of the IS sample, we noted already that the UK IS sample network has a limited level of overlap with accounts from Belgium, the Netherlands and Germany, but not with any of the other DARE countries. The accounts closest to our central, larger nodes are those that have been interacting (mentioning, liking, or retweeting) content from our Ahmad Musa Jibril dedicated accounts (which constitute the largest nodes in our sample). One Dutch account – with has not had any postings since 2015 - has a prominent position in our central network of accounts and featured on both the UK and the Netherlands' IS samples. The predominantly Dutch language account appears to be an advocacy campaign account aiming to raise awareness about an unidentified woman who had been arrested. However, this does not point to a complex 'transnational network' or 'milieu' of interaction between accounts in our sample. Topics engaged in between these accounts are not only those that pertain to 'sharing' Ahmad Musa Jibril quotes, but also towards collective advocacy or campaigning for 'perceived' social and human rights causes. Owing to the nature of jihadist account takedowns, removals and suspensions on Twitter, it follows that our IS network sample is less developed. As mentioned, jihadist accounts on Twitter have a short shelf life. For this reason, it is difficult to gauge how developed milieus or networks of radicalisation could become if the takedown rates were not as rapid.

5.2 On the retweet level
The following series of graphs show us which accounts retweet each other, in the process adding another layer of depth to our understanding of which users produce content most resonant with our sample. There are two conditions which must be met for a user to appear below: the person who is retweeting must be part of the UK country level sample, and the person who is retweeted must be part of the full DARE sample (any of the seven countries). Again, colours correspond to countries and the size of the nodes represents the indegree of the node, so the more an account is retweeted, the bigger the node.

5.2.1 The RWE retweet network
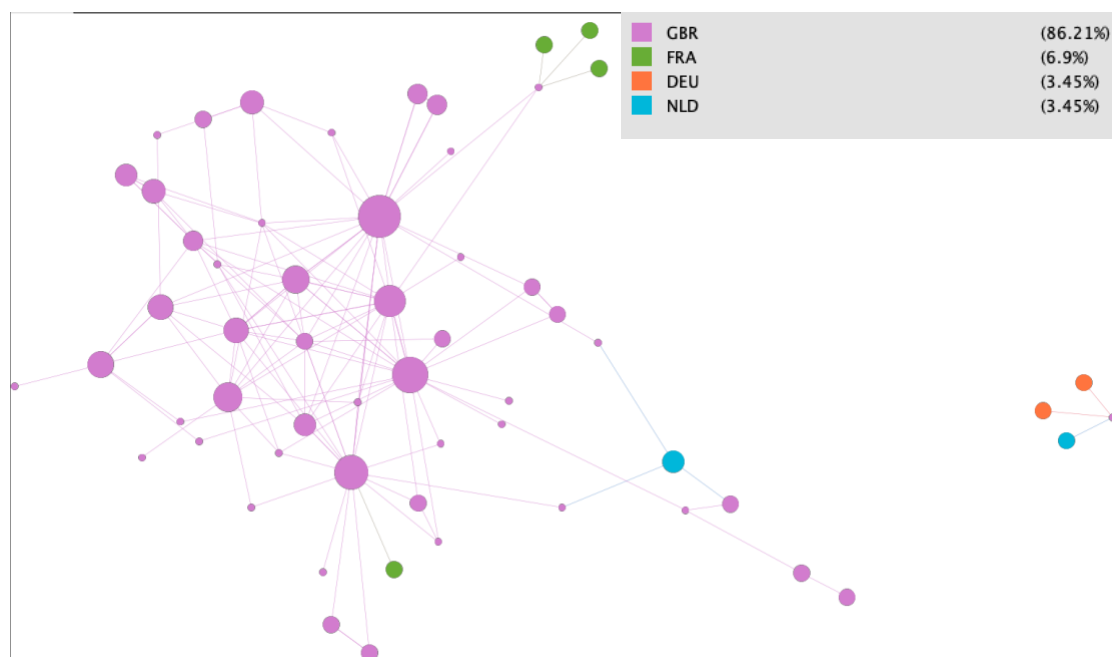Below, we can observe the retweet network of the RWE sample.

Figure 25: Retweet network map - RWE sample

The RWE retweet network is complex, and focused around a network of individual accounts. Rather than showing a focus on one or two prominent influencers (as we will see in the IS retweet network), the RWE network instead retweets a larger group of prominent profiles, who also retweet each other. The great deal of connectivity between the larger influencers corroborates the kinds of horizontal communication that we observe in other aspects of the sample's styles and directions of interaction.

The most retweeted account is that of LanaLektoff, which covers an international range of topics, including those related to the UK, which may explain the popularity of this account's content. There are three key themes in the accounts' tweets. First, the concept of 'white supremacy' as a misnomer used by the Left to oppress white people. The account argues against interracial relationships and the importance of protecting the purity of the white race. A second theme centres on discussions of the uncertain future for white children, particularly relating to societies' acceptance of LGBTQ+ identities and multiculturalism. Fixation on the future of white children is a hallmark of white supremacist ideology as illustrated by the 14 words, 'We must secure the existence of our people and a future for white children.' The final topic LanaLektoff focuses on is multiculturalism and diversity as negative forces within Western societies. By addressing these issues transnationally, LanaLektoff feeds into the white supremacist narrative of a global clash between white, Western identity and the racialised 'other.'

5.2.2 The IS retweet network

The IS network retweets are centered around fan-page accounts of Shaykh Ahmad Musa Jibril, a hugely popular figure within anglophone jihadist communities. The Michigan-born Palestinian-American preacher grew in popularity in the nineties with his website AlSalafyoon.com, which peddled anti-American and anti-Western sermons where he 'encouraged his students to spread Islam by the sword, to wage a holy war [and] to hate and kill non-Muslims' (Malik and Safi, 2019). The website ceased operations following his arrest and incarceration in 2003-4 (Business Insider, 2019). Many of his YouTube lectures and sermons are still widely available online, in contrast to radical preachers like Anwar Al-Awlaki (whose content has been effectively removed from most non 'dark web' platforms such as YouTube (Newsweek, 2019). Although he is not explicitly affiliated to an extremist group, his lectures and sermons help to

socialise and normalise a jihadist worldview to many online audiences around the world. In fact, in the wake of the London Bridge attack, it was revealed that the lead attacker in the three-man cell, 27-year-old Khuram Shazad Butt, was a regular viewer of the Palestinian-American preacher's sermons before he mowed down civilians and launched a stabbing attack in Borough Market (ibid.). It is not surprising that his popularity has generated countless fan pages and quote accounts. Preachers like Ahmad Musa Jibril utilise legitimate political and other grievances of the Muslim Ummah or community to shape an 'Us vs. Them' narrative - all too familiar to jihadist audiences in the online space. His lectures invoke Muslim oppression in Palestine and Syria in order to motivate audiences to take action against their oppressors. In the IS sample retweet network graph below (Figure 26), the largest nodes are accounts dedicated to the extremist cleric's quotes (names of actual accounts are removed to protect anonymity).

Nearly 40% of interactions (including retweets) between our IS sample are those that include these 'fan page' accounts. The lack of cross communication between the network of accounts in the IS sample may give us some insight into how Twitter is used by a jihadist audience, but again our sample size is too small to make broader generalisations. However, as discussed in previous sections, jihadist accounts have a short shelf life, with widespread takedowns prompting backup and secondary accounts. This indicates that communities or milieus of extremism are more easily prevented from fully forming on mainstream platforms such as Twitter and Facebook.
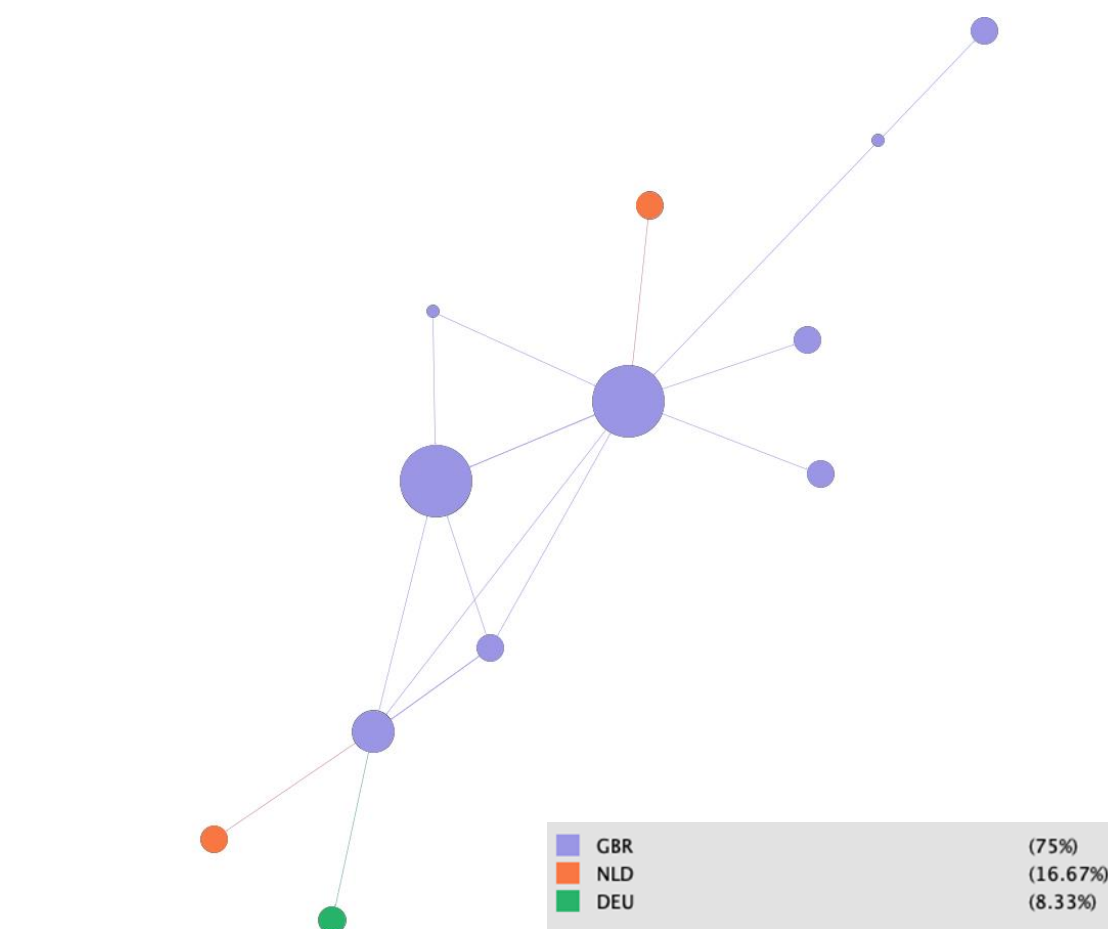

	GBR	(75%)
	NLD	(16.67%)
	DEU	(8.33%)

Figure 26: Retweet network map - IS sample

5.3 On the mention level

Mentions networks represent links between users who have 'mentioned' each other in one or more tweets. It can be assumed that the more a user account is mentioned in our sample, the higher their influence is within a network where users seek out particular users to fulfill requests for direction, information and ideology. Attempting to quantify the relevance of Twitter influence metrics such as retweets, mentions and likes is difficult; there are a broad range of interpretations with regard to the depth of support and sentiment that a particular interaction type conveys. That is to say that, when calculating an influencer score from a range of influence metrics, each variable is weighted with regard to the likelihood that this action denotes active support or resonance with the messages or account to which the interaction is directed. The results of these quantifications are presented below with a ranking of influencers according to this weighted influence formula applied equally over the RWE and IS audience samples.

This section will analyse user mentions within the identified RWE and IS networks to understand user reputations within the sample. Mentions are a mechanism to notify users of posts and can be understood in two ways. Firstly, mentions can be direct conversations between two people. Secondly, individuals may be mentioned by users to offer support, to challenge them, or to gain attention from them. A mention is signified with the @ symbol.

An analysis at the mention level can show if individuals within the networks acknowledge other users and actively interact with them. Identifying which users receive the highest number of mentions sheds light on the individuals most central to the online conversations and most acknowledged by others.

The size of the nodes on the graphs below demonstrates the frequency to which a user is mentioned; the larger the node, the more they are mentioned by other users. The thickness of the lines between nodes demonstrates the number of times the connected users have mentioned each other; the thicker the line, the more times they have acknowledged each other.

To contextualise the mention networks of the RWE and IS Twitter audiences, we employ terminology from the study of organisational communication in order to describe the channels and direction of correspondence between the Twitter profiles. Direction of communication is a common point of focus in the study of social movements, protests and new digital media like those analysed in this study (see: Kavada, 2013). The communication styles observed in our sample are characterised according to the definitions suggested by Bhardwaj (2009) as either: 'horizontal communication'; or 'vertical communication'. Horizontal communication is that which occurs between people of the same level and status in a network or hierarchy. In the context of this study, horizontal communication refers to mentions between individuals of a similar status in terms of popularity and prominence within the same sample and across other geographic networks. When examining the networks, this study distinguishes between internal horizontal communication among low ranking members of a particular network, and international horizontal communication between similar low ranking members in different geographic areas. Vertical communication refers to downward or upward communication between individuals of different ranks and positions within the same network. For this study, downward and upward vertical communication refers to mentions and communication between prominent influential groups and personalities and smaller individual profiles within the same geographic samples.

5.3.1 The RWE mentions network
The mention network for the RWE sample shows a significant amount of transnational overlap, Figure 27 illustrates a scattering of account interactions, as opposed to localised clusters of mention-based interaction. This indicates that accounts from different country samples interact with each other to a

much higher degree than found in the IS sample. This could be an indication that the RWE extremist sample is representative of users who interact with each other around common topics of interest, trending content and news. Those users falling under the GBR sample are highlighted in purple (Figures 27 and 28) and appear to often mention accounts from other countries with links appearing to Dutch, Norwegian and Greek accounts.
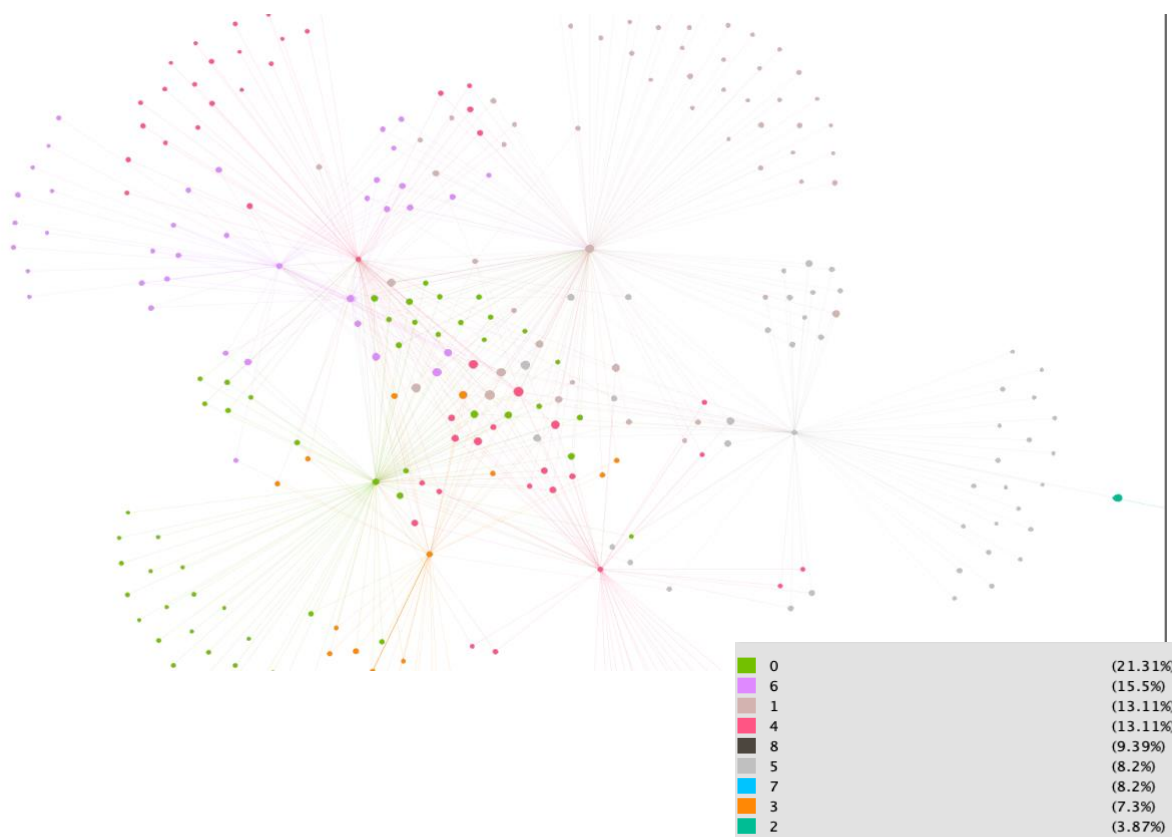

0	(21.31%)
6	(15.5%)
1	(13.11%)
4	(13.11%)
8	(9.39%)
5	(8.2%)
7	(8.2%)
3	(7.3%)
2	(3.87%)

Figure 27: Mention network map - RW sample

5.3.2 The RWE destination platforms

For the RWE audience, the most common link shared among users are links to other tweets in the form of retweets, accounting for 20,043 of the sample of tweets containing links. This is not surprising, as the retweet function is a core feature of Twitter's platform. However, it suggests that a great deal of activity and redirection amongst the RWE audience remains on Twitter itself.

The most common external destination for users is the Daily Archive, also known as whiteresister.com, which has 2,873 citations. The second most common external domain is YouTube, with 1,738 YouTube links embedded in the sample's tweets, followed by websites voiceofeurope.com (818), breitbart.com (541), and dailystormer.com (527).

For videos, the vast majority of content is shared by only a small proportion of users. A total 4,263 videos were shared across 67 accounts, but nearly 70% of the content was posted by just under 30% of the users.

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[13] Key for Figure 27: 0=NOR 1/5=FRA 2/13=DEU 3=NLD 4=BEL 6=GBR 7=GRC 8=Unknown

Of the top 20 user accounts, nine represent groups/organisations or established leaders and influential personalities, and the remaining 11 are individuals. The top three most prolific video sharers (the only three to post more than 200 videos) represent groups and influential personalities. The fact that 45% of the top 20 most active users are from group or influential personality accounts is significant considering that they only represent 15% of the entire sample. Additionally, all but one of the group or influential personality accounts are in the top 20 most active profiles. This shows that group and influential personality accounts are significantly more active across the sample, and are the main providers of content.

5.3.3 The IS mentions network

Conversely, the international mention network for IS sample accounts on Twitter displays a great deal of segmentation. Country networks are polarised and highly distinct from each other (see Figure 28). The pathways of interaction between the different country nodes infers a more horizontal to vertical line of communication, where members of a certain country sample mention and communicate vertically to a central profile. This central profile then communicates horizontally to similarly influential profiles from other countries who receive most - if not all - mentions from people within their respective sample.

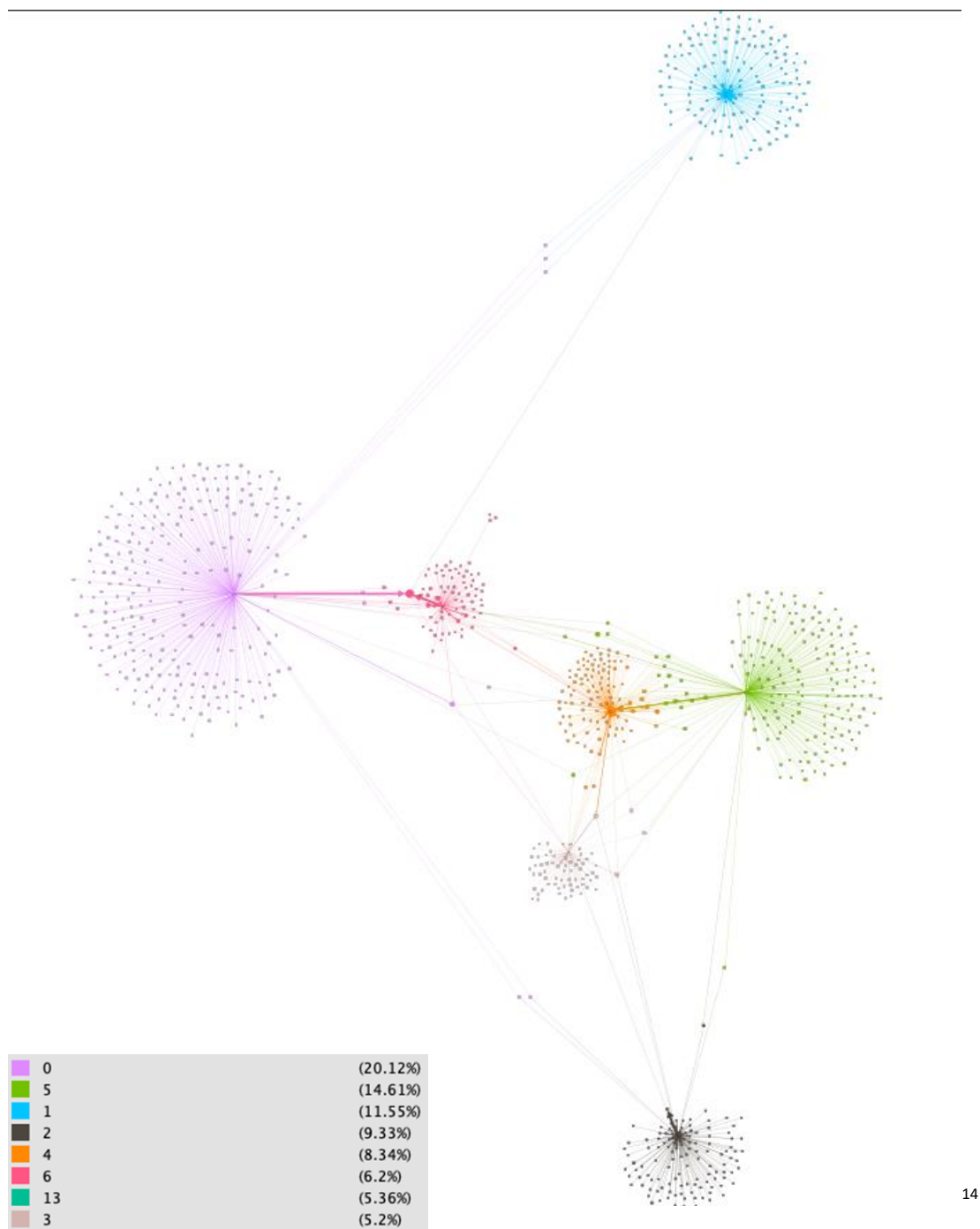|		
⬛	0	(20.12%)
⬛	5	(14.61%)
⬛	1	(11.55%)
⬛	2	(9.33%)
⬛	4	(8.34%)
⬛	6	(6.2%)
⬛	13	(5.36%)
⬛	3	(5.2%)

Figure 28: Mention network map - IS sample[15]

[14] Key for Figure 27: 0=GBR 1/3=FRA 2=Unknown 4=NLD 5=NOR 6=BEL 13=DEU
[15] Users in the sample who have not been mentioned at least once have been removed from the graph (in Gephi Indegree Filter).

5.3.4 The IS destination platforms

The mentions level for our IS sample is varied but indicative of the nature of accounts in our sample, several accounts share quotes and images of the radical cleric Ahmad Musa Jibril without engaging with each other. Interestingly, an account associated with Tommy Robinson is among the top in our mentions list. This may be a result of his prominence as part of British media coverage as a RWE anti-Islamic figure.

Mentions on a sample level

Within the mention network of our IS sample accounts, the majority of mentions are 'self-mentions' by accounts using the '@' functionality to self-reference their own handles in tweets (see Table 8). This reinforces the limited capacity of these accounts to form comprehensive 'milieus' or networks of connection. The use of 'self-mentions' could also be interpreted as an attempt to elevate status by including the user's handle alongside figures of influence, as a means of cataloguing tweets for easier retrieval and consumption by the audience, or as a basic attempt at self-promotion.

No. Of Sources	10
No. Of Ends	11
Total No. Of Mentions	42
Total Self-Mentions	29
% of Self-Referring Mentions as portion of Total Mentions	69.05%

Table 8: Mentions on a sample level

6. Conclusion

This report has summarised the results of a number of analyses designed to describe jihadist (IS) and Right Wing Extremist (RWE) accounts and networks on Twitter in the United Kingdom. To this end, we first identified Twitter accounts that qualified as communicating such ideologies based on the match between the content of the user Twitter contributions and a number of predefined criteria. We then set out to describe the general characteristics of the sample, the presentations of the individual tweeters in the sample, the nature of the debate including thematic content and events that were discussed and influencers. Finally, we used network analysis to describe the interactions between the tweeters.

Although we searched for relevant Twitter accounts using a variety of criteria, many of the identified accounts were eventually selected on the basis of a limited set of characteristics. This was in part due to rapid takedowns of the most radical accounts; this reflects changing policies of social media giants such as Twitter. In line with the general aim of the research, Islamophobia was a common characteristic across the right-wing sample. However many other attitudes were observed, often more prominently, and used to justify account inclusion in the sample. These topics included anti-immigration attitudes, anti-EU attitudes, anti-political correctness, and anti-political establishment and anti-mainstream media sentiments. These features are similar to the characteristics of the alt-right movement described by VOX-Pol in a recent research report to describe the Twitter activities of this movement (Berger, 2018). This may be a reflection of the recency bias which effects social media studies such as ours. In this case 'recency bias' refers to the erosion of accounts over time due to suspensions, platform migration and drops in user

activity. This limits our study to an assessment of the picture at the time of data extraction only. We did not find any indications of overt violent intent in our samples, this is unsurprising given overt expressions of hostility and aggression may result in the suspension of an account (Twitter, 2016), it does however indicate that our sample does not represent the IS or RWE portions of the audience that may have been active before data collection, and deleted since.

The accounts we were able to capture did demonstrate some interesting behavioral divergences. Throughout the network analysis and review of user self-presentation it became clear that the behaviour of RWE users is more transparent, interactive and overt. For example, bios were often used by the sample to stake a claim of belonging to a specific in-group, or to position the account as being in direct opposition to a named out-group. These behaviours are a direct contradiction to those of the IS audience; a sample of users far less overt in stating their beliefs, and less engaged with other users. This is reflective of migration away from Twitter among this user base and provides a strong case to consider alternative platforms in future research.

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