

## Fishermen or Swarm Dynamics? Should we Understand Jihadist Online-Radicalization as a Top-Down or Bottom-Up Process?<sup>1</sup>

Till Baaken<sup>a2</sup>, Linda Schlegel<sup>b</sup>

<sup>a</sup>Research Fellow at the Violence Prevention Network e.V., <sup>b</sup>Junior Analyst at Global Risk Insights

### Abstract

The internet has profoundly changed the way we communicate, including how jihadist groups seek to reach Western audiences with their propaganda strategies. Cases of believed online-radicalization call for a re-evaluation of radicalization processes, previously thought to depend on face-to-face interactions. Based on the Hoffman-Sageman debate on whether top-down or bottom-up processes drive terrorism, this essay explores both social movement and organizational approaches to understand online-radicalization. Do jihadist organizations such as Al-Qaeda and IS act as ‘fishermen’, actively engaging in the radicalization processes of individual recruits, or is radicalization driven by social group dynamics with little organizational involvement? Essentially, the larger question is: What role do organizational structures play for radicalization in times of ‘virtual jihad’? Bottom-up radicalization processes are facilitated online, because the conditions for Sageman’s ‘bunch of guys’ are replicated by the characteristics of virtual communication: an echo chamber effect causes frame-alignment through repetition and enables ‘digital natives’ to communicate claims that resonate with other ‘digital natives’. Top-down structures are influential, because organizations continue to employ sophisticated propaganda development, preachers and special recruiters or ‘fishermen’. The article finds evidence for both schools of thought and concludes that the internet facilitates both types of radicalization mechanisms. Only a holistic strategy will be successful in battling online-radicalization and must include both targeting direct channels through which the organizations execute control over recruits, and breaking the echo chamber created by social movement dynamics in the virtual world. While countermeasures need to include the provision of alternative social narratives and the utilization of ‘digital natives’ to make counter-messages more effective, organizational structures need to be tackled simultaneously, not only by identifying and arresting preachers and recruiters, but also through stronger internet governance tools and collaboration with social media companies.

### Article History

Received Oct 18, 2017  
Accepted Dec 3, 2017  
Published Dec 29, 2017

**Keywords:** Online-Recruitment, Online-Radicalization, Hoffman, Sageman

### Introduction

The last decade has brought about the rapid spread of information technology and social media. This development has had a large influence on Western societies as a whole

<sup>1</sup> All views expressed are the authors’ own and neither endorsed nor supported by their affiliated organizations. We thank our anonymous reviewers for their valuable input and Claire Kelly for her assistance.

<sup>2</sup> Corresponding Author Contact: Till Baaken, Email: [till\\_baaken@web.de](mailto:till_baaken@web.de), Twitter: @tillbaaken

---

given that about 90% of Western populations are estimated to be able to connect to and use the internet (Sageman, 2008). Unsurprisingly, the internet not only transformed regular day-to-day interactions, but extremist groups such as jihadists seek to use the new connectivity in the world for their purposes. While various studies on the content and organization of extremist groups in the online sphere have been published in recent years (Brandon, 2008; Musawi, 2010), processes of online-radicalization remain conceptually and practically elusive. This essay seeks to uncover certain mechanisms by which the internet facilitates the radicalization and recruitment processes into jihadist organizations. This is not to suggest that technological change has impacted religious extremism more than other forms of extremism (Wilkinson, 2016; Bartlett and Litter, 2011), but the popularity of the so-called Islamic State (hereafter IS) and related online content has made a discussion on jihadist online-radicalization more acute than for other ideologies. Specifically, so-called ‘homegrown’ jihadists are believed to increasingly come in contact with jihadist ideology and groups online and pose a threat to Western societies. Arguably, “homegrown groups were responsible for 78% of the jihadi terrorism plots in the West from 2003 to 2008” (King and Taylor, 2011, p. 603) and have continued to pose a danger with the increased prominence of IS. This is especially true in the online sphere as “the internet has featured one way or another in each homegrown jihadi terrorist plot since 2002” (King and Taylor, 2011, p. 618). This makes a discussion on the features and processes of online-radicalization an important aspect of preventing and countering the spread of violent extremism. While there is ample discussion on the classification of attacks, such as distinguishing between directed and inspired attacks (Yourish, Watkins and Giratikanon, 2016), it is likely that whatever type of attack was carried out, some form of radicalization preceded the attack. This radicalization is increasingly believed to be influenced by social media content. Only by understanding how both extremist groups and individual users engage with propaganda supplied online and which factors facilitate online-radicalization, can effective measures be developed.

The classical debate in sociology between structure and agency or the importance of organizations as opposed to individual socializations, is mirrored in terrorism studies by the

‘Hoffman-Sageman’ debate. While Hoffman (2006) postulates that the driving forces of extremism and terrorism are the organizational top-down structures of, for example, Al Qaeda and IS, Sageman (2004) identifies social group processes as facilitating extremism in a bottom-up manner. Based on these competing *foci*, this essay explores both bottom-up and top-down features of online-radicalization displayed by jihadist groups, ranging from the dissemination and discussion of propaganda without direct involvement of the group to active one-on-one recruitment. It is discussed to what extent recruitment efforts should be characterized as ‘fishermen’ actively seeking and engaging with potential recruits or as “jihobbyists” (Neumann, 2013, p. 435) relying on flat, non-hierarchical peer-group dynamics facilitated by the properties of social media to enable recruits to find them rather than vice versa. In other words, this essay is concerned with the relative importance and role of terrorist organizational structures in times of ‘virtual jihad’. The question whether agency lies with the group itself or individual members is likely to impact which responses to the growing concern about online-radicalization can be expected to be effective. Even if IS is currently declining, learning how online-radicalization is approached in the context of jihadist groups, is beneficial to increase our knowledge on the phenomenon as a whole. In addition, applying and re-evaluating established theories to new developments can enhance our understanding of terrorist evolution and adaptation over time.

Firstly, the reader is provided with relevant background information and definitions of concepts used throughout this work. Secondly, bottom-up and top-down features of online-radicalization are discussed in turn and implications countermeasures are suggested. Lastly, a conclusion is provided.

### **Methodology and Limitations**

The article employs secondary literature to assess the mechanisms of top-down and bottom-up radicalization processes in the online realm. It is a theoretical application of established theories supported by short examples. The aim of this work is not to explain

online-radicalization or resolve the controversy in the field around the issue. Rather, we seek to show that the current academic divide between those emphasizing Sageman's line of thought and those adhering to Hoffman's claims is artificial and that, in fact, both are at play in the virtual world. We present a system-level analysis rather than in-depth discussion of individual cases to show overall trends and processes at play regarding online-radicalization.

A clear limitation of this as well as most other studies on online-radicalization is the lack of empirical data. Not only is online-radicalization a relatively new phenomenon, it is difficult to detect and analyze individuals radicalizing in the virtual world before they acted upon their violent ideology or became otherwise known to law enforcement personnel. While first-hand accounts, such as the blog of Jake Bilardi, exist sporadically, these writings must be used with caution. Firstly, an individual may not be aware of all the factors driving his or her radicalization processes and may therefore produce little more than clues for qualitative analyses. Secondly, retrospective testimonies may be impacted by more current thinking. For example, it is possible that an individual explains their radicalization with reference to a religious calling and subjectively believe that this was the driving force, whereas other factors such as isolation or the role of recruiters were present, but may be played down in their first-hand account. It is generally very difficult to find or produce data for an analysis of online-radicalization, which corresponds to academic standards. In addition, it needs to be stressed that radicalization is a phenomenon influenced by a multitude of factors, which differ in intensity and importance for each individual. It may be impossible to retrospectively prove whether online or offline, top-down or bottom-up or any other set of factors were decisive for radicalization processes. As noted before, current research is unable to prove a causation in radicalization studies and online-radicalization is not an exception in this respect.

The lack of data, including the biased perceptions people may exhibit when giving first-hand accounts of their past, and the problem of unprovable causation are general problems of the field and it is unsurprising that they are also the main issues in discussing online radicalization. While the same limitations apply here as in the field of terrorism studies as a whole and caution must be exercised in judging the findings, the discussion below is of

---

value. While one may assign more importance to either bottom-up or top-down radicalization mechanisms in a specific case study, a better understanding of radicalization processes calls for the testing of both Sageman's and Hoffman's line of thought. Limiting oneself to only including top-down or bottom-up approaches may skew the overall findings. A holistic approach is likely to produce more nuanced results closer to real-life situations, in which both types of mechanisms are at play. While individual case studies may require certain adjustments, our system-level analysis presents a valuable tool for considering the multitude of factors at play in online-radicalization.

## Background

The internet, defined as “including all communication, activity or content which takes place or is held on the world wide web (www) and cloud structures” (von Behr et al., 2013, p. 2), has been used by violent groups since the very beginning of this technological advancement for various purposes. In the 1990s many groups established static websites, to produce and “make available alternative platforms, circumventing the mainstream media's censorship, conveying unfiltered news, and disseminating ideological texts and materials” (Neumann, 2013, p. 434). At the same time, forums were launched, often by the groups themselves, which made discussions about controversial topics possible. These forums, however, were restricted in access and therefore hardly constituted a tool for wider radicalization and mobilization (Brandon, 2008). When broadband became widely available, the “dissemination of multimedia products, especially videos” revolutionised the propaganda, because it “spurred debates and generated constant excitement” (Neumann, 2013, p. 434). Increased availability and the opportunity to debate and negotiate ideological messages, rather than only reading about them, increases both exposure and perceived individual ownership of the ideas by those engaged in the discussion. With the rise of social networks and the emergence of user-generated content on platforms such as YouTube and Facebook, it became possible to reach an even wider audience and, as Neumann describes, it led to the possibility

---

of “people to virtually stumble into extremist propaganda” (Neumann, 2013, p. 435). For example, Roshonara Choudry was reportedly searching for more information about her religion and accidentally ‘stumbled upon’ sermons by Islamist preacher Anwar Al Awlaki. (Neumann, 2013). The development of the smartphone at the beginning of this decade increased the opportunities for extremist groups even more, with content now being available 24/7 on devices carried around by people at all times. New secure apps like Telegram and Threema provide encryption and make a high, instant level of connection between groups and followers, as well as for followers with each other, possible (Burke, 2016, p. 16, p. 19). While terrorists engage in multiple activities online, including fund-raising or training (Rudner, 2017, p. 11), the focus for this essay is placed on radicalization and recruitment activities only.

Just like the term ‘terrorism’ in general (Schmid and Jongman, 2005; Weinberg, Pedahzur and Hirsch-Hoefler, 2004), ‘radicalization’ as a concept is contested and lacks both an accepted definition and agreement on its features and facilitating conditions. Various different theories and discussions on pathways of radicalization (e.g. Moghaddam, 2005; Venhaus, 2010; Wiktorowicz, 2005) and root causes (e.g. Dalgaard-Nielsen, 2010) exist. These models fall on both sides of the Sageman-Hoffman debate and diverge significantly on the assumed influence, if any, and role of extremist organizations in radicalization. Specifically, the literature about online/internet-radicalization has mounted since the early 2000s with governments becoming “increasingly aware of the importance of the internet in radicalization” and the topic becoming ever more popular among researchers (von Behr et al., 2013, p. 3, p. 8). Academics come to very different conclusions regarding said importance, ranging from researchers sceptical of a significant role played by the internet in radicalization (Benson, 2014; Bouhana and Wikström, 2011) to researchers identifying the internet as a substantial and increasingly important facilitator (Berger and Strathearn, 2013; Carter, Maher and Neumann, 2014; Edwards and Gribbon, 2013; Neumann, 2012; McNicol, 2016). There is little agreement to be found what constitutes online-radicalization besides that the internet seems to provide a facilitating environment for radicalization (Meleagrou-Hitchens and

Kaderbhai, 2017) by providing space for effective and anonymous communication and better networking opportunities (Koehler, 2014). One of the main problems identified in the literature is the lack of a proven connection between “consumption of and networking around violent extremist online content and adoption of extremist ideology and/or engagement in violent extremism and terrorism” (Conway, 2017, p. 1). No causality has been proven between growing amounts of jihadist content on the internet (Weimann and Hoffman, 2006) and the radicalization of individuals online. At best a correlation is assumed (von Behr et al., 2013, p. 17). However, the absence of evidence cannot be accepted as evidence of absence of a connection (*argumentum ad ignorantiam*). This essay is a contribution to the attempts to shed light on the elusive processes and features of possible online-radicalization.

While the authors acknowledge the problem of lacking theoretical clarity and encourage further debate about the concept of online-radicalization, definitional disagreement should not prevent researchers and practitioners from engaging with the phenomenon of radicalization aided by online content. Especially since jihadists themselves display knowledge of the importance of online content. As Ayman al-Zawahiri, the current head of Al-Qaida, stated: “We [Al-Qaida] are in a battle, and more than half of this battle is taking place in the battlefield of the media. And that we are in a media battle in a race for the hearts and minds of our people” (Liebermann and Collins, 2008, p. 6). Therefore, the authors use a working definition for ‘homegrown’ online-radicalization until conceptual clarity can be achieved within the discipline. Borum defines radicalization as a process “by which people come to adopt [radical] beliefs that not only justify violence but compel it” (Borum, 2011, p. 8) and the US Department of Justice specifically defines online-radicalization as a “process by which an individual is introduced to an ideological message and belief system that encourages movement from mainstream beliefs toward extreme views, primarily through the use of online media, including social networks such as Facebook, Twitter and Youtube” (U.S. Department of Justice, 2014). Taken together, online-radicalization may be described as the process of adopting beliefs justifying and/or compelling violence primarily through online media consumption. Radicalization is an individual process and may include different root causes,

pathways and elements for each individual. However, understanding broader processes, which potentially increase the susceptibility to adopting extremist ideologies in some individuals, may enhance both law enforcement and policy measures as well as further academic research with regards to extremism displayed online.

Generally speaking, there have been two significantly different research approaches to understanding how the internet facilitates radicalization. Researchers either focus on the analysis of online content (Bhui and Ibrahim, 2013; Winter, 2015) or on the individuals consuming and using the online content (e.g. Edwards and Gribbon, 2013, p. 41; von Behr et al., 2013). This can be viewed parallel to the ‘Hoffman-Sageman’ debate (Sciolino and Schmitt, 2008), in which the role of an extremist organization is either active or passive during a person’s radicalization (King and Taylor, 2011, pp. 612–613). Historian Bruce Hoffman explains in his book *Inside Terrorism* (2006) that Al-Qaeda was significantly weakened following the wars and occupation in response to the 9/11 attacks, but that it was regaining strength and decision-makers should focus on eliminating the designated leadership of the organization to decrease the threat to the US posed by jihadist groups. To him, terroristic violence is primarily driven by organized groups with hierarchical structures, which engage in the preparation and execution of plots, from the radicalization of recruits to the planning of attacks. Psychologist Marc Sageman, however, disagreed that organizational channels are the largest driving force of terroristic danger to US national security and brought forward what is now commonly referred to as the ‘bunch of guys’ theory. Sageman postulates that radicalization is the result of small groups of friends, mostly young men, gradually engaging and then identifying themselves with extremist worldviews. Group dynamics and peer-pressure lead individuals to either drop out of the group or to adhere to the new shared worldview. To Sageman, radicalization is not a controlled or directed process to be traced back to ‘professional’ recruitment mechanisms, but the by-product of internal group dynamics. While the theory was originally designed to explain face-to-face processes of radicalization (Sageman, 2004), he later added the online dimension to his explanation and recognized the growing possibility of virtual ‘bunches of guys’ (Sageman, 2008). The

---

sometimes fiercely fought debate between the two academics (Scolino and Schmitt, 2008) ranged from controversies on methodology and data collection to the general question of what terrorism studies should focus on (Sageman and Hoffman, 2008; Hoffman, 2008). Yet, while on the surface the discussion revolved around Al-Qaeda and its methods specifically, it is symptomatic of broader disagreement on the underlying premises on radicalization and recruitment. It is, in essence, a disagreement about whether the spread of jihadism should be explained by means of organizational or social movement theory. Not only for Al-Qaeda, but for jihadist organizations in general, the question remains whether radicalization is mainly driven by top-down initiatives of actively ‘fishing’ recruits or bottom-up group dynamics with peer-groups acting like swarms by changing their ideological direction internally and in unison. The following sections explore both bottom-up and top-down radicalization and recruitment processes in the online realm to facilitate a more thorough understanding of the role of the internet in driving ‘homegrown’ extremism.

### **Sageman: Passive Organizations - Active Peers**

Sageman’s theory postulates that that the threat of radicalization originates in small social groups or ‘bunches of guys’ inspired by and socializing each other into a certain worldview through internal group dynamics. Isolated individuals find each other and form friendship bonds, which can accelerate adopting radical ideas if one person brings these ideas into the close-knit peer-group for discussion. The group as a whole then seeks a link to a terrorist organization *after* their radicalization process. To Sageman, it is bottom-up social interactions and not the organizations themselves executing the most direct influence on radicalization processes (King and Taylor, 2011, p. 613). Essentially, the group one identifies with is able to drive a pathway to extremism more easily than organizational structures can, because, as Atran claimed “people don’t simply kill and die for a cause, they kill and die for each other” (Atran, 2010, p. ix). Terrorist organizations may follow a strategy, which includes enabling these social movement processes further, but are not actively engaged in top-down

recruitment. To resonate and achieve maximum legitimacy or impact, propaganda claims are adapted to the specific environment they are consumed in and tailored to specific audiences, both with regards to content discussed and the actors discussing the content, but the negotiation itself is undirected and self-driven by the users. Bottom-up online-radicalization is facilitated through macro-, meso- and micro-level factors influencing the potential recruit, including the virtual environment, the content itself and the messenger conveying this content. Each are discussed in turn.

*The virtual social environment - the normalization of violence*

The internet constitutes a very specific environment for propaganda distribution. It makes little difference which jihadist group distributes the propaganda in this context, as “all justify violence to achieve the same end goal and share the same radicalization and recruitment techniques and strategies” (Gendron, 2017, p. 47). The internet has increased the effectiveness of distribution of jihadist propaganda decisively. In 2014, IS alone used to circulate three videos and 15 photographic reports per day while also producing monthly feature-length films, many of which are translated into English or subtitled (Winter, 2015, p. 12). Increased visibility and accessibility through mainstream platforms such as Twitter enhances the potential reach of the propaganda messages and thereby widens the pool of potential recruits. The more people are exposed to the propagandistic material, the larger the chance that it resonates with someone. In addition to mainstream platforms, IS utilizes anonymous websites such as ‘justpaste.it’ and encrypted messaging apps such as Telegram (Milton, 2016, p. 41) to circumvent counter-measures by social media companies. Another output is the online magazines *Rumiyah* (previously *Dabiq*). These magazines are published in English and tailored to intrigue Western audiences (Ingram, 2017, p. 3, p. 10).

Besides increasing visibility and reach by offering access to mainstream websites to spread propaganda, the internet has other properties, which facilitate bottom-up radicalization. Firstly, a seemingly infinite amount of propaganda material can be stored online and be accessed multiple times and at different points in time by potential recruits. People are not

---

required to be physically present anymore when an ideologue gives a speech, or to hide a propaganda leaflet, as content can be accessed and engaged with virtually without the limitations of time or space. It is no longer necessary to meet for prayer-groups or set up secret book shops, the place of conglomeration is now a ‘virtual town square’ (Neumann, 2012). Secondly, real-time interactive services such as Whatsapp or other chat platforms enable communication between recruits in different countries and time-zones without any delay. Attacks or other current events can be discussed immediately and recruits are able to communicate with each other as if they sat in the same room. Group dynamics can evolve in the online realm and produce similar results as Sageman’s ‘bunch of guys’ dynamics in the offline world, because instant communication enables deep relations and peer mechanisms to arise online. In short, the internet has helped jihadist organizations overcome the constraints of time and space and allows peer-group dynamics to emerge virtually.

Additionally, social media platforms create so-called ‘echo chambers’ (Winter, 2016, p.17) or ‘virtual bubbles’ (Musawi, 2010, p. 18). Similar to sound being reflected in a cave, social media platforms show users only what they and their network ‘liked’ or ‘followed’ without outside content ever penetrating these ideological bubbles. Comparable to Sageman’s peer groups, which create a “collective identity and foster solidarity, trust, community, political inclusion, identity formation, and other valuable social outcomes” (Sageman, 2004, p. 157), social networks within the same echo chamber facilitate a sense of commonality and belonging by only displaying specific ideological narratives. If seemingly everyone around oneself displays similar views, one may be more inclined to accept these as true and adhere to them as well. Through constant repetition or ‘echoing’ within the social network, a normalization of violence and other components of the propaganda takes place. Normalization through repetition (Neumann, 2012) facilitates the acceptance of the messages conveyed by the peers in the echo chamber and may, over time, help to radicalize an individual. If radical views are not only accepted, but actively facilitated by a peer group online, its members may construct their worldview in accordance. Neumann describes that: “As a result, people acquire a skewed sense of reality so that extremist attitudes and violence are no longer taboos but –

---

rather - are seen as positive and desirable” (Neumann, 2013, p. 436). In essence, the echo chamber facilitates ‘groupthink’ processes by which members can radicalize collectively without an outside force driving the process. The discussion and gradual acceptance of propaganda claims creates a shared ingroup identity and triggers a self-reinforcing dynamic by making the consumer believe that everybody around them adheres to ideological worldview propagated. This can create a powerful group dynamic of constantly engaging with and thereby normalizing the propaganda claims or, as Ingram calls it, “cyclical cognitive reinforcement” processes (Ingram, 2017, p. 5).

The internet facilitates bottom-up online-radicalization by allowing jihadist groups to overcome the constraints of time and space and by facilitating a one-sided display of information resulting in a greater acceptance of propaganda claims repeated and normalized by ‘virtual bubbles’. Constant exposure to ideological narratives may create greater susceptibility to radicalization and increase the chances of accepting the propaganda frames as one’s own worldview. Complementing this, the content of the messages disseminated on the internet also facilitates bottom-up radicalization processes.

#### *Propaganda and online content - frames that resonate*

The content of jihadist propaganda and its effect may be analyzed by using Quintan Wiktorowicz’s framing theory. A frame is defined as “an individual’s worldview, consisting of values (notions about right and wrong) and beliefs (assumptions about the world, attributes of things, and mechanisms of causation)” (Dalgaard-Nielsen, 2010, p. 801). Framing theory explains violent radicalization “[...] through the distinct constructed reality, into which members of violent groups are socialised – a constructed reality or worldview” (Dalgaard-Nielsen, 2010, p. 802). In other words, individuals come to accept the claims made and normalized by their echo chambers as their own and construct their worldview in accordance with them. Wiktorowicz used to claim that online content by itself will never be enough to fully frame an issue, as the media is a powerful vehicle for agenda setting and “movements utilize media coverage as a mechanism to facilitate message dissemination to a broader

audience” (Wiktorowicz, 2005, p. 98). A decade later, however, jihadists do not rely on Western media coverage to the same extent as they used to. The internet enables them to set their own agenda and disseminate their ideology without it being filtered by journalists acting as middle-men. The aim of the propaganda of jihadist groups is to increase both visibility and acceptance of their claims. This leads the potential recruits, who regularly consume the pictures and videos, to construct a worldview, in which it is the highest purpose for every Muslim to defend victimized members of the global community of Muslims, the *ummah*. As Ingram puts it: “Inspire and Dabiq’s narratives are designed to provide their audiences with a competitive system of meaning that coaxes their audience to use it as the ‘lens’ through which to perceive the world and process decisions” (Ingram, 2017, p. 3).

Content may be classified using the six themes of the IS ‘brand’ by Charlie Winter. *Brutality* serves as gratification to the supporters and provokes outrage from the international media (Winter, 2015, pp. 22–23), helping the recruitment process by increasing the visibility and recognition of the brand. The topic of brutality in the propaganda can also lead to ‘mortality salience,’ “an overpowering sense of one’s own mortality, which increases support for suicide operations and other, often excessively brutal, terrorist tactics” through “constant exposure to discourses about martyrdom and death” (Neumann, 2012, p.17-18) according to Tom Pyszczynski. *Mercy*, which is aimed at local populations, and *Victimhood* draw the attention of consumers to the deprivation of the local populations in majority Muslim countries suffering from Western attacks. Watching these videos is a motivational factor in many case studies (e.g. Kirby, 2007, p. 418), and while videos on this topic existed before the internet, being circulated on tapes or CDs, the scale and accessibility of material on the internet is unmatched. Propaganda is available 24/7 on the internet and the *victimhood* motive can induce a sustained sense of moral outrage, an important trigger for violent actions taken by extremists (Sageman, 2008). For example, Arid Uka, who attacked US soldiers at Frankfurt airport in 2011, spend much of his time online due to a lack of real-life contacts. On one of the websites, he saw a video containing images of US soldiers allegedly raping a Muslim woman. This created sustained outrage over the victimization of one of his fellow

---

Muslims that he decided to take action the next day (Frankfurter Neue Presse, 2012). To act on behalf of one's ingroup and to stop the victimization of peers can be a strong pull factor and may give the individual the feeling of purpose and the opportunity to end evil treatment of those he/she identifies with. The echo chamber constantly reminds its members that Muslims *qua* Muslims are attacked and that only counter-violence can address this issue adequately. The topic of *War* fulfils two purposes with regards to recruitment, it builds the narrative of IS being a 'real state' with a real army, while also appealing to consumers seeking adventure or a thrill (also see Venhaus, 2010). *Belonging*, a strong motivational factor according to Sageman, is used by the propagandists showing strong comradery; IS is acknowledging "that offers of friendship, security and a sense of belonging are powerful draws for its supporters abroad" (Winter, 2015, pp. 27–28). The last topic identified by Winter is *Utopianism*, the aspiration of constructing a better and safer world for the global community of Muslims, which adds an end-goal to the jihadist narrative and portrays a future worth fighting for. While this existed before, the internet enables visualizations of said utopia, which can make it a more tangible objective for consumers.

In summary, the potential recruit is confronted with constant reminders that Muslims are under attack and that young men need to take up arms in order to fulfill the utopian vision of an Islamic State. This corresponds to the classical scheme of framing identified by Benford and Snow (2000). To them, in order to resonate, narratives need to include a diagnostic element of what the problem is, a prognostic element envisioning a better future and a motivational element calling for action. While the direction of propaganda is set by the organizational structures and media outlets, the content and themes are discussed, negotiated and disseminated in the 'echo chambers'. It is not enough to passively consume propaganda content, the social interaction about this content is what drives radicalization. Members are constantly reminded of the six important narratives aimed at causing an emotional reaction in the recruit and their peers in the network express their support for the claims, which may lead an individual to accept them as true and right.

The internet adds another structural element to the dissemination of propaganda, which facilitates bottom-up radicalization processes: egalitarian interactivity. Online, no pre-made hierarchy exists and every user can not only consume, but actively engage in discussions about their ideology and the frames constructed or even produce content themselves. Rather than simply coming to align one's own worldview to that displayed by peers in the echo chamber, the internet enables recruits to engage in the direct development of frames. Not only 'frame alignment' (Wiktorowicz, 2005), but frame construction can take place when potential recruits access discussion forums, negotiate and re-negotiate the jihadist narrative presented to them. For example, the so-called 'Virginia Five', a group of friends in the US, produced videos with extremist content and then distributed them throughout different forums and popular platforms such as YouTube (Neumann, 2012). They influenced the narrative by adding content independently of organizational guidance. This interactivity and the potential inclusion of all voices can make consumers of propaganda feel more involved in the virtual group dynamics and increase perceived ownership of the worldview brought forward. In an inclusive, interactive process, framing activities themselves, not only the resulting frames, facilitate the recruit's identification with the group and increases the resonance of the messages spread. It is of secondary importance whether bottom-up processes actually change the content of propaganda narratives as a perceived influence already increases emotional ownership of the frames and increases their resonance. Resonance may also be increased through familiar communication patterns displayed by those, who represent a peer group to the potential recruit, which is discussed below.

*Utilizing digital natives- the importance of the messenger*

Not only the environment in which the propaganda is conceived and the content itself are important for the resonance of the claims made. Those conveying the message and their characteristics also influence the perceived legitimacy of the claims and their effect on the consumers of propaganda. Whether one identifies with a certain group online depends on the content of the frames communicated and the environment they are communicated in, but to

increase perceived belonging and ultimately achieve that individuals construct their identity based on this group, the messenger plays an important role too. Generally, we are more inclined to trust those similar to ourselves (Ben-Ner and Kramer, 2006) and especially young people are reported to display more trust (Durante, 2011) and positive feelings in online interactions (Page, DK and Mapstone, 2010) than older generations do. Sageman even writes that “online feelings are stronger in almost every measure than offline feelings” (Sageman, 2008, p.114). One explanation for increased resonance may therefore be found in the familiarity of interactions of so-called ‘digital natives’ (Prensky, 2001a) in the virtual world and the effect this has on the perceived belonging and identity construction of the potential recruits. The term ‘digital native’ was coined by Prensky (Prensky, 2001a) and refers to a person actively using modern communication technologies throughout their upbringing, who therefore communicates and processes information differently than ‘digital immigrants’ (Prensky, 2001b) who were not socialized using these technologies from an early age.

Many potential recruits to terrorist groups are young males between 15 and 30 who, if they grew up in the Western world, are likely to be digital natives due to the spread of internet and social media usage in the last two decades. In the online realm, digital natives are able to intuitively navigate their surroundings and, due to their shared socialization characteristics, are likely to share communication patterns with other digital natives. Familiarity in communication makes it easier for digital natives to relate to each other as the framing of an issue influences its resonance with the target audience. In other words, because digital natives share an intuitive way of communicating, messages from digital natives, their choice of words or metaphors, ‘speaks to’ and resonates with other digital natives. The numerous young foreign fighters and others engaged in the dissemination of jihadist propaganda can increase a person’s susceptibility to radicalization due to their ability to convey the frames in a relatable manner. Additionally, those engaging in the spread of propaganda in their native tongue, such as Pierre Vogel in Germany, add another layer of familiarity to their claims and make them resonate even more with their audiences. Sharing social dispositions with the messengers increases the familiarity of messaging and therefore the trust in those similar to the potential

recruits. This makes identification both with the claims and the conveyors of the propaganda more likely and can result in the evolution of virtual ‘imagined communities’ (Anderson, 1991).

Sageman’s ‘bunch of guys’ (2004) replicates itself in the online sphere as young people connect to, discuss and identify themselves with extremists and their narrative. The possibility of finding communities online, which have the same ideas and mindset as the individual searching, leads to less social control of their offline environment such as family or educational facilities, which could otherwise act as a counter-force to radicalization. Increased interactions online and an increased emotional connection with people who are perceived to be the same as oneself can diminish the influence of offline social networks considerably. The radical views are facilitated and enforced by like-minded peer communities found online. Before the internet, individuals with radical ideas may not have found others in their offline world to share and discuss these views with, or even to have the ideas in the first place. It lies in the nature of the internet to connect people across distance and even time, hence potential recruits and seekers with no offline connection to radical groups can link up with terrorist structures online, making the theoretical phenomenon of self-starting groups possible (Sageman, 2009, pp. 4–25).

Bottom-up radicalization processes in the online sphere are facilitated by the specific properties of the internet such as the echo chamber, by the way ideological frames and narratives are discussed and by the way digital natives are able to relate to each other in the virtual sphere. However, while the evidence for bottom-up processes driving online-radicalization is compelling, one should not dismiss the possibility that a certain degree of strategic steering from jihadist organizations is involved and impacts the process. Therefore, we now turn to examine Hoffman’s claim that top-down dynamics explain the spread of jihadist extremism in the online environment.

### Hoffman: Active Organizations

On the other side of the debate are those siding with Hoffman (2006), who argues that the jihadist organizations maintain strong operational and strategic control over the individuals who choose to engage in terrorism (King and Taylor, 2011, p. 613). Hoffman postulates that terroristic violence is driven in a top-down manner with hierarchical organizations managing every aspect of the process leading up to an attack. Members of the organizations have designated roles, some of which entail the identification, selection, radicalization and recruitment of new members to the cause. This is done increasingly through online communication. Thompson writes: “Al-Qaida and its affiliates understand the Western world’s reliance on information sharing and use of technology to communicate. They are increasingly using the Internet to manipulate the grievances of alienated youth, radicalize them, and give them a sense of purpose” (Thompson, 2012, p.168). Again, one can identify macro-, meso- and micro-level processes facilitating top-down online-radicalization; namely content management and distribution, the use of preachers and the role of recruiters. Each are discussed in turn.

#### *Content management and distribution*

Today, jihadist organizations, notably IS, have a sophisticated propaganda development department and designated ‘staff’ dealing with this issue specifically. The IS media branches include the Ajnad Media Foundation, Al-I’tisam, Al-Hayat, Makateb al-Vilayat, Al-Bayan radio station (Sardarnia and Safizadeh, 2017, p.8), the online magazine *Dabiq* (now named *Rumiyah*) and Bonyad Zora, which is specifically aimed at a female audience (Sardarnia and Safizadeh, 2017). Milton showed that the IS media outlets form a carefully planned semi-hierarchical structure in the shape of a pyramid, producing propaganda in multiple languages and tailored to different regional contexts (Milton, 2016). In addition to official websites, IS utilizes a variety of mainstream websites to distribute content produced by its propaganda departments. The platform Telegram has arguably become one of the most

important ways of communicating ideological content to followers. Telegram offers secure, encrypted messaging in chats users must be invited to before they can access content, which often means that an invitation link is posted on other social media platforms such as twitter and then removed again after a short period of time. Designated administrators control the dissemination of the links and the access to the chats, including removing individual users they deem suspicious (Bloom et al., 2017). These administrators are believed to be official propagandists, whose specific role within the organization consists of social media content management. An indication for the tight control exercised by the organization over the content on Telegram is that the administrators are believed to use bots to post content in hundreds of chats simultaneously (Bloom et al., 2017). There is clear centralization evident in the structure of the media branches as well as the production and distribution of IS propaganda.

The sheer sophistication of the propaganda development and distribution is an indication that radicalization is partially driven by top-down processes, as a lot of the content used for the purpose of radicalization is produced by ‘official’ media arms of the organizations. Having specialized media branches ensures the continued production of propaganda material, which can then be distributed widely through social networks. The age of social media requires continuous posting of new material to keep users interested and this is assured through the specialization of certain members on the production of content. Specialization also enables more sophisticated and diverse propaganda production than small, disconnected cells could produce by themselves. IS, for example, distributes movie-style videos in multiple languages and even online games.

Semi-hierarchical distribution and centralization of propaganda production also ensures coherence in the message. As we have seen earlier, IS exploits various themes for their propaganda communication, which are aimed at causing an emotional reaction in the consumer. The coherence of the message necessary to develop a holistic ideological claim, which resonates with users, is strengthened through the use of official media outlets. Inconsistencies are avoided through content management from the organization itself and the

---

themes used are employed deliberately and not by chance. This does not mean that individual users do not produce content themselves, especially when commenting and discussing, but official messages display coherency, which may increase their resonance and perceived legitimacy. Another advantage of the internet in preserving the coherence of the message is that online communication cuts out the middlemen previously involved in communication processes. Mainstream journalists, who may not report the full story or a convey biased view to their readers or listeners, are not needed anymore to provide possible recruits with information about the movement. A link to the organization is literally a ‘click’ away today, and one is able to access ‘official’ content from the organization itself. However, it needs to be stated that mainly passive consumption of jihadist propaganda may not be enough for a radicalization process to unfold. There are individuals, whose specific role is not only the production of content, but the engagement with followers and therefore the direct execution of top-down radicalization processes.

#### *Preachers – accessible authority figures*

Preachers produce content in line with the ideology of their affiliated organization and present a hybrid between propagandists and recruiters. The material produced by them stays online or can continuously be re-uploaded if detected by security forces and influence multiple generations of recruits. Arguably the most prominent online preacher was Anwar al-Awlaki, an American-born individual who “utilized the Internet to purvey Al Qaeda’s militant Islamist doctrine to a targeted audience of educated, English-speaking Muslim youth” (Rudner, 2017, p. 13). For example, the Canadian group ‘Toronto 18’ had planned multiple attacks throughout Ontario in 2006 after watching extensive content posted by al-Awlaki (Gendron, 2017). Despite his death in 2011, al-Awlaki continues to influence the jihadist seekers with his material online, and his work is among the most frequently downloaded jihadist material. Gendron observes: “Many of those who have been apprehended in the last few years and charged with terrorist offenses in the West, as well as those who have volunteered to fight abroad, are known to have accessed Awlaki’s online sermons” (Gendron, 2017, p. 49). The constant availability and storing of content does not only mean preachers

---

can continue their influence post-mortem, but it also makes it easier for living preachers to cover a wide array of themes since previous talks are always available to the followers. This increases the breadth of the themes discussed. If unable to store content, preachers would have to constantly repeat the key points to potential new followers to ensure that the most important claims reach their followers. The internet frees them of this constraint and enables deeper and wider discussion of propaganda claims by preachers, which results in a more well-rounded ideological communication. Everyday topics can now be elaborated upon, whereas previously pure ideological claims would have taken precedent due to the constraints of availability. This, in turn, makes it easier to relate to the messages propagated and may increase resonance within the followers.

The content produced and uploaded can then be used by recruiters. Because preachers represent a moral and religious authority, recruiters can refer to the sermons they produce in order to validate their recruitment claims. Preachers, however, also contact and make themselves available to their followers, influencing the recruitment process directly. Using the internet has several advantages. The preachers can stay in touch and direct control with their followers, thus they are able to respond to questions and counter arguments in real time. It allows them “to keep a finger on the pulse,” (Gendron, 2017, p. 56) checking the topics of conversations and feeling the mood in the community, to which they can adjust their sermons accordingly and thereby achieve more effective resonance. Similar to the group processes discussed in relation to Sageman, real-time interaction is a key factor in communicating with potential recruits. Here, however, the communication and discussion are steered by an authority figure and cannot be characterized as peer processes. The medium through which the communication unfolds remains the same, but the communicating parties and therefore the communication mechanism differs from what we saw earlier. The internet enables top-down radicalization, because it enables preachers to distribute their content widely and to engage in communication with their followers directly. This property of the internet also enables the so-called ‘after-sales service’, which permits preachers to “identify the committed from the merely curious and facilitate their transition to militant activism” (Gendron, 2017, p. 57) by

which preachers also partially act as recruiting agents. This is a clear indication that top-down recruitment processes take place in the online realm. Preachers, in their dual purpose of propagandists and active facilitators of communication and ultimately recruitment, use the internet to their advantage. Online platforms allow for increased availability, but also for preachers to communicate with the consumers of their content directly and to identify ‘promising’ candidates for recruitment into their affiliated organization.

### *Recruiters – the fishermen*

While some researchers postulate that face-to-face interaction is necessary for recruitment to occur, other academics maintain the notion that, without having sound data to the contrary, there is a possibility that recruitment processes can take place fully online now (Conway, 2017, p. 81). Most research arguing that a face-to-face connection must occur stems from a time when the rise of social media had not yet changed and democratized the communication processes online. With digital natives (Prensky, 2001a) being used to having relationships purely within the online realm, a change in recruitment procedures emerged concurrently. An example are the 2016 attacks in Germany, where the attackers were in contact with IS members on instant messaging apps before and during the attack, with no record of offline-radicalization activities or face-to-face meetings having taken place (Joscelyn, 2016). In both the Ansbach and Würzburg attacks, the perpetrators were in constant contact with IS operatives before and even during the attack (Ulrich, 2016), which suggests a high level of organizational control.

Even if part of the radicalization process takes place offline, the internet has considerable advantages for recruitment purposes. Recruiters can act as ‘fishermen’ and can use the internet to identify individuals susceptible to radical ideas more easily. In a RAND study from 2013, a recruiter described the internet as a widening pool of potential recruits: “The internet is like a fishing net, catching surface fish, not bottom fish. We used to catch one at a time, now we catch 100-200 in a year” (von Behr et al., 2013, p. 26). Approaching potential recruits is also less risky for the recruiter online than offline (Neumann, 2013, p. 437). To find and approach potential recruits, recruiters “monitor online communities where

they believe they can find receptive individuals, but they also make themselves highly available to curious seekers” (Berger, 2015, p. 20). Recruiters can engage in ‘reconnaissance’ of their targets prior to approaching them, which increases the likelihood of success and decreases the risk of approaching someone, who will then report the recruiter to authorities. After the primary interest expressed through visits to those sites “local talent spotters” take over and “recruiters prep [...] the potential recruits for enlistment” (Rudner, 2017, p. 15). As Charlie Winter states: without engagement online “the [offline] recruiter’s job would have to be based solely on rhetoric and chance. With it, they are able to quickly address doubts with ready-made visual and audio arguments” (Winter, 2015, p. 35). Recruitment efforts can be tailored to individual needs and facilitated through private conversations once the potential recruit has been identified. This, again, increases the chances of success for the recruiter. One can observe this type of behavior in the case of Colleen LaRose, also known as JihadJane, who was identified and approached by several Al Qaeda associates seeking to influence her to kill a Swedish cartoonist publishing images of the Prophet Mohammed. She had little to none Muslim contacts in the real world and engaged with her faith and the extremist propaganda solely online (Neumann, 2012; Halverson and Way, 2012). After declaring her wish to become a martyr, she was contacted directly by Al Qaeda ‘staff’, a clear indication of organizational recruitment.

Another option is that individuals who, for whatever reason, came into contact with radical material online, reach out to the recruiters directly. Recruiters are well-connected individuals - both online and offline - and act as a bridge into an organization. In online networks, recruiters are simultaneously ‘hubs’ and ‘brokers’. Hubs are individuals with many connections, who can receive and distribute information to a large number of otherwise unconnected people. Brokers are individuals bridging two otherwise disconnected networks, in this case the terrorist organization on the one side and the pool of potential recruits on the other side. Being a hub has two advantages for recruiters. Firstly, they are easy to find for newcomers in the network, because they are known by so many people and new members are referred to them. Network theory assumes social networks to develop according to

‘preferential attachment’; that is, new individuals in the network will most likely attach themselves to those who already have the most connections. Recruiters are therefore easy to be found and accessed. Secondly, recruiters who are hubs have the ability to distribute messages effectively. Thompson writes: “The average person with a worthwhile message or cause can send it to a high-profile individual with a large social media following, and that individual may forward the message to his or her followers, immediately bringing the message or cause to the attention of millions of people” (Thompson, 2012, p.176). The connections of the hub will then share the message with their own network of friends and a cascade of information distribution follows. Recruiters are therefore a valuable tool for organizations, because they both attract and identify new followers and simultaneously maintain a large network of connections to distribute information effectively and widely.

The internet facilitates top-down radicalization processes by providing jihadist organizations with a global platform, which makes it possible to reach individuals everywhere and at any point in time. Organizations display a sophisticated propaganda production machinery ensuring the continued creation of ideological content and the coherence of the message. Organizations utilize preachers and recruiters in the online realm not only to distribute their propaganda widely, but to actively identify, radicalize and recruit potential new members into the organization.

### **Implications**

Government spending and the allocation of resources is influenced by the role a government assigns to organizations or social movement structures. Disrupting social networks may require the action of different departments than catching designated leaders of terrorist organizations and therefore a competition for resources is likely to erupt. This analysis has shown that both mechanisms have an influence and that it is indeed likely that radicalization is facilitated by both bottom-up and top-down processes. Both are valuable to advance terroristic violence and therefore a blended, holistic countermeasures approach

including governments, law enforcement and civil actors is required. The Hoffman-Sageman debate has been symptomatic of a dangerous either-or mentality, which may cloud our understanding of the complex nature of radicalization processes. The internet has enabled social movement dynamics with a global reach and facilitated the building of virtual 'imagined communities' (Anderson, 1991) based on familiarity and trust, but the production of propaganda and the use of active recruiters are still directed by organizational structures. The coherence of messaging is ensured and propaganda is produced based on the thematic *foci* of framing used to inspire action in social movements (Benford and Snow, 2000). The internet helped salafi-jihadism to become an idea transcending individual organizations, softened previously established hierarchies in organizations and enabled flexible membership and participation, but has not made real-world organizational structures obsolete.

In order to be effective, countermeasures need to adhere to the changed role of organizations and address social movement processes without losing track of the directed organizational measures of terrorist organizations. To counter social movement processes, the construction of alternative narratives (not only counter-narratives) is necessary to help facilitate the feeling of belonging to mainstream society. There can and should be the promotion of democratic values to counter fundamentalist ideologies, but it is not enough to counter ideology. People need to feel like they belong to society and are accepted. Social relations are an important part of what drives some individuals into extremism and for this reason, it is beneficial to involve civil society actors in CVE measures, both in the real world and the online realm. In the real world, reputable actors may encourage open debate on what it means to be a Muslim in a Western democracy, but also provide spaces for positive group dynamics to develop, for example by encouraging mixed-background sports teams. In addition, providing legitimate and effective, but non-violent outlets for grievances and inclusion in political processes can decrease susceptibility to violent actions. In the online realm, empowering the voices of digital natives and utilizing their ability to intuitively connect with other digital natives can help create more effective countermeasures in terms of form, content and delivery. Examples for this already exists, such as the YouthCan initiative

(YouthCan, 2017) and should continue to be supported. However, organizational structures should not be ignored. Progress needs to be made on international regulations for internet governance and more cooperation with social media platform providers to make extremist content harder to distribute and decrease the chances of ‘stumbling upon’ it while using regular websites. Law enforcement needs the necessary tools to investigate, arrest and punish preachers and recruiters and transnational cooperation on this issue is of utmost importance. Organizations use the internet, because it increases their reach and makes access to global recruits easier. In limiting their reach and access, we may be able to effectively decrease the importance of the internet for facilitating violent extremism.

## Conclusion

This study found evidence for both schools of thought: The internet helps to facilitate radicalization, both through enabling bottom-up and top-down processes; it essentially empowers organizations and social movement dynamics alike. Bottom-up processes are facilitated through the creation of echo chambers, which constantly repeat and thereby normalize violent narratives. The content is specifically tailored to arouse emotions and is continuously debated by internet users, which facilitates perceived ownership and legitimacy of the claims made. Digital natives are able to frame violent narratives in familiar terms for other digital natives and thereby increase the resonance of the claims within their peer groups. Overall, the internet helps connect potential recruits with like-minded individuals facilitating networks of trust or ‘imagined communities’ (Anderson, 1991), which facilitate the adoption of shared radical frames.

On the other side of the debate, the internet empowers organizations to increase their reach and effectiveness in spreading propaganda. Organizations are able to control the development and dissemination of content through their social media branches and the use of specialized ‘staff’ as content managers on websites used for radicalization purposes. The coherence of the message decreases the risk of frictions and may increase resonance within

recruits. Preachers and recruiters can reach more individuals across the world through direct online communications and better tailor their recruitment messages. Recruiters are simultaneously hubs and brokers in their networks and can effectively identify and ‘fish’ new recruits.

Although it is still unclear whether individuals can radicalize solely online, much of the evidence points in the direction of an increasing importance of online jihadist activity in recruitment, whether through passive means as implied by Sageman or active means as proposed by Hoffman. It is likely that jihadist groups use a mix of the two strategies; there is evidence for both approaches and governments should seek to counteract both sets of processes. Jihadist organizations have not necessarily lost their influence, but are aided and complimented by the virtual social movement characteristics the internet provides them with. Organizations continue to produce and disseminate propaganda, but this propaganda is then ‘digested’ by the followers by means of group dynamics facilitating bottom-up recruitment. Any comprehensive and effective counter-terrorism policy needs to counter both dynamics. Next to improvements in the sphere of internet governance, cooperating with social media providers and empowering law enforcement personnel to utilize the online data available to crack down real-world cells, soft-power mechanisms such as an inclusion of digital natives in the construction of alternative and counter-narratives can be beneficial.

More research is needed to understand the exact processes of online-radicalization and whether or not radicalization can take place purely through online engagement and interactions. In addition, scholars need to investigate and negotiate the meaning of membership of an extremist organization in times of ‘virtual jihad’. Is it enough to consume online content, or post comments, or disseminate propaganda to be called a supporter or even part of a terrorist network? Conceptual clarity on membership in times of clicktivism and fluid social networks in the online realm, may help direct both research and law enforcement to address consumers, disseminators and those actively engaging in propaganda negotiation in appropriate ways. This research has shown that while the internet has enabled bottom-up social movement processes to take place virtually by connecting supporters on a global scale,

terrorist organizational structures are far from obsolete. Salafi-jihadism spreads through social movements and friend-groups, but groups and hierarchies drive action in the real world, albeit building on and using the community of supporters in the virtual world. Both mechanisms, bottom-up and top-down, need to continue to be the focus of countermeasures and academic research as they complement each other to create powerful structures composed of both fluid networks and hierarchical structures.

## References

Atran, S. (2010). *Talking to the enemy: Violent Extremism, sacred values, and what it means to be human*. London: Penguin Books.

Anderson, B. (1991). *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. (2nd edition). London: Verso.

Bartlett, J. and Litter, M. (2011). Inside the EDL: populist politics in a digital age. Retrieved from: [https://www.demos.co.uk/files/Inside\\_the\\_edl\\_WEB.pdf?1331035419](https://www.demos.co.uk/files/Inside_the_edl_WEB.pdf?1331035419), accessed 20/05/17.

von Behr, I., Reding, A., Edwards, C. and Gribbon, L. (2013). Radicalisation in the Digital Era: The Use of the Internet in 15 Cases of Terrorism and Extremism. *RAND*. Retrieved from: [https://www.rand.org/pubs/research\\_reports/RR453.readonline.html](https://www.rand.org/pubs/research_reports/RR453.readonline.html), accessed 24/03/17.

Benford, R. and Snow, D. (2000). Framing Processes and Social Movements: An Overview and Assessment. *Annual Review of Sociology*. Vol. 6 (26). pp. 611-639.

Ben-Ner, A. and Kramer, A. (2006). Do We Prefer People Who Are Similar to Us? Experimental Evidence on Giving and Work Behaviors. Retrieved from: <http://conf.som.yale.edu/obsummer07/PaperBen-NerKramer.pdf>, accessed 25/06/17.

Benson, D. (2014). Why the Internet Is Not Increasing Terrorism. *Security Studies* Vol. 23 (2), pp. 293-328.

Berger, J. (2015). Tailored Online Interventions: The Islamic State's Recruitment Strategy. *Combating Terrorism Center at West Point* Vol. 8 (10) Retrieved from: <https://ctc.usma.edu/posts/tailored-online-interventions-the-islamic-states-recruitment-strategy>, accessed 30/03/17.

Berger, J. and Strathearn, B. (2013). Who Matters Online: Measuring Influence, Evaluating Content and Countering Violent Extremism in Online Social Networks. *ICSR*. Retrieved from: [http://icsr.info/wp-content/uploads/2013/03/ICSR\\_Berger-and-Strathearn.pdf](http://icsr.info/wp-content/uploads/2013/03/ICSR_Berger-and-Strathearn.pdf), accessed 27/03/17.

Bhui, K. and Ibrahim, Y. (2013). Marketing the 'radical': Symbolic Communication and Persuasive Technologies in Jihadist Websites. *Transcultural Psychiatry* Vol. 50 (2), pp. 216-234.

Borum, R. (2011). Radicalization into Violent Extremism I: A Review of Social Science Theories. *Journal of Strategic Security* Vol. 4 (4), pp.7-36.

- Bouhana, N. and Wikström, P. (2011). Al-Qa'ida-Influenced Radicalisation: A Rapid Evidence Assessment Guided by Situational Action Theory. *UK Home Office*. Retrieved from: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/116724/occ97.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/116724/occ97.pdf), accessed 04/04/17.
- Brandon, J. (2008). Virtual Caliphate: Islamic Extremists and their Websites. *Centre for Social Cohesion*. Retrieved from: <http://civitas.org.uk/pdf/VirtualCaliphate.pdf>, accessed 21/05/17.
- Bloom, M. Hicham, T. and Horgan, J. (2017). Navigating ISIS's Preferred Platform: Telegram. *Terrorism and Political Violence*. DOI: 10.1080/09546553.2017.1339695.
- Burke, J. (2016). The Age of Selfie Jihad: How Evolving Media Technology Is Changing Terrorism. *CTC Sentinel* Vol. 9 (11), pp. 1-8.
- Carter, J. Maher, S. and Neumann, P. (2014). #Greenbirds: Measuring Importance and Influence in Syrian Foreign Fighter Networks. *ICSR*. Retrieved from: <http://icsr.info/wp-content/uploads/2014/04/ICSR-Report-Greenbirds-Measuring-Importance-and-Influence-in-Syrian-Foreign-Fighter-Networks.pdf>, accessed 27/03/17.
- Conway, M. (2017). Determining the Role of the Internet in Violent Extremism and Terrorism: Six Suggestions for Progressing Research. *Studies in Conflict & Terrorism* Vol 40. (1)., pp. 77-98.
- Dalgaard-Nielsen, A. (2010). Violent Radicalization in Europe: What We Know and What We Do Not Know. *Studies in Conflict & Terrorism* Vol. 33 (9), pp.797-814.
- Durante, M. (2011). The Online Construction of Personal Identity through Trust and Privacy. *Information*. pp.594-620. Retrieved from: [https://www.researchgate.net/publication/220121535\\_The\\_Online\\_Construction\\_of\\_Personal\\_Identity\\_Through\\_Trust\\_and\\_Privacy](https://www.researchgate.net/publication/220121535_The_Online_Construction_of_Personal_Identity_Through_Trust_and_Privacy), accessed 23/05/17.
- Edwards, C. and Gibbon, L. (2013). Pathways to Violent Extremism in the Digital Era. *The RUSI Journal* Vol. 158 (5), pp. 40-47.
- Frankfurter Neue Presse (9.2.2012). Wie Arid Uka am Flughafen zum Mörder wurde. Available at: <http://www.fnp.de/rhein-main/Wie-Arid-Uka-am-Flughafen-zum-Moerder-wurde;art801,407224>, accessed 02/12/17.
-

Gendron, A. (2017). The Call to Jihad: Charismatic Preachers and the Internet. *Studies in Conflict & Terrorism Vol. 40* (1), pp. 44-61.

Halverson, J. and Way, A. (2012). The Curious Case of Colleen LaRose: Social Margins, New Media, and Online Radicalization. *Media, War & Conflict Vol. 5*(2), pp. 139-153.

Hoffman, B. (2006). *Inside Terrorism*. New York City: Columbia University Press.

Hoffman, M. (2008). The Myth of Grass-Roots Terrorism: Why Osama Bin Laden Still Matters. *Foreign Affairs Vol. 87* (3), pp. 133-138.

Ingram, H. (2017). An Analysis of *Inspire* and *Dabiq* : Lessons from AQAP and Islamic State's Propaganda War. *Studies in Conflict & Terrorism Vol. 40* (5), pp. 1-19.

Joscelyn, T. (2016). Terror Plots in Germany, France Were 'remote-Controlled' by Islamic State Operatives. *FDD's Long War Journal*. Retrieved from:  
<http://www.longwarjournal.org/archives/2016/09/terror-plots-in-germany-france-were-remote-controlled-by-islamic-state-operatives.php>, accessed 9/12/17.

King, M. and Taylor, D. (2011). The Radicalization of Homegrown Jihadists: A Review of Theoretical Models and Social Psychological Evidence. *Terrorism and Political Violence Vol. 23* (4), pp.602-622.

Kirby, A. (2007). The London Bombers as 'Self-Starters': A Case Study in Indigenous Radicalization and the Emergence of Autonomous Cliques. *Studies in Conflict & Terrorism Vol. 30* (5), pp.415-428.

Koehler, D. (2014). The Radical Online: Individual Radicalization Processes and the Role of the Internet. *Journal for Deradicalization, Winter (2014/15)*, pp. 116-134.

Liebermann, J. and Collins, S. (2008). Violent Islamist Extremism, the Internet, and the Homegrown Terrorist Threat. *United States Senate Committee on Homeland Security and Governmental Affairs, Majority and Minority staff of the Senate Committee on Homeland Security and Governmental Affairs (Committee)*. Retrieved from:  
<https://webcache.googleusercontent.com/search?q=cache:QDg2qTiD0UkJ:https://www.hsgac.senate.gov/download/violent-islamist-extremism-the-homegrown-terrorist-threat-and-the-internet+&cd=1&hl=en&ct=clnk&gl=fr>, accessed 05/06/17.

McNicol, S. (2016). Responding to Concerns About Online Radicalization in the U.K. Schools Through a Radicalization Critical Digital Literacy Approach. *Computers in the Schools Vol. 33* (4), pp.227-238.

- Meleagrou-Hitchens, A. and Kaderbhai, N. (2017). Research Perspectives on Online Radicalisation: A Literature Review 2006-2016. Retrieved from: <http://icsr.info/2017/05/icsr-vox-pol-paper-research-perspectives-online-radicalisation-literature-review-2006-2016/>, accessed 09/12/17.
- Milton, D. (2016). Communication Breakdown: Unraveling the Islamic State's Media Efforts. *West Point: Combating Terrorism Center at West Point*. Retrieved from: <https://ctc.usma.edu/wp-content/uploads/2016/10/ISIL-Media2.pdf>, accessed 05/09/17.
- Moghaddam, F. (2005). The Staircase to Terrorism. *American Psychologists*. Vol. 60 (2). pp.161-169.
- Musawi, M. (2010). Cheering for Osama: How jihadists use internet discussion forums. Quilliam Foundation. Retrieved from: <http://www.quilliaminternational.com/new-quilliam-report-cheering-for-osama-how-jihadists-use-internet-discussion-forums/>, accessed 23/05/17.
- Neumann, P. (2012). Countering Online Radicalization in America. *National Security Program Homeland Security Project*. Washington, D.C.: Bipartisan Policy Center. Retrieved from: <http://bipartisanpolicy.org/wp-content/uploads/sites/default/files/BPC%20Online%20Radicalization%20Report.pdf>, accessed 07/06/2017.
- Neumann, P. (2013). Options and Strategies for Countering Online Radicalization in the United States. *Studies in Conflict & Terrorism* Vol. 36 (6), pp. 431-459.
- Page, K., DK and Mapstone, M. (2010). How does the web make youth feel? Exploring the positive digital native rhetoric. *Journal of Marketing Management*. Vol. 26 (13). pp.1345-1366.
- Prensky, M. (2001a). Digital Natives, Digital Immigrants Part 1. *On the Horizon*. Vol. 9 (5). pp.1-6.
- Prensky, M. (2001b). Digital Natives, Digital Immigrants Part 2: Do they really think differently? *On the Horizon*. Vol. 9 (6). pp.1-6.
- Rudner, M. (2017). 'Electronic Jihad': The Internet as Al Qaeda's Catalyst for Global Terror. *Studies in Conflict & Terrorism* Vol. 40 (1), pp. 10-23.
- Sageman, M. (2008) *Leaderless Jihad: Terror Networks in the Twenty-First Century*. Philadelphia: University of Pennsylvania Press.
-

Sageman, M. and Hoffman, B. (2008). The Reality of Grass-Roots Terrorism [with Reply]. *Foreign Affairs Vol. 87* (4), pp.163-166.

Sageman, M. (2004) *Understanding Terror Networks*. Philadelphia: University of Pennsylvania Press.

Sardarnia, K. and Safizadeh, R. (2017). The Internet and Its Potentials for Networking and Identity Seeking: A Study on ISIS. *Terrorism and Political Violence*. DOI: 10.1080/09546553.2017.1341877.

Schmid, A. and Jongman, A. (2005). *Political Terrorism*. New Brunswick, New Jersey: Transaction Publishers.

Sciolino, E. and Schmitt, E. (2008). A Not Very Private Feud Over Terrorism. *The New York Times*. Retrieved from: <http://www.nytimes.com/2008/06/08/weekinreview/08sciolino.html>, accessed 23/11/17.

Thompson, R. (2012). Radicalization and the Use of Social Media. *Journal of Strategic Security Vol. 4* (4), pp. 167-190.

Ulrich, A. (2016). Attackers in Germany Had Contact with Suspected IS Members. *Spiegel Online* (5.8.2016). Retrieved from: <http://www.spiegel.de/international/germany/attackers-in-germany-had-contact-with-suspected-is-members-a-1106271.html>, accessed 09/12/17.

U.S. Department of Justice (2014). Awareness Brief: Online Radicalization to Violent Extremism. Retrieved from: <http://www.theiacp.org/portals/0/pdfs/radicalizationtoviolentextremismawarenessbrief.pdf>, accessed 19/05/17.

Venhaus, J. (2010). Why Youth Join Al-Qaeda. *USIP Special Report*. Retrieved from: <https://www.usip.org/sites/default/files/SR236Venhaus.pdf>, accessed 20/05/17.

Weimann, G. and Hoffman, B. (2006). *Terror on the Internet: The New Arena, the New Challenges*. Washington DC: United States Institute of Peace Press.

Weinberg, L., Pedahzur, A. and Hirsch-Hoefler, S. (2004). The Challenges of Conceptualizing Terrorism. *Terrorism and Political Violence. Vol. 16* (4), pp.777-794.

Wiktorowicz, Q. (2005). *Radical Islam Rising: Muslim Extremism in the West*. Lanham, Md.: Rowman & Littlefield.

Wilkinson, A. (2016). We need to talk about the online radicalisation of young, white men. Retrieved from: <https://www.theguardian.com/commentisfree/2016/nov/15/alt-right-manosphere-mainstream-politics-breitbart>, accessed 19/05/17.

Winter, C. (2015). The Virtual ‘Caliphate’: Understanding Islamic State’s Propaganda Strategy. London: Quilliam Foundation. Retrieved from: <https://www.stratcomcoe.org/charlie-winter-virtual-caliphate-understanding-islamic-states-propaganda-strategy>, accessed 23/09/17.

Winter, C. (2016). Special Report: An integrated approach to Islamic State recruitment. Australian Strategic Policy Institute. Retrieved from: [https://www.aspi.org.au/publications/an-integrated-approach-to-islamic-state-recruitment/SR88\\_IS-recruitment.pdf](https://www.aspi.org.au/publications/an-integrated-approach-to-islamic-state-recruitment/SR88_IS-recruitment.pdf), accessed 22/05/17.

Yourish, K., Watkins, D. and Giratikanon, T. (2016). Where ISIS has directed and inspired attacks around the world. *The New York Times* (March 22, 2016). Available at: <https://www.nytimes.com/interactive/2015/06/17/world/middleeast/map-isis-attacks-around-the-world.html>, accessed 09/12/17.

YouthCan (2017). <http://youthcan.net/>, accessed 03/11/17.

### About the JD Journal for Deradicalization

The JD Journal for Deradicalization is the world's only peer reviewed periodical for the theory and practice of deradicalization with a wide international audience. Named an [“essential journal of our times”](#) (Cheryl LaGuardia, Harvard University) the JD's editorial board of expert advisors includes some of the most renowned scholars in the field of deradicalization studies, such as Prof. Dr. John G. Horgan (Georgia State University); Prof. Dr. Tore Bjørge (Norwegian Police University College); Prof. Dr. Mark Dechesne (Leiden University); Prof. Dr. Cynthia Miller-Idriss (American University Washington); Prof. Dr. Marco Lombardi, (Università Cattolica del Sacro Cuore Milano); Dr. Paul Jackson (University of Northampton); Professor Michael Freeden, (University of Nottingham); Professor Hamed El-Sa'id (Manchester Metropolitan University); Prof. Sadeq Rahimi (University of Saskatchewan, Harvard Medical School), Dr. Omar Ashour (University of Exeter), Prof. Neil Ferguson (Liverpool Hope University), Prof. Sarah Marsden (Lancaster University), Dr. Kurt Braddock (Pennsylvania State University), Dr. Michael J. Williams (Georgia State University), and Aaron Y. Zelin (Washington Institute for Near East Policy)

For more information please see: [www.journal-derad.com](http://www.journal-derad.com)

Twitter: @JD\_JournalDerad

Facebook: [www.facebook.com/deradicalisation](http://www.facebook.com/deradicalisation)

The JD Journal for Deradicalization is a proud member of the Directory of Open Access Journals (DOAJ).

ISSN: 2363-9849

Editors in Chief: Daniel Koehler, Tine Hutzler