Lessons Learned from the "Viral Caliphate": Viral Effect as a New PSYOPS Tool?

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This paper aims to analyze still unnoticed aspects of the so-called Islamic State's cyber jihadist campaign in order to indicate its potential utility for state-sponsored information warfare. To begin with, it tends to present the most important features of the "Islamic Caliphate's" online campaign, which aims to generate the "viral effect." Moreover, the paper attempts to provide an overview of earlier military conflicts, in which the viral effect could be noticed. And finally, based on these considerations, it answers the question how viral marketing methods and mechanisms can be used as viable tools in psychological operations.

Keywords: cyber jihadism, cyber propaganda, information warfare, PSYOPS, viral effect, viral marketing

Introduction

Information warfare¹ is becoming an increasingly important aspect of contemporary military conflicts.² As many recent examples have proven, the manipulation of information is frequently critical to gaining an advantage over the enemy.³ One method of doing this is through the use of psychological operations (PSYOPS),⁴ which aims to influence attitudes and the behavior of hostile populations, counter enemy propaganda and disinformation, and establish credibility among the people targeted. Until the end of the Cold War,

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these goals were usually reached through various, but rather unsophisticated methods such as loudspeakers, leaflet drops, radio programming, comic books, posters, and TV spots and bulletins. A new era of information warfare emerged at the end of the twentieth century with the worldwide propagation of the Internet. Cyberspace, being a new domain of multidimensional human activities, proved to have multiple unique features, which enabled new kinds of offensive and defensive information operations. The most fundamental of these operations was accurately described by W. Tecumseh Fitch: "When I consider the effect of the Internet on my thought, I keep coming back to the same metaphor. What makes the Internet fundamentally new is the many-to-many typology of connection it allows. Suddenly any two Internet-equipped humans can transfer essential information, flexibly and efficiently. We can transfer words, code, equations, music, or video anytime to anyone, essentially for free."

It is well known that the use of cyberspace for information warfare is not a new phenomenon. Many early examples such as the US intervention in Iraq or the Caucasus war in 2008 indicated that cyber propaganda usually rested on adapting the means of traditional PSYOPS to the electronic environment. Instead of leaflets and loudspeakers, they frequently utilized poorly designed spam in the form of e-mails or website comments. Posters were transformed into banners and messages that were posted on defaced websites and social media sites.8 TV bulletins emerged as videos that were released via popular hosting services such as YouTube or LiveLeak. Currently, cyberspace is characterized by its massiveness (more than 3.3 billion Internet users in 2016) and its interconnectedness, which—along with the dominance of mobile devices—open much more unique and sophisticated possibilities for propaganda sensu largo. This has already been realized and utilized by the so-called Islamic State (IS); its spectacular cyber jihadist campaign, initiated in 2014, now has the group's major goals echoing around the world. As Christina Schori Liang put it, "IS has brought cyber jihad to a whole new level . . . This highly successful campaign is an effective tool for psychological operations and for recruitment." Naturally, its online activities have become the object of extensive scientific studies. It is therefore surprising that academics have not yet observed that in order to increase its efficiency, IS propaganda exploits techniques and mechanisms specific to viral marketing.

In this context, this study has three goals. First, this study will present the most important features of the "Islamic Caliphate's" online campaign, which generate the "viral effect." Second, this study will provide an overview of earlier military conflicts, in which the viral effect could be spotted. Third, based on these considerations, this study will answer how viral marketing methods and mechanisms can be used as viable tools in psychological operations. To summarize, the paper aims to analyze still unnoticed aspects of the IS cyber jihadist campaign in order to indicate its potential utility for state-sponsored information warfare. To achieve these objectives, the paper has been divided into three sections. The first section attempts to characterize the phenomenon of the viral effect from the perspective of its potential usability for psychological operations. The second section presents a short overview of conflicts in which propaganda went viral. Finally, the last part focuses on the "viral caliphate," i.e., the reasons why the viral effect is so evident in IS's cyber jihadist activities.

Defining the Viral Effect

The viral effect is a subject of in-depth marketing research, which has discovered that cyberspace enables the development of the well-known mechanism "word-of-mouth." It can be defined as the use of influencers "to generate peer-to-peer product recommendations or buzz." Historically, word-of-mouth was strictly dependent on direct, physical contact between peers, which limited its geographical coverage and message proliferation rate.¹² In the information revolution era, word-of-mouth has evolved into viral marketing, which is defined by Maria Woerndl and others as "the transmission of marketing messages through various Internet-based channels by peers. During these transmissions, information passes between individuals without the involvement of the original message source, propagating like a virus would have done, infecting the hosts."13 Viral marketing techniques therefore aim to incite the "viral effect," which can be broadly defined as a process of the exponential proliferation of a message online, in which individuals "infected" by its content share it with their peers through their electronic environment. The form of such a message varies, starting from simple e-mails, websites, pictures (e.g., "memes"), to games, videos, music, and documents. In principle, almost any form of uncommon content under appropriate conditions may inspire individuals to propagate it among their friends, associates, and family. The term "viral marketing" was coined by Steve Jurvetson and Tim Draper to describe the dynamic expansion of Hotmail in 1996, which had advertised its services in the outgoing e-mails of its users. It had allowed the company to grow twenty-four times larger over a one-year period. 14 In the twenty-first century, viral marketing techniques have focused mostly on the use of short, interesting, and unconventional videos. One of the first advertisement campaigns to do so was by the blender manufacturer, BlendTec, which had prepared a series of online videos entitled "Will it blend?" It presented tests of its products using unusual items, such as expensive smartphones, wooden boards or watches. This unique approach to advertising hit the mark, as the series went viral. BlendTec's YouTube account quickly became very popular (200,000 subscribers in 2009) and retail sales jumped by 700 percent. 15 Since then, many companies have tried to use viral marketing techniques; however, very few have succeeded. The Red Bull Space Jump, Old Spice's "I'm on a Horse," and the LG Elevator Prank are worth mentioning.¹⁶

The viral effect is not only limited to professional advertisements; the same mechanics are exploited by hobbyists and amateurs. In fact, a large part of the "going viral" content is created purely "for fun" and not for profit, released on social media, such as YouTube, Facebook, Reddit, Twitter, Instagram, Tumblr or their national equivalents (e.g., VKontakte). Most involve random, usually ridiculous, interesting, unusual, emotional or appalling events and situations, which attract the interest of the netizens who are ultimately responsible for their further propagation among their peers. Others contain unusual references to mass culture.¹⁷

In this context, it must be emphasized that the features that constitute the viral effect could theoretically be used to increase the scope and efficiency of psychological operations. To begin with, the viral effect ensures the fast and exponential proliferation of messages, reaching diverse groups due to the specificity of multilayered interactions in social media. This is impossible with traditional PSYOP methods in cyberspace. Moreover, going viral is also elusive and inexpensive in nature as the transmission of messages depends strictly on the receivers, who are always important for online propaganda during military conflicts. Finally, viral marketing methods, compared to both traditional advertising and classic PSYOP techniques, can also be seen

as less interruptive and more credible, thus limiting the possible negative effects of a propaganda campaign.¹⁹

In order to increase the chances of the occurrence of the viral effect in PSYOPS, a number of conditions should be considered. To start with, its appearance is dependent on the content of the message, which needs to be presented in an easily receivable, interesting, and unconventional form. Humor, violence, and sexuality are usually the themes that can influence individuals to transmit the message, as they are the easiest way to arouse emotions.²⁰ This feature is crucial for information warfare, as emotion can "infect" recipients with an idea and encourage them to disseminate it. Furthermore, although the viral effect was successfully tested in Web 1.0, containing mostly static content ("read-only web"),21 nowadays it is strictly dependent on the sophisticated use of social networking. Thanks to the popularity of such services as Facebook, Twitter, Instagram or YouTube, and the interconnection ("share" function) that they enable, the message—if interesting enough—can proliferate exponentially and almost instantly reach audiences worldwide. Just one share on a popular social media account may encourage thousands or even millions to click the link.²² This is strictly connected to the broader issue of the network topology, which obviously influences the spreading of information. As Romualdo Pastor-Satorras and Alessandro Vespignani stressed, "the typology of the network has a great influence in the overall behavior of epidemic spreading. The connectivity fluctuations of the network play a major role by strongly enhancing the infection's incidence."²³ There is a difference, however, in virus and information proliferation; according to Albert-Lászlo Barabási and others, the information spreads purposefully, whereas the virus does not, and thus, it represents a more complex behavior.²⁴ Moreover, viral efficiency depends on the level of the information and communications technology (ICT) development of the country/society being targeted. Electronically underdeveloped nations are less susceptible to online propaganda. Simultaneously, societies that are highly dependent on electronic communication pose a more suitable target as the manipulative message will have a bigger chance to actually "go viral," due to the quantity and quality of online interactions. And finally, the population being targeted may be less keen to use the Internet in an ordinary manner during a crisis or conflict as their interests will be drawn away from everyday online activities. Moreover, audiences may be much more suspicious of unknown online content. Thus,

the viral effect theoretically should be more difficult to achieve. As the Arab Spring experiences suggest, 25 however, even during serious crises, people tend to use electronic communication extensively for information collection or coordination purposes. That is why in most situations, it should still be possible to generate a viral effect that would resonate throughout the targeted societies' electronic environment.

In summary, viral messages, whether for profit or non-profit, amateur or professional, are unconventional in nature and stand out amongst the plethora of Internet content, which is the key to their popularity. They frequently transgress typical online communication methods, therefore attracting the attention of Internet users. The viral effect refers to appealing to the interest of the Internet users in order to "infect" them with a concept, idea or brand, which then should be transferred to other users through the wide spectrum of social media channels. As a matter of fact, without the use of contemporary social media and various interconnected applications a trend of this scale would be virtually impossible. As a result, viral messages have emerged as a new and powerful phenomenon in online communication. By exploiting emotions and curiosity, they can visibly affect the way Internet users see various issues and act offline, which, in certain circumstances, can be utilized by skillful psychological operations.

Information Warfare Goes Viral

Given the aforementioned considerations, it should be noted that the viral effect is nothing new in the online dimension of wars. Since the beginning of the twenty-first century, armed conflicts have been accompanied by cyber propaganda, mostly due to the propagation of mobile devices with cameras—such as smartphones—and the development of Web 2.0 technologies. As a result of these two developments, the Internet became flooded with pictures and movies documenting various wartime events. Naturally some of them proved to be so uncommon that they managed to go viral to various degrees. A few early examples occurred during the US invasion of Iraq in 2003 and the Caucasus war in 2008. The real change, however, began during the Arab Spring, which proved the utility of social media for influencing political attitudes and the morale of populations. Middle Eastern activists in 2011 made extensive use of Web 2.0 tools to organize themselves, promote their political agenda, and inspire populations to revolt against authoritarian

regimes.²⁷ It is therefore not surprising that the same political activists who participated in the Arab Spring revolutions then used their rich experience with social media to conduct propaganda during the subsequent military conflicts. With the scope of new manipulative content released online, the viral effect occurred in a number of interesting cases.

The Libyan civil war in 2011 between the western-backed rebels and Muammar Qaddafi's regime was the first case in history where social media was used to such an extent that it influenced international public opinion. Soon after the first battles broke out, the Internet was flooded with videos and pictures documenting battles against the Qaddafi regime. These videos and pictures sometimes also contained statements or manipulations aimed at gaining external support. Their technical and substantive sides were usually amateurish. Nonetheless, the viral effect was evident in two cases. The first one concerned the famous "Libyan guitar hero" picture, which quickly proliferated through the various picture-hosting services, ²⁸ and contributed to the positive image of the Libyan rebels. Due to the unconventionality of this photo, merging two separate themes—fusillade and music—it was quickly noticed by the media, which also disseminated the message to the West. ²⁹ In effect, the picture may have reached hundreds of thousands of netizens.

The usability of the viral effect for PSYOPS was also confirmed by the death of Muammar Qaddafi in October 2011, which was recorded from several perspectives and released online by the rebels soon after. In just a few hours, videos showing the brutal lynching of the former dictator proliferated across Internet news services and social media. They were also quickly picked up by leading TV stations such as CNN, BBC, and NBC.³⁰ In effect, at the time, these recordings proved to be the most popular content not only on the Internet, but also in the global media. Dozens of copies of the lynching posted on YouTube alone gathered millions of viewers. For instance, the Al-Jazeera version, released online on October 20, 2011 by the YouTuber user xciter79, was viewed over six million times by 2016. The versions posted by ABC News and Al-Arabiya each were viewed over one million times.³¹ The videos presenting Qaddafi's last moments were played across the world due to the huge viral effect they had incited. The viral effect was possible because these recordings combined a few significant features. They were shocking and contained purely graphic content; yet graphic content alone would not attract people's attention as the Internet is

full of materials restricted to 18 years and over. Moreover, these recordings presented in detail the death of a widely hated dictator, which in itself was very unusual. Qaddafi's death also symbolically ended the civil war in Libya, which was closely followed by the international community. To summarize, these factors together created the biggest and the most apparent viral effect during a military conflict to date.

This lesson was quickly learned by the Syrian rebels, who started to post a staggering amount of propaganda online. While the opposition to the Bashar al-Assad regime extensively used the Web 2.0 environment to inspire national and international support, their attempts usually failed as they frequently released videos and pictures presenting their own terrorist activities or war crimes.³² This ignorance was manifested by a video of rebel commander Abu Sakkar mutilating the corpse of a Syrian soldier and eating his flesh. In theory, as he later explained in an interview with the BBC, he did this to terrify his enemies.³³ In reality, the video actually went viral due to its unparalleled savagery. Its effects, however, were completely the opposite of what they had wanted as it deepened the West's distrust of the "moderate" rebels.

The viral effect also was apparent in the information warfare during the recent Ukrainian conflict. Although official Russian propaganda focused mostly on traditional media, such as TV stations, radio, and newspapers, Maria Snegovaya noted that hackers, bots, and trolls played an important role in promoting Russian propaganda in the online environment.³⁴ Pro-Russian propagandists released online manipulative videos and edited pictures throughout social media, such as VKontakte, 35 aimed at spreading fear among Ukrainian society, intimidating western nations, disrupting their perception of events, and promoting the Kremlin's agenda. Among the plethora of Russian propaganda online, the viral effect strengthened its reach in two evident cases. The first concerned a picture of an alleged Ukrainian soldier incorrectly loading the ammunition of an RPG-7. It was edited by pro-Russian propagandists³⁶ and released online to ridicule the war effort of Ukraine. The picture was posted on sites such as reddit.com and epicfail.com where they were viewed and shared by thousands of Internet users.³⁷ The second case was proof that pro-Russian propaganda also had major shortcomings. One of the "documents" released by the Russian-speaking media in cyberspace depicted the mistreatment of Ukrainian POWs in Donetsk.³⁸ In principle,

its aim was to damage the morale of Ukrainian society; instead, it incited a limited viral effect as it quickly proliferated throughout western Internet news services and social media, becoming a symbol of the brutality and war crimes committed by pro-Kremlin rebels.³⁹

The Case of the "Viral Caliphate"

All of these examples prove three points. Firstly, the viral effect in certain circumstances can accompany psychological operations. Secondly, manipulative content may go viral without any specific intention, as a side effect of ordinary online propaganda activities. Thirdly, the propagandists do not always have any awareness of these mechanisms.

In this context, the viral effect has been used intentionally to increase the efficiency and reach of the most advanced cyber jihadist propaganda campaign ever conducted. 40 The case of the Islamic State proves that this terrorist organization has modified traditional cyber jihadist methods to increase the chances of a viral effect occurrence. The responsibility for adapting this approach rests with the dedicated PSYOP cells of the Islamic State—al-Hayat Media Center—which was created in 2014. It is composed of highly skilled professionals, such as computer graphics artists, former musicians, 41 cinematographers, editors, and manipulation experts. Despite the fact that little is known about the personnel of this group, their sophisticated and technologically impeccable multimedia products manifest their talents and knowledge. It is known that al-Hayat Media Center has two major goals. First, it attempts to win the general support of Muslim societies around the world, with special emphasis on the Middle East and Europe. This vector is evident in various ways, such as in the recruitment videos inciting audiences to join their ranks or to engage in terrorist activities in the West. 42 Second, it seeks to intimidate and confuse western societies. This vector is usually based on graphic releases presenting barbarous atrocities committed by IS members. However, as Gabi Siboni, Daniel Cohen, and Tal Koren argue, the widely publicized beheadings can also be considered part of IS's strategy targeting Muslim populations. They argue that "it is a source of attraction for potential recruits by appealing to senses of basic Islamic morality within the framework of a return to the fundamentals of early Islam."43

To reach these objectives, the Islamic State's propaganda machine planned its actions in cyberspace in ways of maximizing the chances of generating

the viral effect. Several arguments support this statement. First of all, IS's propaganda campaign is based on extensive and highly sophisticated use of social media. 44 In 2014 the number of accounts on Twitter alone that shared IS propaganda ranged from 46,000 to more than 70,000. On average, Twitter accounts supporting the Islamic State had about 1,000 followers each. 45 The Islamic State also utilizes other social networks, as well as peer-to-peer applications (Telegram and Surespot) and content-sharing services (JustPaste.it and Archive.org). 46 Moreover, they extensively use various video-sharing services, starting from the most popular ones like YouTube, to the more controversial LiveLeak and the Canadian shock site BestGore.com. 47 Hence, the scope and the variety of cyber jihadist activities in social media is unprecedented. This is also a key condition in generating the viral effect as social media has many entry points for the Islamic State's propaganda, thus allowing the swift transmission of messages.

Secondly, the technical side of the Islamic State's releases is virtually flawless. Their technical level is sometimes even compared to Hollywood movies. 48 Production and postproduction equipment and methods used by the al-Hayat Media Center, including videography, editing, computer graphics, sounds effects, and photography are of the highest quality. This was highlighted by Charlie Winter who argued that, "undeniably, the production effort behind Although the Disbelievers Dislike It was formidable. It is clear that the content of the video was carefully considered and the individual (or individuals) who directed it were obvious perfectionists . . . the equipment that IS attempted to keep out from shooting—the cameras, in particular—demonstrates the professionalism of the operation."49 This is where the uniqueness factor comes in. The technical quality of IS propaganda distinguishes itself from other cyber jihadist productions. There is no comparison between the crude releases of al-Qaeda, al-Shabab or Boko Haram, for example, and the high definition Hollywood-style movies with multilingual translation produced by the Islamic State. Moreover, such productions match the ordinary communication habits of the western audiences. Therefore, both of these issues naturally increase the chances of the viral effect.

In comparison to the majority of cyber jihadist releases, IS frequently adopts unconventional forms of propaganda, which also draw the attention of western citizens. Messages produced by the al-Hayat Media Center frequently refer to cyber or mass culture canons. For instance, one of the

videos exploited a very popular gaming brand.⁵⁰ Other examples include the so-called #mujatweets on Twitter,⁵¹ extensive use of memes, and the American-stylized *nasheed* music videos. These references frequently are combined with barbarous savagery, such as decapitations or corpse mutilations, which aim to generate extreme emotions. The distinct contrast between properly introduced cyber culture clichés and horrible atrocities is unique among cyber jihadist propaganda. In effect, such a convergence especially seduces youth, more efficiently than the previously dull statements that were released, for example, by Osama bin Laden. Thanks to evident references to mass and cyber culture, targeted audiences can more easily understand and embrace the message, thus enabling the viral mechanism. In summary, terrorist organizations had never before released graphic images and videos, as well as propaganda music in a way that was specifically for the western entertainment sector. This feature naturally attracts the attention of netizens, which is a crucial condition for inciting the viral effect.

The Islamic State combined the trendiest methods of online communication—social media and the most popular apps—with technological advancement, crude savagery, and manipulative sophistication on an unprecedented scale. 52 This is the key to their great propaganda "success," symbolized by the scale and proliferation of a series of videos presenting decapitations of western citizens (e.g., James Foley, Steve Sotloff, David Haines, and Alan Henning). These beheadings, published from August 2014 onwards, went viral on a global scale shortly after their initial online release. A few features contributed to their viral effect: the aforementioned technical flawlessness; the sheer brutality they presented; and the sophisticated manipulative content, evident in the statements by the prisoners and by "Jihadi John." Finally, they all exploited the same video-sharing services, including YouTube, LiveLeak, BestGore, and other social media, which ensured their instant proliferation on the Internet. Basically, they combined the uniqueness factor with professional propagation via multiple social media entry points.

In effect, these beheading videos have become the most successful pieces of viral terrorist propaganda in history. Several arguments support this statement. First, it is difficult to assess exactly how many people have viewed or heard about these videos,⁵³ but tens of millions is the lowest possible estimate. This is due to the fact that there were two interconnected proliferation vectors for this campaign. They have gone viral through social

media and video-sharing services. Although administrators frequently deleted the original releases, edited or intact copies proliferated instantly over the web, supposedly due to the activities of unaffiliated netizens. YouTube alone still contains dozens of Islamic State's censored decapitation recordings viewed by millions of Internet users. The two most popular copies of James Foley's execution, which were published on YouTube, were viewed almost four million times by May 2016. Its full version posted on LiveLeak has been viewed more than one million times.⁵⁴

Journalists also quickly spotted these videos. As a result, leading global media, both offline (via TV news) and online (through official YouTube accounts and dedicated websites) released censored and shortened recordings with commentary in hundreds or even thousands of copies. Many also prepared their own reports on the executions, which frequently contained excerpts of the manipulative statements included in the original videos. This trend was visible just after the first release of James Foley's execution when all the offline and online global media outlets were full of its screenshots, edited recordings, and detailed descriptions. A google video search of the words "James Foley" has about 322,000 hits, frequently related to his execution. It should be emphasized that both these vectors were self-perpetuating. While the media reports increased the curiosity among netizens in the original videos, the popularity of the unedited versions escalated viewers' interest in successive media reports; thus the media unwittingly contributed to the success of the Islamic State's PSYOP. Thanks to them, audiences could know what the Islamic State wanted to tell them, even if they did not see the original recordings.

Furthermore, the viral aspect of the IS beheadings is manifested by the popularity of this theme among the blogosphere pundits and amateurs, creating a multitude of content referring to IS atrocities. These include various analyses, commentaries, and even parodies. The scope of this trend is exemplified by the popularity of the YouTube movie, "ISIS Bloopers," a pastiche of the famous executions prepared by Israeli comedians. Between February 2015 and May 2016, it was viewed more than 5.2 million times. The abundance of amateur-made content referring to IS decapitations proves that this "epidemic" factor has really worked. If it had not worked, Internet users would not devote their time and resources to preparing their own materials that mention these events.

It must be stressed that the exposure of millions of western citizens to the unusual IS decapitations, which went viral online and offline and were strengthened by alarming reports from the Middle East and by terrorist attacks in Europe, have contributed to the increasing fear of the Islamic State, especially in the West. The success of the Islamic State's propaganda is evident in the statistics of the Pew Research Center, which indicate that western societies perceive the Islamic State as the top global security threat.⁵⁶

Conclusions

The activities of the "viral caliphate" pose a serious threat to international security, including, among others, an increased risk of micro terrorism, as well as a deepening fear and confusion among western nations. Therefore, the information security policies of the NATO/EU states aim to quickly suppress this feature of the Islamic State's cyber strategy.

Paradoxically, the Islamic State's success also allows several conclusions to be drawn about the usability of the viral effect in psychological operations. Firstly, there is no certainty that a message designed to go viral in PSYOP will ever do so. The tapestry of human relations on various levels in the Internet is too dynamic and elusive to exploit it successfully every time. Designing actions that will meet the constantly changing features of online communication, including varying trends and moods of netizens, is highly problematic. As David Meerman Scott states, "nothing is guaranteed to go viral." From thousands of IS messages released online in the form of videos, music, statements, banners, and memes, only a few actually have gone "epidemic."

Secondly, the case of the "viral caliphate" shows how important it is to conduct proper cyber reconnaissance. Adapting a message to the targeted group's "cyber cultural" background as well as to the level of ICT development increases the chances of the viral effect. Thirdly, PSYOP intending to exploit this effect should use multiple "vectors of attack," both in terms of content and technology. One message posted online has little chance of going viral. A hundred messages in various forms may sometimes make a difference, as the probability of attracting the audience's attention will increase. This is understood by the al-Hayat Media Center, which has flooded the Internet with its propaganda. Moreover, these messages should be proliferated throughout a wide range of channels: websites, social media networks, and

other online services, including those that are the most popular among the targeted population.

Fourthly, viral campaign should both precede and coincide with political and military events, which was evident in the aforementioned executions, in which "Jihadi John" referred to President Obama's statements. Anticipation may minimize the chances of the messages being recognized as hostile propaganda by the targeted populations. At the same time, messages should strictly refer to the most important events for PSYOP. Such a solution may strengthen operational efficiency as it draws attention to messages that are up-to-date and controversial or unusual. This was also done in the infamous execution videos. Fifthly, the case of the "viral caliphate" proves that the message inciting the viral effect should be in compact form and be easily accessible, meaning that it must not require any logins, passwords, web browser add-ons or plug-ins. This is due to the fact that users usually are not keen to log in or install new software in order to familiarize themselves with even the most interesting online content. Moreover, content should be simply named, in a way that will increase the chances of finding it through social media or search engines. In the Web 2.0 environment this also heavily depends on the use of proper hashtags (#), such as IS's #mujatweets.

And finally, the content of the message should be as intriguing, unconventional, and unique as possible. This does not mean that PSYOP should just copy classic viral marketing techniques frequently based on sexual themes. Instead, humor and violence presented in a unique and unconventional form—both used by the Islamic State—may be the right way to go. Humor may be more elastic, and, if used properly, can spark various reactions from the audiences, both positive and negative. For instance, al-Hayat Media Center frequently mocked the American military effort in the Middle East, using humor as a tool. Violence also may have a different role as it may shock and intimidate recipients; this was carried out perfectly in many of the execution videos posted online by the Islamic State.

In conclusion, the case of the "Islamic Caliphate" and the aforementioned military conflicts suggest that the viral effect can be efficiently exploited by psychological operations in cyberspace. Although it is a highly uncertain tool, with enough deliberation, it is possible to increase the chances of its occurrence and gain outstanding benefits for its creators, as proven by the case of the infamous IS executions.

Notes

- Brian Nichiporuk defined information warfare as "the process of protecting one's own sources of battlefield information and, at the same time, seeking to deny, degrade, corrupt, or destroy the enemy's sources of battlefield information." According to Nichiporuk, information warfare includes operational security, electronic warfare, psychological operations, deception, physical attack on information processes, and information attack on information processes. See Brian Nichiporuk, "U.S. military opportunities: information-warfare concepts of operation," in *Strategic Appraisal: The Changing Role of Information in Warfare*, eds. Zalmay Khalilizad, John White, and Andy W. Marshall (Santa Monica: RAND Corporation, 1999), p. 180.
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