

Islamic State Propaganda as a Precedent? Learning, Emulation and Imitation Amongst Other Extremist Groups after IS

Paul Gill, Kurt Braddock, Sanaz Zolghadriha, Bettina Rottweiler and Lily D. Cushenbery.

In the past, communication by terrorist groups to outsiders was largely limited to static propaganda produced by the groups and passively consumed by targeted audiences. However, the onset and global diffusion of internet technology since the late 1990s and early 2000s has fundamentally changed how terrorist groups engage with audiences of all types. When the internet first became widely available to the public as a communications tool, terrorist groups primarily used it to reach new audiences to which they previously lacked access. In these early days, much of what terrorist groups electronically distributed was simply a computer-mediated form of their previous propaganda—only to a larger, more geographically diverse audience. Some communicative affordances of the internet, however, allowed terrorist groups to connect audiences in ways that had previously been impossible. For instance, often called “the first hate site on the internet,” Stormfront consisted of a series of discussion forums on which members of the site could discuss issues related to white nationalism, organize in-person meetings, share stories, and a host of other activities. In a sense, Stormfront represented the first online social network specifically designed to allow those associated with an extremist ideology to connect and communicate.

Since Stormfront’s genesis in 1996, internet technology has matured and expanded. As a result, the communicative capabilities provided by the internet have also grown more advanced. Indeed, the various chapters in this book make repeated assertions regarding the creativity and innovation embedded within IS communications.

The emergence of IS as perhaps the world’s most technologically adept terrorist organization (in terms of the propaganda it distributes) requires a consideration of how the new communicative techniques the group has employed may be replicated by future terrorist organizations. Moreover, the apparent effectiveness of IS propaganda suggests that the adoption of IS communicative innovations may increase the likelihood of other groups successfully filling their ranks. To understand the contagion of terrorist groups’ communicative innovations, it is first necessary to consider how communicative techniques and styles diffuse more generally.

Imitation and innovation commonly occur within a terrorist organization’s modus operandi. Tactical and technological innovations of one terrorist group often cross-pollinate into other groups with wildly different ideologies and from geographically diverse combat theatres. Such processes have been modelled extensively (both quantitatively and qualitatively) within the terrorism studies literature. Some refer to it as contagion (Moghadam, 2008; Bloom, 2005; Dugan, LaFree, & Piquero, 2005; Midlarsky, Crenshaw, & Yoshida, 1980), and others diffusion (Horowitz, 2010; Braithwaite, & Li, 2007; Bonneuil & Auriat, 2000), and still others (malevolent) creativity and innovation (Jackson et al., 2005; Dolnik, 2007; Rasmussen & Hafez, 2010; Gill et al., 2014). A similar strategy is often employed by flat-hierarchy organizations, where power distance is low, ideas are valued regardless of employee status, and sharing is encouraged (Jung et al., 2008). The aim of this chapter is to examine the potential imitation/emulation dynamics that extremist groups (both jihadist and other) might enter following the “success” of the propaganda produced by the Islamic State.

There are several questions that guide the analyses that form the basis for this chapter. What factors spark imitation, creativity and innovation within and across terrorist organizations? Are

there particular traits that increase a terrorist organization's propensity for creativity and/or innovation? We make use of insight from communications, business management, and a range of psychology (social, cognitive, industrial/organizational, educational) literatures and apply this to understand (a) the degree to which IS propaganda itself is the result of imitation or innovation and (b) the potential emulation dynamics of other groups moving forward. Though it remains impossible to predict the onset of innovations within terrorist organizations, it is possible to analyse a group's capacity for creativity at a given moment in their life-course.

Therefore, our focus centres on the process, behaviours and organizational capabilities that precede the adoption of another terrorist group's innovation. This focus can offer greater insight for counter-terrorism strategy focused on disrupting the abilities of terrorist organizations to communicate in a manner similar to IS. This chapter largely focuses on tactical innovation and imitation as opposed to strategic or organizational innovation more broadly. Tactical innovation and imitation encompass a terrorist organization's adoption of an entirely new method or mode of communication as well as a terrorist organization's capacity to copy and the forms of learning it engages in. Just as terrorist groups can innovate in terms of their violent operations, so too can they innovate in terms of their communicative activities (and in turn be copied by other actors). This chapter first explores what organisational psychology, business management, communications science, and terrorism studies have to say regarding creativity and innovation. We then reiterate the examples of IS emulation, creativity and innovation depicted in the various contributions to this book before exploring their drivers and considering the likelihood of their being replicated elsewhere.

Insights into Creativity & Innovation:

Insights from Communications Science

Albert Bandura's (1986, 2001) social cognitive theory (SCT) dictates that people learn behaviour as a function of their involvement in social systems. Although SCT has primarily been used to describe learned behaviour on the part of individuals, it also describes the process by which organizations come to adopt certain behaviours. Bandura (2001) argued that social practices are most effectively introduced to others through notable examples that illustrate the utility of those social practices for achieving organizational objectives. Organizations formalize this process through group socialization and on-boarding procedures (Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007).

It follows that as a fundamental social practice, communication behaviours are learned by organizations in the same manner as other kinds of behaviour—by observing the environmental and organizational characteristics that led to their use by others. There exists some evidence to suggest that this learning process explains how individuals and organizations come to adopt different communication styles and techniques.

For instance, research on information technology has shown that users' adoption of specific communication technologies to convey information is dependent on their perceptions of the technology's ease of use and perceived usefulness (Davis, Bagozzi, & Warshaw, 1989; Ilie, Van Slyke, Green, & Lou, 2005), as well as their perceptions of the technology's characteristics (Van Slyke, Lou, & Day, 2002). Researchers have also shown that the intrinsic affordances of communication technologies diffuse much like the technologies themselves. For example, Chang (2010) showed that on Twitter, hashtag adoption behaviour spreads much like any other communication innovation.

In addition to communication technologies and their inherent features, there is some work that suggests that communication style also spreads in a manner consistent with theories that describe the diffusion of more tangible innovations. For example, with reference to the 2016 U.S. Presidential election and growing discontent in the U.K., Block and Negrine (2017) argued that numerous politicians (including U.S. President Trump and U.K. Independence Party representative Nigel Farage) adopted populist communication styles to appeal to dissatisfied voters in both countries. In parallel, with the rise of Donald Trump to the U.S. presidency, more politicians have adopted populist communicative styles, characterized by anti-establishment ideologies (Mudde & Rovira-Kaltwasser, 2012), belligerent “plain talk” between politicians and their disenfranchised constituents, and a contentious relationship with the media.

Much of the recent work on the diffusion of communication styles is found in analyses of extreme populist candidates, how they spread their ideologies, and how populism has become a learned communicative style (see Bracciale & Martella, 2017; Krämer, 2017; Waisbord & Amado, 2017). This is appropriate for this chapter, given our focus on how the communication of another kind of extreme group, IS, may be learned and adopted by similar organizations.

Past analyses of the diffusion of communication technologies, tactics and styles would suggest that IS’ propaganda successes would lead other terrorist groups to adopt practices they had seen IS perform. Social cognitive theory contends that IS’ adept use of social media to disseminate its propaganda represents an exemplar of communicative behaviour that can help show other groups how best to radicalize, recruit, and mobilize potential followers. Although there has been only limited work on the diffusion of communicative *style*, the successes enjoyed by IS in terms of the communicative *technologies* and *techniques* they employed gives every reason to believe that subsequent groups may at least attempt to adopt similar practices. However, the insights from organisational psychology suggest this adoption will be mediated by the degree to which their incremental innovations remain novel, relevant, elegant and generalizable. As outlined above, there is a direct relationship between an innovation’s novelty and its effectiveness. Therefore, as the novelty of IS communication strategies diminishes, social learning and emulation in relation to those strategies is likely to wane in parallel.

Insights from Terrorism Studies

To date, the focus of these studies has been the attacks themselves, not the communicative strategies that seek to justify, promote and extol these attacks. That said, recent studies have emphasized a change in focus toward terrorist innovation. Previous analyses highlighted a lack of creativity and innovation within terrorist organizations. For example, Merari (1999) compared terrorism to conventional war and argued that terrorism “has not changed much in the course of a century, and virtually not at all during the last 25 years” (p. 54). Hoffman (1993) also noted the remarkable consistency and conservative nature of terrorist attacks. Dolnik (2007) concurred with these assertions, claiming, “What we have witnessed is that this scope [of terrorist attacks] is relatively limited and remarkably unchanging. In fact when one surveys the last 50 years of terrorist operations case by case, very few incidents strike the observer as creative *in any way*” (p. 56).

Increasingly, however, there has been a growing acknowledgement that innovation regularly occurs and can be categorized in a number of ways. Crenshaw (2010) offered a typology of terrorist innovation, delineating three kinds. First, adopting new technologies to achieve

unchanged objectives constitutes tactical innovation. Tactical innovation is not limited to attack types, but can also be extended to communicative approaches, delivery systems, the adoption of new technologies, initiation types, IED types and changing the profile of operatives. Second, adopting new objectives comprises strategic innovation. Third, changes at the organizational level in terms of structure or recruiting processes represent organizational process innovation.

A 2010 conference at the U.S. Naval Postgraduate School brought together a number of terrorism experts to present on various case studies of terrorist innovation across a wide spectrum of actors and conflicts. Collectively, the analysts agreed on a number of issues. First, more resources (financial and human) can potentially lead to more prolific innovation. Second, leadership plays a central role in innovation, but conference participants failed to agree on which type of leadership facilitates innovation most. Third, innovation itself is often incremental and driven by the need to overcome security constraints.

A growing number of studies on the organizational dimension of terrorism have also begun to focus on the types of terrorist activity that are likely to be replicated and organizational traits that make replication of another organization's tactics more likely. The majority of these studies follow in the manner of Midlarsky, Crenshaw and Yoshida (1980) who quantitatively illustrate the contagion effect that occurred transnationally during the rise of terrorist violence between 1968 and 1974. They also examined the types of violence most likely to be replicated elsewhere. According to their analysis, bombings, kidnappings and hijackings diffused much more readily across borders than assassinations and raids.

More recently, suicide bombing experts such as Pape (2005), Bloom (2005) and Moghaddam (2008) utilized process-tracing techniques to emphasize the key role that success plays in a tactic's diffusion or contagion. Dugan, LaFree and Piquero (2005) presented a time-series analysis of 1,101 attempted aerial hijackings to illustrate that hijacking rates significantly increase due to copy-cat processes (p. 340). In a highly sophisticated account, Horowitz (2010) demonstrated that external linkages and organizational capabilities facilitate a terrorist organization's ability to copy the innovation of others. For Horowitz, a terrorist organization willing to engage in suicide bombings yet missing the organizational capability or the necessary ties to others is unlikely to be able to sustain a campaign of suicide bombings.

While many studies on terrorism acknowledge that successful terrorist organizations must learn, very few show how learning occurs. According to Kenney (2007), it is unfortunate that "many government officials, policy analysts, and even researchers gloss over how...terrorists...actually *learn*, in the sense of acquiring, analyzing, and applying knowledge and experience...It is not enough simply to claim, as many do, that...terrorists learn" (p. 13). Kenney focused on training practices and outlines the various means by which al Qaeda has spread knowledge through its network. Examples include state sponsorship, training camps, knowledge-based artefacts such as training manuals, "informal apprenticeships, on-the-job training, communities of practice, and combat" (Kenney, 2007, p. 145). These learning dynamics are likely to be similar within communication styles. The terrorism studies literature therefore suggests that whilst emulation is likely, it is *most* likely within groups that contain members who directly learned communication strategies within IS as opposed to those who watched and studied it from afar.

Insights from Organisational Psychology and Business Management

There are a number of fundamental principles within the organisational psychology and business management literature related to creativity and innovation. First, although linked, creativity and innovation represent two distinct entities that form a collective process in the development of a product. While creativity refers to the generation of ideas and novel concepts, innovation involves implementing these ideas (Amabile, 1996). Though often used interchangeably, creativity typically refers to early-stage activities such as problem solving or idea generation while innovation refers to later-stage activities such as evaluation, planning, and monitoring (Anderson, Potocnik, & Zhou, 2014).

Second, for an innovation to occur, it must first go through a creative process from idea generation to full implementation. Characterizing creativity and innovation as a process requires us to understand the dynamic interactions (and the properties that govern those interactions) by multiple actors. A successful creative process requires the ability to generate ideas for a new tactic (including communications strategies) or adapt certain technologies and then use them for a new purpose. It also entails understanding how organizational structures and management systems facilitate this process. In turn, this involves understanding the drivers of creativity from both bottom-up (creativity in individuals and small groups) and top-down (leadership and intra-organizational structural effects) perspectives while also accounting for the competitive environment in which terrorist organizations operate against a much stronger foe. The creative process is multi-dimensional, multi-causal and dynamic (Gill et al., 2014).

Third, the result of this process ends in a novel product or process. Whether this product or process is depicted as an innovation depends on its originality, relevance, elegance and generalizability. Creative products are novel and generate effective surprise in their beholder while remaining relevant and useful (Cropley, Kaufman, & Cropley, 2008). Essentially, the product must meet both consumer and target population needs. A creative product lacking relevance and effectiveness is merely aesthetic. For terrorist communication, consumers typically include the community that the terrorist organization claims to represent, as well as the target of the violence. Spontaneous novel acts of violence generate effective surprise within the target audience. The violence and its subsequent media coverage generate an image of the terrorist organization as strong, cohesive and relevant. Another element of creativity is the elegance of the solution. Elegance refers to whether the product is logical, sensible, and well-crafted. In other words, “good solutions look like good solutions” (Cropley et al., 2008, p. 108). Broadly speaking, organizational behaviour researchers assert that creative solutions must also be generalizable. This refers to the applicability of the product, not only in terms of satisfying target population needs, but also the extent to which it sparks new ideas and inventions, challenges the status quo and generates new ways to resolve current problems (Cropley et al., 2008).

Fourth, regardless of the innovation associated with a particular product (in this case, a communication strategy), its novelty will decay over time. Once a set of skills is perfected, terrorists may rely on the expertise associated with this set of skills to guide their future communications. However, the problem with creative, but repeated, communicative acts is the element of diminishing returns. Truly creative acts often contain novelty value. Over time however, the novelty diminishes. Lakomy (2017) makes this point devastatingly clear regarding IS’ propaganda campaign:

“Islamic State’s releases are gradually losing their uniqueness, which was so striking in 2014 and 2015....When the first major IS productions started to emerge online in 2014, they were fresh and unique in comparison to the earlier releases of other Islamist

terrorist organizations. After two years, most potential audiences got somewhat weary with the similar issues addressed by the IS's cells over and over again...It basically means that there is far less chance that these productions will draw enough attention to spark a proper viral effect”.

To sidestep diminishing novelty, terrorist organizations regularly shift tactics in terms of who is targeted, attack methods, weapon components, or delivery methods. Terrorist organizations' communication strategies are likely to change in a similar fashion. This involves a return to the creative process depicted above. However, their innovation depends on having the right operating environmental and organizational capability (a discussion we return to later).

Fifth, as a product's novelty decays, so too does its effectiveness (provided countermeasures are put in place or activated) and its likelihood of being emulated by other groups. This decay in novelty will likely be accelerated by the emergence of competing products.

Finally, there are two forms of product and process innovation—incremental and radical. These variants differ in the degree to which they are revolutionary and novel. Radical innovation consists of fundamental changes that strike a clear departure from existing processes and products. Incremental innovation describes small adjustments to the current technology or product (Dewar & Dutton, 1986). Radical innovation drives the creation of effective surprise and shock in consumers. Radically-creative products possess the surprise factor of being rarely anticipated and thus, provide a competitive advantage to the designers by making it extremely difficult for competitors to emulate the product's unique qualities. In the case of terrorist organizations' activities, innovative outcomes can include successful subway gas attacks, effective improvised explosive devices, strategic recruitment of new extremists, and responsive counter-attacks against military officials. Of course, this advantage lasts only until an organization's competitors generate a more technologically advanced and desirable product. In the same way as businesses compete with one another for first-mover advantages, the war on terror is seen as a dynamic struggle between law enforcement officials and terrorists to outperform one another by employing increasingly creative means to effectively strike at their targets and evade detection (Cropley, 2008, p. 107).

IS' Imitation and Innovation

Of course, IS' communication strategy did not develop in a vacuum. As the previous chapters in this book demonstrate, IS has obviously learnt a great deal from other jihadi groups from the decade prior. This should not be surprising given the insights regarding social learning outlined above. Less obviously, they may have also learnt about effective communication strategies from U.S. Army, ethno-nationalist movements, left-wing revolutionaries, and Hollywood and Nazi mass propaganda (see Chapters 1 and 3 in this volume). This social learning covers a range of behaviours including:

- Using the internet as the primary vehicle for propaganda
- Using visual imagery and “grotesque propaganda”
- Seeking “viral” documents
- Having dedicated media-teams
- The use of videos, magazines and *anashid*
- The use of “martyr biographies”

IS communication strategies also imitate content including:

- Developing social diagnoses and agendas
- Reifying group categories
- Recycling old symbolic imagery and narratives
- Using Eschatology

If one were to cherry-pick these examples from this book, it would be appropriate to ponder whether anything related to IS' communication strategy is actually creative or innovative. However, several claims are made in this book and elsewhere that IS' communication strategies are indeed innovative. These innovations include:

- The "sophisticated" use and understanding of social media
- The quantity of propaganda outputs
- The diversity of propaganda outputs
- The lingual diversity in outputs
- It's ideological appeal being "anchored" in "exceptionalism"

The organisational psychology literature would largely depict these innovations as incremental as opposed to radical. Purely radical innovations are difficult to find. Those listed above are essentially small creative adjustments to previous efforts. Combined, they have certainly had a radical *impact*, but the innovations themselves are incremental. As the introduction and Ingram's chapter make clear, it is IS' propaganda as a system of "full-spectrum propaganda" which is arguably unprecedented. They have built upon previous innovations but made it large scale. Kovacs (2015:66) showed that IS incrementally improves "the massive 'visual turn' embraced by some radical Islamist movements at the beginning of the 21st Century" (2015:66). In this book, Chapters 4 and 5 depict IS videos within a "continuity of propaganda practices" and IS magazines as "not too far from the preceding Inspire". What appears to distinguish IS communication strategies are their high level of elegance and relevance, aided by the volume and diversity of outputs.

This leaves the question of whether the IS communicative strategy will likely be emulated by others? The terrorism studies and communication science literatures would both suggest that this would be natural occurrence because the strategy has demonstrably proved to be effective. Terrorists are rational-actors and conduct deliberate cost-benefit analyses after all. However, the organisational psychology and business management literatures consistently highlight a number of caveats. The answer is more likely group-specific and all depends upon capability. As previously stated, typically multiple levels of interacting actors combine to initiate the creative process. The interplay of individuals, teams, leaders, organizations, and environments contribute to this process of creativity and innovation. Innovation therefore is typically multiply determined. We need to think about the attributes of a group that make creativity and innovation (and potentially emulation) more likely. So whilst groups may learn from IS communications strategies, the literature above suggests that if they do not have similar organizational characteristics, emulation may be less likely. IS communicative innovations appear primarily driven by organizational-level and environmental-level factors. Given the more nuanced accounts available from the organizational and business management literatures, we now consider some of these variables and elaborate upon some of the key findings from the various literatures briefly reviewed above.

IS Communicative Innovations and Organizational-Level Variables

The business management literature suggests there are several organizational-level variables of creativity that leaders can control. They include: organizational structure, organizational size, offering extrinsic/intrinsic rewards, ensuring a collaborative environment, building inter-team trust, engaging in participatory decision-making, encouraging a unified commitment to the project, appointing principled leadership, financial resources, obtaining external support and recognition, adopting a flexible approach to roles and behaviours that accommodate emergent ideas, provision of feedback and encouragement to 'be creative' (Abetti, 2000; James, Clark, & Cropanzano, 1999; Shalley, 1991; Carson & Carson, 1993; Grant & Berry, 2011). Looking at IS specifically, Miller and Mekhennet (2015) reported first-hand accounts from defectors who described the central role and importance bestowed to the media team. Senior media members "are treated as 'emirs' of equal rank to their military counterparts. They are directly involved in decisions on strategy and territory. They preside over hundreds of videographers, producers and editors who form a privileged, professional class with status, salaries and living arrangements that are the envy of ordinary fighters".

The creativity literature illustrates that a flexible, organic structure, as opposed to a bureaucratic structure, is more conducive to innovation in organizations (Drazin & Schoonhoven, 1996; Hunter, Bedell, & Mumford, 2007). For example, in Hellstrom and Hellstrom's (2002) qualitative study, most respondents perceive organizational rules as hindering creativity. While workers depend upon quick feedback because "ideas are perishable goods", informal networks possess the danger of ideas being stolen for the benefits of others. Thus, while too much structure suffocates creativity, too little structure deters idea generation, subsequent evaluation and the processes needed for full implementation. Although a strictly hierarchical organization, IS' media department is stratified across a number of physical and virtual domains with some central coordination. This may have had the (potentially unintended) impact of creating multiple competing teams where the innovations of one quickly diffused across the organization (see Milton, 2016 for example). This same intra-organizational competition was noted as a key factor in Provisional IRA's systematic innovations in the area of bomb development (Gill, 2016).

Further, Tushman and O'Reilly (1996) illustrated that larger organizations possessing complicated interlinked structures may be dependent on a network of external ties and suppliers that provide raw materials for their products and can hesitate to innovate in order to leave the ties undisturbed. The cost and difficulty of implanting change incentivizes some organizations to remain rooted in their structures, systems, procedures, and processes. Although a large organization's resources can be conducive to innovation, it may also lead to losing focus, which in turn leads to poor planning (Halbesleben, Novicevic, Harvey, & Buckley, 2003).

Leadership is also important for the creative focus. We must first distinguish what role leaders play in the creative process before distinguishing specific leadership behaviours that engender greater creativity and innovation. According to the literature, leaders provide structure and vision, facilitate idea progression, champion and promote ideas to others, provide resources and feedback, model appropriate behaviours, motivate subordinates, model open-minded thinking, extend discussions to encourage more idea generation, define problems in new ways and grant autonomy to subordinates (Damanpour, 1991; Halbesleben, Novicevic, Harvey, & Buckley, 2003; Mumford, 2000; Mumford et al., 2007).

One of the clearest findings in creative leadership research is that technical expertise is critical for leader performance (Mumford, Hunter, Eubanks, Bedell, & Murphy, 2007). Expertise helps leaders appraise follower capabilities, creates awareness of professional expectations, and

provides a basis for effective exercise of power (Gumusluoglu & Ilsev, 2009). It is commonly perceived that newcomers to a domain may be more creative than experts because they are unhindered by locked modes of thinking. Although this may be true in some cases, research shows that in order to conceptualize creative solutions to problems, an individual needs expertise in the problem domain (Walczyk & Griffith-Ross, 2008). Experience and expertise provide individuals a framework for interpreting, gathering, and acting on information (Mumford, Hunter, Eubanks, Bedell, & Murphy, 2007; Taylor & Greve, 2006). Having a broader and richer frame of reference allows individuals a larger reservoir to draw from when solving problems. Specifically, expertise promotes (a) a more rapid acquisition of knowledge, (b) use of systematic solutions rather than trial and error, and (c) applications of the principles, relationships, and prototypic cases to novel problems (Mumford, 2000). The value of expertise is so great that some researchers argue most individuals take ten years to make an important contribution in their domain (Kaufman, 2009).

The preceding chapters make it clear that a key reason for IS' social media success was the organization's capacity for creating and distributing a large number of slickly produced and specifically targeted materials. Expertise and experience appear crucial to the incremental innovations embedded in this social media success. Miller and Mekhennet (2015) reported on first-hand accounts of IS defectors who described the central role and importance bestowed to the media team. This team is stocked with individuals "whose production skills often stem from previous jobs they held at news channels or technology companies". Interviewees further claimed that "the media wing has relied on veterans of al-Qaeda media teams, young recruits fluent in social media platforms... Some of them were hackers; some were engineers". The fact remains, however, that IS are beginning to lose some of these key personnel (Lakomy, 2017).

While individual traits are conducive to creative work, they may also hinder collaborative efforts which themselves are often necessary to solve complex problems and require multiple areas of expertise. Indeed, the traits that allow innovative employees to break from social norms also leave them susceptible to interpersonal conflicts with co-workers (Anderson & Geistner, 2007). As suggested by Feist's (1998) meta-analysis of creative personality, innovative people tend to remove themselves from social interactions more readily. Despite a creative individual's need for autonomy, workgroup support strongly predicts innovation (Baer & Frese, 2003). Several reasons explain why teamwork benefits creative efforts. First, diverse expertise contributes to the pool of information available for idea generation. It also provides a greater need to articulate the problem at hand (West, 2002). Work groups provide ties and networks that promote innovation (Hellstrom & Hellstrom, 2002). In turn, these ties provide support in uncertain times and help lower stress. Team members serve as collaborators and provide feedback in an environment of trust (Paulus et al., in press; Mueller & Kamdar, 2011; Pirola-Merlo & Mann, 2004). Given the volume of foreign fighters within the ranks, IS' personnel is clearly a diverse pool. A previous chapter makes a clear link between this diversity and some incremental innovations – namely the production of anashid and other propaganda outputs in a range of languages: "It is worth noting that this trend of linguistic diversification has been apparent across IS' propaganda operations between 2014 and 2017, and has been facilitated by the abilities it accrued from foreign fighter inflows".

Cohesiveness has positive effects on innovation because it increases group process effectiveness, promotes awareness of team members' skills and team mental models, aids in more efficient decision making, and builds trust and liking among group members (Ayres, Dahlstrom, & Skinner, 1997; Mumford & Hunter, 2005). The early years of IS and the geographical sanctity they possessed potentially allowed for this cohesiveness to develop and

innovations to occur. Now that IS is under greater military pressure on the battlefield and increased pressure on the virtual space, it will be interesting to see the impact upon innovation. Already this pressure appears to be impacting upon production quality which many inextricably tie to IS' innovation. For example, Lakomy (2017) notes during 2016 that some "high-profile videos contain evident editing, montage and post-production mistakes, which were previously very rare". Lakomy (2017) depicts this as a "a serious creativity crisis". This fall in quality is not linked to an increase in output. Milton (2016) notes the severe reduction in content being produced through 2016.

IS Communicative Innovations and Environmental-Level Variables

Of course, organizational level attributes are only one side of the coin. There is an interaction effect between organizations and the environment in which they operate. Undoubtedly, IS communication strategies benefitted from their particular environmental context. So much so, that some might question the degree to which we can actually credit IS' with these innovations. For example, the drivers of innovation for behaviours like the use of social media and the dissemination of the quantity and diversity of propaganda appear attributable to environmental drivers outside the control of IS. Other environmental drivers can be more proximal. One such proximal environmental driver is that of external agencies *imposing* the need for innovation on a terrorist organization. As Crenshaw (2010) notes, the social movement literature embodied by Tarrow (1994) suggests something similar in "that government actions as well as new opportunities and constituencies stimulate innovation in social movements and their strategies of protest" (p. 43).

For terrorist organizations, two types of external agencies exist in the communicative context. First, effective counter-terrorism policies may force terrorist organizations to experiment with other creative acts of violence or communicative strategies. At the same time, new counter-terrorism policies, while increasing the pressure to innovate, may also curtail a terrorist organization's capacity for creativity and innovation. This evokes the argument in Chapter 2 of this book that IS' reproduction of concepts such as al-Wal'a' wa al-Baraa' "is deeply reactionary in nature, in the sense that it comes from a perceived necessity to enforce a protection against foreign influence". Counter-terrorism is no longer the sole remit of security and intelligence agencies. The pressure applied by social media organizations led to emulations of others in the use of hashtags in disseminating IS material and ultimately the switch to Telegram which "has become a hub for retrieving IS related propaganda and coordinating its distribution on other social network platforms, allowing them to organize ghazawat (raids) on platforms such as Facebook and Twitter" (see Chapter 2).

Terrorist organizations espousing similar goals may attempt to outbid one another for community support; this represents a second form of external agency that may drive creativity and innovation for a terrorist organization. Community support for particular types of violence may also encourage terrorist organizations to innovate and fulfil these needs; this encapsulates the third form of external agency. Again, returning to Chapter 2, the central appeal of IS' communication efforts is that the group is depicted as exceptional compared to other Islamist groups and the group is "highly conscious that its most important battle is the ideological one for the leadership of Salafi jihadism".

Furthermore, innovation is a process of change, which is an inherently temporal phenomenon (Lubart, 2001). Thus, planning is crucial for successfully releasing new products. Planning requires understanding market trends and development opportunities. However, without

appropriate testing and evaluation the product can fail. Thus, external pressure may place a greater emphasis on idea evaluation with innovative products (Mueller, Melwani, & Goncalo, 2011). These findings from the organisational psychology literature resemble much theorizing from the field of social movement studies. Grievances in and of themselves fail to account for the emergence of violent contentious actions. Instead, organizational elites utilize political opportunity structures to maximize their chances of mobilizing previously passive but potential recruits and supporters. The same is true for particular manifestations of violence once mobilization has begun (see Sarma, 2007). Indeed, both Zelin (2015) and Winter (2015) demonstrate IS' disposition to satisfy the broad needs of their diverse supporter pool. "This marks an important departure from other significant jihadist groups such as AQ, who tended to focus on the ideological aspects of their message (e.g., via historical videos, online sermons or battle scenes). Thus, IS did not simply 'luck into' the advent of social media; we must also credit the group with the forethought of considering the broad spectrum of needs of their users, and investing heavily in satisfying these hence the need to turn to an organisational understanding of drivers" (see Chapter two).

Imitation and Innovation after IS

So what does this all mean for imitation and innovation after IS? A naïve answer would suggest that because the "full-spectrum" innovation worked for IS, it is bound to be copied and incrementally improved elsewhere. However, if that were the case, we should have already seen it by now. Copying is common in industry, with only an estimated six to eighteen month time period in which competitors have access to product development information (Levin et al, 1987). This is especially so when the product is less complex or easier to understand and imitate, making reverse engineering easier (Pil & Cohen, 2006). Additionally (and ironically), the success of a terrorist organization's innovative communication can also be its downfall, as other organizations copy the style or content and in turn make the original organization seem too mainstream. If the purpose of propaganda is to terrorise, too much exposure to it, dampens the intended effect as people become habituated.

Looking at "what works" is insufficient. What the preceding section demonstrates is that we need to think about "what works, for whom and in what circumstances". All the will in the world to emulate IS communication strategies will be redundant if the individual, environmental and group-level capabilities are lacking.

Where these IS innovations are most likely to be imitated will heavily depend upon where IS adherents end up in other conflict zones upon the group's demise in Syria. The study of business imitation demonstrates competitors gain knowledge through peer conversations, suppliers, customers, and employee turnover (Appleyard, 1996). They will take with them the tactics, techniques and procedures learnt in Syria and adept them to the idiosyncrasies of the local conflict and the affordances offered to them there.

What these ex-IS members bring to their new conflict will not necessarily be a reduction in the quality of communication strategy. Some research suggests an advantage to being a second mover or imitator. Chinese and Korean tech companies had initially followed this strategy with great success, allowing rapid growth and development of their own high tech skills through acquiring information about other successful companies' methods. The second mover advantage allows organizations to make more incremental improvements to a radical innovation, create products at a lower cost, or take advantage of a well-known and "proven" product or process once the market has already been tested for it. In a study by Golder and

Tellis (1993), first movers remain market share leaders in only 4 out of 50 companies, with only a 10% market share but a 47% failure rate. In contrast, second movers had larger average market shares of 28% and lower failure rates of 8%. Thus, imitators can have a significant competitive advantage by learning from the mistakes of first movers. We might therefore expect to see less of the “full spectrum” approach, and instead see a more fine-tuned and streamlined suite of communication products emerge.

Where innovations go next will largely be a small-scale mimicking of systematic innovations which will impact all of us benevolently. Who could have foreseen 15 years ago, the ubiquity of social media in our lives and how malevolent actors could have shaped these forces for their own end. Technological changes will lead inevitably to new forms of communication strategies for both benevolent and malevolent groups.

Conclusion

The emergence of IS as perhaps the world’s most preeminent terrorist organization (in terms of its communication strategy) makes it likely others will try to replicate it. We know from the history of terrorism that this emulation is most likely going to occur within groups of a similar ideological outlook, grievance structure and geographical proximity.

Future innovation of terrorist communications will likely be dependent upon the affordances offered by new online innovations. It is therefore impossible to predict the timing and scale of these innovations. However, organisational psychology tells us that the right organizational- and environmental-variables must overlap in space and time for a group to fully make use of these innovations. Few groups will have the scale, foresight, finances and diversified personnel that IS had. Moreover, few groups will have the relatively secure on- and off-line operating space that IS benefitted from. The likelihood that a group will benefit from both at the same time is relatively unlikely. Although the internet affordances crucial to IS’ growth can be copied by other groups, these other groups are unlikely to be sufficiently capable of manipulating these affordances.

A focus on processes, behaviours and organizational capabilities allows us to answer the ‘how’ questions and here there is a sparsity in the research field. Instead, analyses tend to focus on the ‘what’ (e.g. the content of the communications) and the ‘why’ (e.g. the instrumental reasoning behind the communication). In time, the ‘how’ questions may become easier to answer as first-hand documents and accounts of the IS communication process become available. This book has consistently highlighted a number of innovative *products* related to IS communications. What we know too little of, is the creative *process* this organisation went through to make these products a reality. In particular, we know very little about issues (e.g. idea generation) that preceded the production of the innovative product. Further research is needed on the inner-workings of the organisation to specifically pinpoint what individual, team, leader, organizational and environmental factors afforded their capability to relentlessly go through creative processes. This, of course, is a much more challenging research task. It will always be easier to study the *products* that IS wanted disseminated, than the *processes* they tried to keep hidden from the eyes of counter-terrorism. For now, we are reliant upon reassurances from organisational psychology which posit that (a) communicative innovations are difficult to emulate, and (b) the sheer scope of the communicative innovations’ presence diminishes their innovative effects over time. This forces terrorist groups into new communication strategies which may prove counterproductive and increase the effort required of the terrorist group to effectively communicate with targeted audiences.

References:

- Abetti, P. A. (2000). Critical success factors for radical technological innovation: A five case study. *Creativity and Innovation Management*, 9(4), 208-221.
- Amabile, T. M. (1996). *Creativity in context: Update to "The social psychology of creativity"*. Boulder, CO: Westview Press.
- Anderson, N., & Gasteiger, R. M. (2007). Helping creativity and innovation thrive in organizations: Functional and dysfunctional perspectives. In J. Langan-Fox, C.L. Cooper, & R. J. Klimoski (Eds.), *Research Companion to the Dysfunctional Workplace: Management Challenges and Symptoms* (pp. 422-440). Cheltenham: Edward Elgar Publishing.
- Anderson, N., Potocnik, K., & Zhou, J. (2014). Innovation and Creativity in Organizations: A State-of-the-Science Review, Prospective Commentary, and Guiding Framework. *Journal of Management*, 40(5), 1297-1333. <http://doi.org/10.1177/0149206314527>
- Ayres, D., Dahlstrom, R., & Skinner, S. J. (1997). An exploratory investigation of organizational antecedents to new product success. *Journal of Marketing Research*, 34(1), 107-116.
- Baer, M., & Frese, M. (2003). Innovation is not enough: Climates for initiative and psychological safety, process innovations, and firm performance. *Journal of Organizational Behavior*, 24, 45-68.
- Bauer, T. N., Bodner, T., Erdogan, B., Truxillo, D. M., & Tucker, J. S. (2007). Newcomer adjustment during organizational socialization: a meta-analytic review of antecedents, outcomes, and methods. *The Journal of Applied Psychology*, 92(3), 707-21. <http://doi.org/10.1037/0021-9010.92.3.707>
- Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of social and clinical psychology*, 4(3), 359-373.
- Block, E., & Negrine, R. (2017). The populist communication style: Toward a critical framework. *International Journal of Communication*, 11, 20.
- Bloom, M. (2005). *Dying to kill: The allure of suicide terror*. New York: Columbia University Press.
- Bonneuil, N., & Auriat, N. (2000). Fifty years of ethnic conflict and cohesion: 1945-1994. *Journal of Peace Research*, 37(5), 563-581.
- Bracciale, R., & Martella, A. (2017). Define the populist political communication style: the case of Italian political leaders on Twitter. *Information, Communication & Society*, 20(9), 1310-1329.
- Braithwaite, A., & Li, Q. (2007). Transnational terrorism hot spots: Identification and impact evaluation. *Conflict Management and Peace Science*, 24(4), 281-296.
- Carson, P. O., & Carson, E. D. (1993). Managing creativity enhancement through goal-setting and feedback. *Journal of Applied Psychology*, 27, 36-45.
- Chang, H. C. (2010). A new perspective on Twitter hashtag use: Diffusion of innovation theory. *Proceedings of the Association for Information Science and Technology*, 47(1), 1-4.
- Crenshaw, M. (2010). Innovation: Decision points in the trajectory of terrorism (pp. 35-50). In M. Rasmussen & M. Hafez (Eds.), *Terrorist innovations in weapons of mass effect: Preconditions, causes and predictive indicators* (Report No. ASCO 2010-019). Retrieved from <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA556986>
- Cropley, D., Kaufman, J., & Cropley, A. (2008). Malevolent creativity: A functional model of creativity in terrorism and crime. *Creativity Research Journal*, 20(2), 105-115.
- Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34, 555-590.
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of applied social psychology*, 22(14), 1111-1132.
- Dewar, R. D., & Dutton, J. E. (1986). The adoption of radical and incremental innovations: An

empirical analysis. *Management Science*, 32(11), 1422-1433.

- Dolnik, A. (2007). *Understanding terrorist innovation: Technology, tactics and global trends*. London: Routledge.
- Drazin, R., & Schoonhoven, C. B. (1996). Community, Population, and Organization Effects on Innovation: A Multilevel Perspective. *Academy of Management Journal*, 39(5), 1065-1083.
- Dugan, L., LaFree, G., & Piquero, A. R. (2005). Testing a rational choice model of airline hijackings. *Criminology*, 43(4), 1031-1065.
- Feist, G. (1998). A meta-analysis of personality in scientific and artistic creativity. *Personality and Social Psychology Review*, 2, 290-309.
- Gill, P., Horgan, J., Hunter, S. T., & D Cushenbery, L. (2013). Malevolent creativity in terrorist organizations. *The Journal of Creative Behavior*, 47(2), 125-151.
- Grant, A. M., & Berry, J. (2011). The necessity of others is the mother of invention: Intrinsic and prosocial motivations, perspective-taking, and creativity. *Academy of Management Journal*, 54(3), 73-96.
- Gumusluoglu, L., & Ilsev, A. (2009). Transformational leadership, creativity, and organizational innovation. *Journal of Business Research*, 62, 461 - 473. doi:10.1016/j.jbusres.2007.07.032
- Halbesleben, J. R. B., Novicevic, M. M., Harvey, M. G., & Buckley, R. (2003). Awareness of temporal complexity in leadership of creativity and innovation: A competency-based model. *The Leadership Quarterly*, 14, 433 - 454. doi:10.1016/S1048-9843(03)00046-8
- Hellstrom, C., & Hellstrom, T. (2002). Highways, alleys and by-lanes: Charting the pathways for ideas and innovation in organizations. *Creativity and Innovation Management*, 11, 107- 114.
- Horowitz, M. (2010). Nonstate actors and the diffusion of innovations: The case of suicide terrorism. *International Organization*, 64(1), 33-64.
- Hunter, S. T., Bedell, K. E., & Mumford, M. D. (2007). Climate for creativity: A quantitative review. *Creativity research journal*, 19(1), 69-90.
- Ilie, V., Van Slyke, C., Green, G., & Hao, L. (2005). Gender differences in perceptions and use of communication technologies: A diffusion of innovation approach. *Information Resources Management Journal*, 18(3), 13.
- Jackson, B., Baker, J., Chalk, P., Cragin, K., Parachini, J., & Trujillo, H. (2005). *Appetite for destruction: Organizational learning in terrorist groups and its implications for combating terrorism*. California: Rand Corporation.
- James, K., Clark, K., & Cropanzano, R. (1999). Positive and negative creativity in groups, institutions, and organizations: A model and theoretical extension. *Creativity Research Journal*, 12, 211-226.
- Jung, D., Wu, A., & Chow, C. W. 2008. Towards understanding the direct and indirect effects of CEOs' transformational leadership on firm innovation. *The Leadership Quarterly*, 19: 582-594
- Kaufman, J. C., (2009). *Creativity 101*. Springer Publishing Company: New York.
- Kenney, M. (2007). *From Pablo to Osama: Trafficking and terrorist networks, government bureaucracies, and competitive adaptation*. State College: Pennsylvania State University Press.
- Kovacs (2015:66),
- Krämer, B. (2017). Populist online practices: the function of the Internet in right-wing populism. *Information, Communication & Society*, 20(9), 1293-1309.
- Lakomy, M. (2017). Cracks in the Online "Caliphate": How the Islamic State is Losing Ground in the Battle for Cyberspace. *Perspectives on Terrorism*, 11(3).
- Lubart, T.I. (2001). Models of the creative process: Past, present and future. *Creativity Research Journal*, 13(3-4), 295-308.
- Merari, A. (1999). Terrorism as a strategy of struggle: Past and future. *Terrorism and Political*

Violence, 11(4), 52-65.

- Midlarsky, M. I., Crenshaw, M., & Yoshida, F. (1980). Why violence spreads: The contagion of international terrorism. *International Studies Quarterly*, 24(2), 262-298.
- Miller, G., & Mekhennet, S. (2015). Inside the surreal world of the Islamic State's propaganda machine. *The Washington Post*, 20.
- Moghadam, A. (2008). *The globalization of martyrdom*. Maryland: The Johns Hopkins University Press.
- Mudde, C., & Kaltwasser, C. R. (Eds.). (2012). *Populism in Europe and the Americas: Threat or corrective for democracy?*. Cambridge University Press.
- Mueller, J. S., & Kamdar, D. (2011). Why seeking help from teammates is a blessing and a curse: A theory of help seeking and individual creativity in team contexts, *Journal of Applied Psychology*, 96, 263-276.
- Mueller, J. S., Melwani, S., & Goncalo, J. a. (2011). The Bias Against Creativity: Why People Desire but Reject Creative Ideas. *Psychological science*. doi:10.1177/0956797611421018
- Mumford, M. D., & Hunter, S. T. (2005). Innovation in organizations: A multi-level perspective on creativity. In F. J. Yammarino & F. Dansereau (Eds.), *Research in Multi-level Issues: Volume IV*. (pp. 11-74). Oxford, England: Elsevier.
- Mumford, M. (2000). Managing creativity. *Human Resource Management Review*, 10, 313-351.
- Mumford, M., Hunter, S. T, Eubanks, D., Bedell, K., & Murphy, S. (2007). Developing leaders for creative efforts: A domain-based approach to leadership development. *Human Resource Management Review*, 17(4), 402-417.
- Pape, R. (2005). *Dying to win: The strategic logic of suicide terrorism*. New York: Random House publishers.
- Paulus, P. B., Dzindolet, M., & Kohn, N. W. (in press). Collaborative creativity – Group creativity and team innovation. In M. D. Mumford (Ed.), *Handbook of Organizational Creativity* (pp. 327-357). London: Elsevier.
- Pirola-Merlo, A., & Mann, L. (2004). The relationship between individual creativity and team creativity: aggregating across people and time. *Journal of Organizational Behavior*, 25, 235-257.
- Rasmussen, M., & Hafez, M., (2010). Terrorist innovations in weapons of mass effect: Preconditions, causes and predictive indicators. Washington: The Defense Threat Reduction Agency. (Report No. ASCO 2010-019). Retrieved from <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA556986>
- Sarma, K. (2007). Defensive propaganda and IRA political control in Republican communities. *Studies in Conflict and Terrorism*, 30(12), 1073-1094.
- Shalley, C., & Gilson, L. (2004). What leaders need to know: A review of social and contextual factors that can foster or hinder creativity. *Leadership Quarterly*, 15(1), 33-53.
- Tarrow, S. (1994). *Power in Movement: Social movement, collective action and politics*. Cambridge: Harvard University Press.
- Taylor, A., & Greve, H. R. (2006). Superman or the fantastic four? Knowledge combination and experience in innovative teams. *Academy of Management Journal*, 49(4), 723-740. doi:10.5465/AMJ.2006.22083029
- Tushman, M., & O'Reilly, C. (1996). Ambidextrous organizations: Managing evolutionary and revolutionary change. *California Management Review*, 38, 8-30.
- Van Slyke, Lou, & Day, 2002
- Waisbord & Amado, 2017
- Walczyk, J. & Griffith-Ross, D. (2008). Commentary on the functional creativity model: Its application to understanding innovative deception. *Creativity Research*

Journal, 20, 130- 133.

West, M. A. (2002). Sparkling fountains or stagnant ponds: An integrative model of creativity and innovation implementation in work groups. *Applied Psychology: An International Review*, 51, 355–387.

Winter, C. (2015). The virtual 'caliphate': Understanding Islamic State's propaganda strategy.

Zelin, A. Y. (2015). Picture or it didn't happen: A snapshot of the Islamic State's official media output. *Perspectives on Terrorism*, 9(4).