

Jihadi Video & Auto-Radicalisation: Evidence from an Exploratory YouTube Study

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Abstract. Large amounts of jihadi video content on YouTube along with the vast array of relational data that can be gathered opens up innovative avenues for exploration of the support base for political violence. This exploratory study analyses the online supporters of jihad-promoting video content on YouTube, focusing on those posting and commenting upon martyr-promoting material from Iraq. Findings suggest that a majority are under 35 years of age and resident outside the region of the Middle East and North Africa (MENA) with the largest percentage of supporters located in the United States. Evidence to support the potential for online radicalisation is presented. Findings relating to newly formed virtual relationships involving a YouTube user with no apparent prior links to jihadists are discussed.

Keywords: jihad, jihadi video, martyr, YouTube, Iraq, online radicalisation, auto-radicalisation

1 Introduction

Jihadists increased virtuality post-9/11 inspired one analyst to coin the descriptor “al Qaeda 2.0” [1] and another to liken jihadis deployment of cyber-based tools to their own “stealth ‘revolution in military affairs’.” [2] Much of the original online jihadist content was text-based, either in the form of traditional websites with a heavy reliance on text or more dynamic Internet message boards and forums. However, technological advances, particularly the increased availability of sophisticated, but cheap and easy to use video capturing hardware (e.g. hand-held digital video cameras, mobile telephones, etc.) and editing software meant that moving images began to play a much greater role in the jihadists information strategy from 2003. Nevertheless, much of this video content remained quite difficult to access for Westerners and others as it was located on Arabic-only websites, many of which were also quite unstable in terms of changing their URLs regularly, and were therefore trafficked only by those who were strongly committed to gaining access to such content on a regular basis and prepared to bear the time and other costs consequent upon the above. The establishment of YouTube and similar video-sharing sites, on the other hand, brought about a democratisation of access to jihadi video content as a result of the significant decrease in costs they introduced. Not only did YouTube become an immediate

Jihadi Video & Auto-Radicalisation

repository for large amounts of jihadist video content, but the social networking aspects of the site also facilitate interaction between those who post video and those who comment upon it thus opening new possibilities for a.) radicalisation via the Internet, but also b.) empirical analysis of same.

2 Related Work

Post-9/11 there was a marked increase in research on al-Qaeda and related organisations—here referred to as jihadists—including their Internet-based information strategies. Much recent work in this area considers online content produced by jihadists and their supporters, [3] with a particular emphasis on the content of jihadist video and the identification of various genres of same. [4], [5], [6] The question that then arises is the impact of this content on audiences, a matter which has seen a recent upsurge in interest on the part of both policy makers [7], [8], [9] and funders [10] [11] seeking to learn more about processes of violent radicalisation, particularly the possibility of ‘self-radicalisation’ or ‘auto-radicalisation’ via the Internet. While there are a number of examples of individuals who have claimed to have used the internet extensively in the process of radicalisation (e.g. Hussain Osman, one of the London bombers, claimed to have been influenced by watching video footage of the conflict in Iraq along with reading about jihad in an online environment), there is a dearth of published academic research addressing this issue. While there are several good reasons why this may be so, probably the most pressing problem faced by researchers in this domain has been the difficulty of accessing fora where individuals might be radicalised and tracing the process as opposed to exploring dedicated jihadist forums. Specifically, Bruce Hoffman has criticised Marc Sageman, in his *Leaderless Jihad*, for neglecting to employ social network theory and associated methods to evidence his argument as to al-Qaeda’s present structure, which Sageman claims is largely horizontal/bottom-up rather than hierarchical. [12] [13] In this paper, we explore the feasibility of utilising social network tools to investigate the possibilities of auto-radicalisation via the Internet not through analysis of jihadist sites *per se*, but exploration of a global portal through which anyone can access jihadist content.

3 Methodology

The purpose of the present research is to evidence the possibility that the functioning of Web 2.0 facilitates radicalisation of youth with and without prior inclination toward jihadist activity, which is distinct from traditional online information provision strategies targeted, as Sageman asserts, at “already made-up minds.” [13] The focus is on those posting and commenting upon martyr-promoting material from Iraq. It was undertaken in order to assess the feasibility and usefulness of carrying out a considerably larger study of supporters of jihadi video content on YouTube utilising both content analysis and network analysis techniques with a view to contributing substantive empirical research to the debate on online radicalisation.

3.1 Why YouTube?

YouTube was established in February 2005 as an online repository facilitating the sharing of video content. YouTube claims to be the “the world’s most popular online video community.” [14] Independent evidence of leadership in the online video sharing market is provided by a 2007 report from the Pew Internet and American Life Project, which put the percentage of US online video viewers using YouTube at 27%, ahead of all other video sharing sites. In the 18 to 29 year old age groups, this leadership is even more pronounced with 49% of US online video viewers using YouTube. [15] In fact, *CNNMoney* reported that in January 2008 alone, nearly 79 million users worldwide viewed more than three billion YouTube videos. [16] As far back as August 2006, *The Wall Street Journal* estimated that YouTube was host to about 6.1 million videos, and had about 500,000 user accounts [17] while, according to Wikipedia, by April 2008 YouTube acted as host of over 83 million videos and 3.75 million user channels. [18]

Registered users can easily upload video content to YouTube, while casual users can search for video content using categorical and keyword search facilities. Links to material can be posted on other websites to direct one to content on YouTube. Registered users can choose to broadcast to all other users or a select group. Along with uploading and viewing video content, registered users can create their own dedicated page/profile, save favourites, create and share playlists, and rate and comment on all YouTube content. All user activity on YouTube is free of charge.¹

YouTube was the platform chosen for analysis due to:

1. the global appeal of the YouTube site in conjunction with the proliferation of easily accessible jihadi video content posted
2. the demographic data provided by posters
3. the extensive commentary from viewers on both videos and individual profiles
4. the potential for analysis of links to friends, group memberships, subscription to channels, and similar.

A focus on YouTube allows one to track the whole range of this data over time, which permits longitudinal analysis, including content analysis, dynamic network analysis, and so forth.

¹ Registered users—individuals and groups—can broadcast without any pre-publishing censorship; however, any user can easily flag content as inappropriate simply by clicking a link provided on every video’s web page. The website ‘Terms of Use’ indicate types of content YouTube deem inappropriate, including “bad stuff like animal abuse, drug abuse, or bomb making.” Nor is the posting of “graphic or gratuitous violence” said to be permissible: “If your video shows someone getting hurt, attacked, or humiliated, don’t post it.” [19] Once a video is flagged, YouTube say that the content is reviewed by YouTube administrators, with immediate removal of content that blatantly violates YouTube’s terms of usage and ‘over 18’ access restrictions put in place in cases where the video content remains online, but is deemed inappropriate for access by those under 18 years of age.

3.2 Data Collection

Due to the vast amount of jihadist video available, it was necessary in this instance to narrow this exploratory research to martyr-promoting content arising out of conflict in Iraq. It was also decided to use fairly basic search terms that might occur to any young person with exposure to mass-media coverage of contemporary jihadist activity. Thus the keywords chosen for searching for appropriate material via the YouTube search facility were *Iraq* and *Martyr*. The Arabic translations of the word 'martyr', such as *shahid* and شهِيد, were also utilised and paired with the keyword 'Iraq'. All returned results were reviewed to exclude material not deemed pertinent to this study. All material mocking jihad and martyrdom was, for example, excluded. All the remaining content (n = 240) was, in one way or another, supportive of martyrdom and included videos hailing and praising individual martyrs, pre-martyrdom recordings, funerals of martyrs, and explicit calls to martyrdom.

The present analysis is based upon a random sample of 50 of these videos, accompanying comments and user data from those who posted material and those who chose to comment. The videos in this sample of 50 were posted by 30 individual users and were commented upon by 940 separate users for a total of 1443 comments in all, as of July 2007. Each of the 50 videos was viewed and categorised using content analysis techniques. Details including YouTube user ratings (rate), number of ratings, number of views, and number of comments were recorded for each video. Videos were ranked according to the number of views.²

Discourse and content analysis techniques were employed to review all 940 users' comments and individual profiles in order to categorise each as a 1.) 'supporter,' 2.) 'critic,' 3.) 'neither,' or 'impossible to determine.' Users were only categorised as a supporter when there were explicit statements of support for jihad-related activity. Users were categorised as critics when there was evidence of a clear challenge to those posting or supporting the videos, or hate speech targeted at Muslims. Postings that contained text that did not clearly fit the supporter or critic categories were assigned to the third category. Demographic details were manually extracted from all user profiles, including age and current location. Additional demographic details were obtained from text contained within user profiles (e.g. national or ethnic markers).

All data was input to ORA Dynamic Network Analysis software [20] for evaluation purposes. This resulted in the identification of several key actors and cases, one of which is detailed below.³

4 Results and Discussion

Presented in Table 1 are the top ten videos in terms of number of views. Rate refers to the average rating given by those who chose to rate each video. As can be seen, 50%

² On a more recent review of these videos, it was found that thirteen are no longer available for viewing on YouTube with ten removed for violation of YouTube Terms of Use and the remaining three removed by those who posted the content.

³ A manual 'crawl' identified linked actors and associated data for the purposes of the case study.

Jihadi Video & Auto-Radicalisation

of the top ten are videos hailing individuals as martyrs, while a further 30% contain footage of suicide bombings.⁴

Table 1. Top ten videos in terms of number of views

Rank	Description	Rate	Number of ratings	Number of views	Number of comments
1	Footage of suicide bombing	4	240	196626	814
2	Martyr hailing	4	302	173810	211
3	Funeral of martyr	4.5	88	86917	144
4	Martyr hailing	4.5	144	68486	207
5	Martyr hailing	5	54	55330	78
6	Footage of suicide bombing	4.5	27	44637	88
7	Martyr hailing	4	97	41070	142
8	Call to martyrdom	4.5	76	34142	133
9	Footage of suicide bombing	4	37	30838	102
10	Martyr hailing	5	51	26108	61

There are many different aspects of the data collected that could be reported upon here, but due to space restrictions it was decided to focus primarily upon issues deemed to be those most germane to the radicalisation process: demographic information, including age profiles and geographical location information, and the presentation of individual case findings. Identifiers used in the presentation of results have been altered to disguise YouTube user names.

4.1 Age Profile

Here 'Age' refers to the 'age' given by individuals in their personal profiles on YouTube. Means, ranges and percentages relate to those who displayed their age on their profiles. The default setting is to display age information—it is necessary to change profile settings to hide age—thus the majority of users (89%) displayed age details. The age of those who posted material analysed within this study ranged from 18 to 72 years. The mean age was 27.9 years, while 85% fell within the 18 to 34 age bracket. The age of supporters ranged from 15 years to 72 years, with a mean age of 26.7 years. Some 86% of supporters were within the 18 to 34 years range.

According to figures presented by YouTube in the promotion of advertising in August 2007, and since removed from the webpage concerned, they claimed that only some 19% of their total users fall within the 18 to 34 year old age group, resulting in a dramatic 67% difference between YouTube's expected numbers for 'average' users in this age range and those supporting martyr-promoting content. There are a number of

⁴ Important to note is that the data contained within Table 1 is data collected during August 2008, hence the number of comments has increased somewhat since the recording of comments for analysis in July 2007.

Jihadi Video & Auto-Radicalisation

possible explanations for this difference. One of the most likely is that people are lying about their ages. Certainly some profiles contain spoof information: it is unlikely that both *NU0159* and *SU0331* are 107 years old. There is one particularly compelling reason for some YouTube users to lie, however: individuals must be over 18 to view content that has been flagged by other users as 'inappropriate'. It is possible therefore that many within the 18 to 34 year old category are actually under the age of 18 years as over 13% of the martyr-promoting videos that remain on YouTube, as of August 2008, were accessible to over 18s only.

4.2 Geographical Location

'Location' refers to the current 'location' stated by individuals in their personal profiles on YouTube. Percentages are based on the total that displayed location on their personal profile, which amounted to 75% of the sample. Table 2 shows the top five locations in terms of the number of commentators.

Table 2. Top five locations in terms of number of commentators

Rank	Location	Percentage of commentators
1	United States	35%
2	United Kingdom	17%
3	Canada	8%
4	Australia	4%
5	Germany	3%

More than half the commentators were located in the United States and the United Kingdom alone. In terms of supporters, the dispersal was not radically different. Eight percent of supporters claimed to be located in the Middle East and North Africa (MENA). Of the 92% that were located outside MENA, 3% were located in Indonesia, the world's most populous Muslim-majority state. Together the top five countries in terms of supporters (see Table 3), all Western, account for 76% of all support. Eight percent of support originated in sub-Saharan Africa. Interesting to see is that the top five, in terms of commentators and supporters are the same except the switching of Germany and Australia in ranking. Even more interesting is that both the United States and Germany have a higher proportion of supporters when compared to that of commentators.

Table 3. Top five locations in terms of number of supporters

Rank	Location	Percentage of supporters
1	United States	42%
2	United Kingdom	15%
3	Canada	8%
4	Germany	7%
5	Australia	4%

Jihadi Video & Auto-Radicalisation

Supporters of martyr promoting video content in the context of Iraq are geographically dispersed. At least one individual claimed to be on Bouvet Island, which is generally accepted as uninhabited by humans! Interestingly, only 3% of supporters claim Iraq as their current location. Perhaps more surprisingly, just 19% of those who posted martyr-promoting material related to Iraq, identified Iraq as their location. In fact 15% were located in the United Kingdom, while 12% were located in the United States. This means that either users are not accurately stating their location or video content is circulating through online social networks. The latter is the more likely explanation as there seems no logical reason to lie about being within Iraq, unlike a situation where users are located in territories where they perceive a more 'big brother' type scenario is operating in terms of online surveillance. *SU0590*, who identifies himself as a Pakistani engineer with an MBA in Marketing, comments on the geographical dispersal of the 'mujahedin':

“in american army there are only americans, in russian only russians and israel only israelis, but among muslim mujahideens, there are men of faith from across the globe, from bangladesh, from pakistan, from uae, from saudi arabia, from sodam, from uk, from usa, from chychinia, from indonesia, from scotland, from germany all over the world, this is true brotherhood” [sic]

SU0590's list of locations largely concurs with the findings of this study. Australia and Sweden are the noted exceptions.

This leads to the question of the extent of diaspora support. It is difficult to estimate accurately the extent that support from those located in the West is from members of the MENA diaspora. However, from analysis of the commentary, some evidence has emerged. For example a 26 year old located in Australia, claims in his comments that he is originally from Gaza, that he moved to Australia one year previously and that he fought for Hamas from the age of 15. User *PU0789* while one year ago claiming to be located in Austria now claims to be located in Iraq. One may ask why a user would deliberately change their profile to claim a new location. Possible is that this poster of video content is now in Iraq. Of course there is no way to verify such claims without data such as IP addresses used for access to YouTube. *NU0542*, who identifies himself as a 39 year old based in Sweden, has amongst his favourite videos three soccer matches, all featuring the Algerian national team, while *SU0860*, a 26 year old based in the UK, also displays links to Algeria within his personal profile. Strong support was seen from those located in Sweden relative to population size, though this may be explained by the influx of Iraqi refugees in recent years. In 2007, Sweden was estimated to be accepting approximately 1,000 refugees per month from Iraq, though the majority of these were reported to have been those who had aided MNFI forces in some way [21].

4.3 Individual Case Findings

While a larger scale research project is underway to perform network analysis on the data collected, limits to this paper prevent all findings to date being presented. A

Jihadi Video & Auto-Radicalisation

number of what may be described as key actors have already been identified through network analysis techniques. The following is simply one of a number of cases worthy of discussion.

On viewing the profile of *SU0798*, a twenty-seven year old located in the Netherlands, nothing alarming in terms of support for martyrdom or jihad was obvious. Analysis of *SU0798*'s comments on various videos illustrate a somewhat different picture, however, with comments including:

“in your dreams, you have no idea what islam is. Islam will take over teh world, you just wait and see. Every year about 20 000 americans become muslim, you should get rid of your idea and find the real truth. America will be concured from within. Allahu Akbar la illaha illa ALLAh” [sic]

On further scrutiny of *SU0798*'s profile, a comment can be found made by *NU0958* citing his admiration for Islam and his wish to convert. *NU0958* is a twenty-one year old rugby fan located in Ireland. From comments made on his profile it is claimed that he is about to pursue a named university degree shortly. One day later *NU0983* also located in Ireland posted “You’ve got to be joking about what ye said on [*SU0798*]’s page about wanting to convert to Islam !” on *NU0958*'s profile. On analysis of all commentary on *NU0958*'s profile, including linkages to other YouTube users, it was revealed that he had two new friends posting numerous comments within weeks of publicising his wish to convert. These friends included *NU0977* and *NU0991*.

NU0977, a student of medicine at a prestigious United Kingdom university talks about family links in Egypt and claims that he doesn't like al Qaeda. Upon following links to his YouTube subscriptions however, it is clear that he subscribes to more radical views than claimed when communicating with *NU0958*, the Irish rugby fan. *NU0977*, also a rugby fan and a fan of Zinedine Zidane the former French soccer player of Algerian descent, as evidenced by his favorite videos, has in less than five months since opening his YouTube account watched 8278 videos, has 583 subscribers and 28,752 channel views. His playlist contains 110 ‘Convert to Islam’ videos, 127 ‘Israel the Terrorist’ videos, 45 ‘9/11 is a lie’ videos.

The second new acquaintance of the Irish rugby fan, *NU0991* claims to be a 15 year old United States based female whom appeals to the rugby fan not to tell anyone about her real age in case it causes her not to be taken seriously. Extensive commentary on her YouTube channel with almost 1500 comments in just eight months since launching her account coupled with statistics like 2819 videos watched, 27 subscribers, 7660 channel views suggest a very busy 15 year old. Her profile contains a hyperlink to a number of external websites including one that accepts donations for ‘the cause.’ While *NU0991*'s profile and commentary suggests the preaching of moderate Islam, further scrutiny of linkages from her profile suggest a well organised mission to not only convert westerners to Islam, but also links to radicals. Not only are *NU0977* and *NU0991* friends on YouTube, but they are both members of a 600+ member group with a mission to convert ‘infidels.’ Notable is the previously cited claim from *SU0798* that 20,000 Americans are converting to Islam every year along with his belief that America will be conquered from within. On a

Jihadi Video & Auto-Radicalisation

random selection of 20 members of the 600+ member group, five profiles claim recent conversion to Islam.

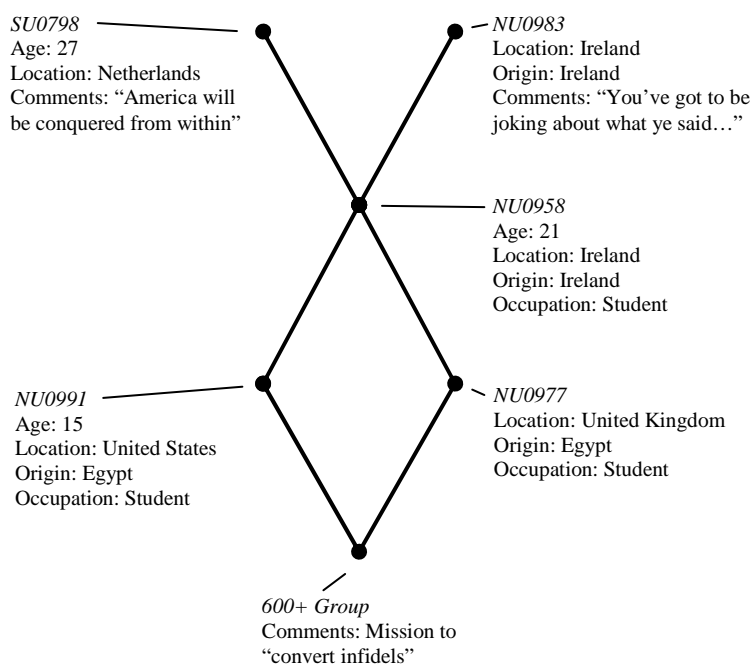


Fig. 1. Partial Network Visualisation of Case Study

This single brief case study is illustrative of the possibilities that are presented by Web 2.0 applications that integrate information provision functions with social networking (See Figure 1). *NU0958* went from browsing a generic website to suddenly being integrated into a specific network by virtue of a single posted comment. Essentially, he was targeted by heavy users, with radical links, whose aim at a minimum was religious conversion. *NU0958* was not, following Sageman, a "made-up mind" [13] but instead a young person who has the potential to become exposed to radical thinking as a result of Internet browsing practices that literally tens of millions of young people engage in every day.

5 Conclusion

The main findings of this study are that the vast majority of those who posted martyr-promoting video on YouTube and those who supported this content were in the 18 to 34 year age bracket, 85% and 86% respectively. While one may accept that the majority of YouTube commentators are located in the West, one may also expect that the vast majority of support would be from the MENA region. In fact, to the contrary, the vast majority of supporters are located outside the MENA region, with 76% in just five Western countries, led by the United States with 42% followed by the UK with 15% of all supporters. Notable is that the percentage of supporters is higher than the percentage of commentators for two of these Western countries, the United States and Germany. In other words they have a higher proportion of supporters than those that just provide commentary.

With regard to the case study, of course one cannot claim with certainty that the Irish rugby fan is being radicalised. Perhaps he is simply on the path to conversion to Islam; on the other hand, his remarks although attracting attention may have been insincere. Nevertheless, *NU0958*'s experience is evidence of the potential for online radicalisation of those with no apparent prior links to jihadists.

As previously stated, this research is merely an exploratory study to evaluate the feasibility of a larger scale project to explore the support base for political violence amongst the online audience of jihad-promoting video content on YouTube. It is only with the proposed larger sample and more in-depth analysis that one can come to more concrete conclusions. One must therefore err on the side of caution in relation to the conclusions of this study. While a considerable amount of data was analysed, this remains a relatively small exploratory study. What is clearly evident however is that jihadist content is spreading far beyond traditional jihadist websites or even dedicated forums to embrace, in particular, video sharing and social networking—both hallmarks of Web 2.0—and thus extending their reach far beyond what may be conceived as their core support base in the MENA region to diaspora populations, converts, and political sympathisers.

With this focus on the potential for bottom-up radicalisation, we do not mean to discount Hoffman's argument regarding the continued importance of top-down activity. [12] Quite clearly there are two separate, but overlapping processes at work here, top-down and bottom-up, and operating at multiple levels. With regard to top-down activity, for example, it can be viewed as facilitation of real-world violence with respect of "already made-up minds" [13] while in the present case it may simply refer to the online targeting of vulnerable youth without prior interest in jihadism by those with radical views. Bottom-up activity, on the other hand, can encompass all individual consumption of jihadist materials online, whether via targeted searching and selection or random browsing.

What can be concluded with certainty is the feasibility of using mixed methods such as content analysis and network analysis of the available data over a time period, which can be utilised to explore the support base for political violence on YouTube. A larger scale analysis can be used to trace linkages from the most significant actors identified within the network and endeavouring to present more concrete findings in terms of the extent of radicalisation efforts related to the viewing of jihad-promoting video.

Jihadi Video & Auto-Radicalisation

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