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FROM THE EDITOR   The deadly attack at Fort Lauderdale airport earlier this month by an individual claiming to have been influenced by voices he heard and to have acted on behalf of the Islamic State has renewed attention on the nexus between terrorism and mental health. In our cover article, Emily Corner and Paul Gill explore what they argue are complex and often misunderstood links. Their preliminary findings show that the proportion of attackers in the West possibly influenced by the Islamic State with a history of psychological instability is about the same as the rate of such instability in the general population, though the rate is higher than in the general population if Islamic State-directed attacks are excluded. This is in line with their previous findings that group-based terrorists are much less likely to have mental disorders than lone-actor terrorists. They also question the degree to which lone-actor terrorists with mental disorders are symptomatic at the time of attacks. Lone-actor terrorists with mental disorders, they have found, are just as likely to engage in rational planning prior to attacks as those without. Their research has also found a significantly higher rate of schizophrenia among lone-actor terrorists than in the general population. There is a long-running debate about whether this condition could make individuals of all ideological persuasions less inhibited in moving from radical thought to radical action.

In a joint interview, Peter Edge, Acting Deputy Director of U.S. Immigration and Customs Enforcement, and Wil van Gemert, Deputy Director of Europol, focus on the challenges of identifying, tracking, and interdicting foreign terrorist fighters and steps being taken to deepen transatlantic cooperation. Michael Horton argues that AQAP's deepening ties to anti-Houthi forces in Yemen's civil war is making the terrorist group even more resilient and difficult to combat. Don Rassler examines the contest between the United States and jihadis on drones and drone countermeasures. Jason Warner looks at the three newly self-declared affiliates of the Islamic State in sub-Saharan Africa.

Paul Cruickshank, *Editor in Chief*

Is There a Nexus Between Terrorist Involvement and Mental Health in the Age of the Islamic State?

By Emily Corner and Paul Gill

The wave of Islamic State-linked terrorism experienced in the West over the past couple of years has rekindled debates surrounding mental disorders and terrorist engagement. A very preliminary survey by the authors found that out of 55 attacks in the West where the 76 individuals involved were possibly influenced by the Islamic State, according to media reports, 27.6% had a history of apparent psychological instability, a percentage comparable to that found in the general population. This figure is driven largely by individuals inspired by the Islamic State, as opposed to those directed by it, however. The percentage is likely overinflated for several noteworthy reasons, including poor reporting, low benchmarks, and the tendency to overuse mental health problems as a 'silver-bullet' explanation for terrorist involvement. The relationship is, in fact, far more complex than typically presented.

The Islamic State-linked terrorism experienced in the West recently has reignited debates about the connection between mental disorders in terrorist activity. Indeed, the assistant commissioner for specialist operations in London's Metropolitan Police Service acknowledges the Islamic State is actively trying to recruit, among others, "those with mental health issues."[1] Similarly, Australia's national counterterrorism coordinator, Greg Moriarty, has outlined that many cases involve individuals "not necessarily deeply committed to and engaged with the Islamist ideology but are nonetheless, due to a range of reasons, including mental health issues, susceptible to being motivated and lured rapidly down a dangerous path by the terrorist narrative."[2] The debates became particularly salient through the summer of 2016 when lone actors inspired and encouraged by the Islamic State killed 135 civilians in separate attacks in Orlando and Nice. More recently, the fatal shooting of five individuals at Fort Lauderdale airport added complexity to these debates. All perpetrators had reported histories of mental disorder.

This article seeks to answer several questions to provide a more

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rigorous evidence base for these debates. These questions include: What is the existing evidence base regarding psychopathology and terrorist involvement? How prevalent are mental disorders among Islamic State-directed and -inspired offenders in the West? What is the content of these diagnoses? When present, what relationship did the disorder have with radicalization?

The Evidence Base

Very few scientific analyses have focused upon the relationship between mental health and terrorist involvement. The following outlines the headline results from the sum total of these scientific endeavors.[3] Some recent studies analyzed the prevalence rates of different disorders within very different samples of terrorist offenders. Based on police files, 6% of Anton Weenink's sample of 140 Dutch individuals who either became foreign fighters or sought to travel abroad for the purpose of terrorism had diagnosed disorders.[4] An additional 20% displayed signs of undiagnosed mental health problems. The diagnoses included ADD, AD/HD, autism spectrum, narcissistic, schizophrenia, post-traumatic stress, and psychotic disorders. The prevalence of schizophrenia (2%) in the sample was higher than what would be expected in the general population, which is currently estimated at between 0.87% and 1%.[5]

A study of lone-actor terrorists co-authored by the authors of this article also found higher rates of schizophrenia than in the general population, as well as certain other disorders. Based on open source information, over 40% of Emily Corner, Paul Gill, and Oliver Mason's study[6] of 153 lone-actor, solo-actor, and dyad terrorists[a] had a diagnosed disorder, much higher than in the general pop-

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a   A lone-actor terrorist is defined by John Horgan, Paul Gill, Noemie Bouhana, James Silver, and Emily Corner as "an individual lacking any ties to a terrorist/violent extremist group … These individuals typically engage in violence in support of a group and/or ideology." Lone actors within the sample included those inspired by Islamist, right-wing, left-wing, nationalist, and single issue ideologies. John Horgan, Paul Gill, Noemie Bouhana, James Silver, and Emily Corner, "Across the universe? A comparative analysis of violent radicalization across three offender types with implications for criminal justice training and education," National Institute of Justice, June 2016. A "solo-actor terrorist" is defined as "an individual who either (a) carried out the act of terror alone, but under instruction or (b) carries out the act through his/her own volition, but has had previous contact with terrorist/violent extremist groups and/or radical environments to receive planning and support." John Horgan et al. A dyad in this context refers to two individuals who conceive, plan, and carry out an attack on their own. One or both individuals may have previously been attached to a terrorist group.

ulation (25-27%).[b] The diagnoses included schizophrenia (8.5%), depression (7.2%), unspecified personality disorder (6.5%), bipolar disorder (3.9%), post-traumatic stress disorder (PTSD, 3.3%), autism spectrum disorder (3.3%), delusional disorder (2.0%), unspecified anxiety disorder (1.3%), traumatic brain injury (TBI, 1.3%), obsessive compulsive disorder (OCD, 1.3%), unspecified sleep disorder (0.7%), schizoaffective disorder (0.7%), psychotic disorder (0.7%), drug dependence (0.7%), and dissociative disorder (0.7%).[c] Three disorders held a substantially higher prevalence than found within general populations (schizophrenia, delusional disorder, and autism spectrum disorders), whereas depression, anxiety, PTSD, and sleep disorders are more commonly found within the general population than the lone-actor sample.[7]

Michael and Simon Gottschalk[8] also tested rates of various measures of personality and psychopathology within terrorist samples against the civilian population. By administering the MMPI-2,[d] they compared 90 incarcerated Palestinian and Israeli terrorists to control groups of Palestinians and Israeli Jews matched on demographic features. The former group scored higher on subscale measures of psychopathic deviate, paranoid, depressive, schizophrenic, and hypomanic tendencies.

It is worth remembering, however, that the Weenink study and the Corner, Gill, and Mason study are based on small samples of particular terrorist types and not necessarily a depiction of all terrorist populations globally. Evidence suggests, for example, that the rates of mental disorders within lone-actor terrorist populations are significantly higher than group-based terrorists. Corner, Gill, and Mason[9] found a negative correlation between the level of co-offending and the rate of mental disorder prevalence. Whereas 40% of the study's lone-actor terrorists had a mental disorder, the prevalence rates were lower for solo-actor terrorists at around 20%, just over 5% for terrorist dyads, and less than 3% for terrorist group members.[e] In an earlier study, Corner and Gill found that lone-actor terrorists were 13.5 times more likely to have a mental disorder than group-based terrorists.[10] This result was in line with Christopher Hewitt's analysis of U.S.-based terrorists who espoused a range of ideologies (22% vs. 8.1%),[11] and that of Jeff Gruenewald, Steven Chermak, and Joshua Freilich, who examined U.S.-based, far-right offenders (40.4% vs. 7.6%).

Evidence also suggests that some terrorist roles may be more likely to experience particular mental disorders. Ariel Merari and his colleagues carried out psychological tests on samples of suicide bombers and various control groups (e.g. other terrorists and non-political criminals)[12] employing a range of techniques including clinical interviews, personality tests, the Thematic Apperception Test, and the House-Tree-Person Drawing test. Suicide bombers obtained significantly more diagnoses of Avoidant-Dependent Personality Disorder (60% vs. 17%), depressive symptoms (53% vs. 8%) and more readily displayed suicidal tendencies (40% vs. 0%). On the other hand, the control group was more likely to contain members with psychopathic tendencies (25% vs. 0%) and impulsive-unstable tendencies (67% vs. 27%). Suicide bomber organizers scored higher in ego-strength, impulsivity, and emotional instability than would-be suicide bombers.

Collectively, these results provide important insight into how we should try to understand Islamic State-linked cases. We should expect to see higher rates of specific mental disorders among lone-actors than the general population, and we should expect variance across the roles and behaviors that these individuals engage in once they have chosen to turn to violence (e.g. suicide attack vs. non-suicide attack). We may also expect to find higher rates of disorders among lone actors inspired and encouraged versus those who are directly trained and dispatched by the Islamic State.

The Circumstantial Evidence Base

Whereas the above studies meticulously collected data and compared the terrorist samples to wider comparison or control groups, no such studies exist on Islamic State-linked plotters in the West. Some insight may come from a couple of studies on al-Qa`ida-inspired or -directed terrorism in the 1990s and 2000s to provide a useful framework for trying to understand the current security problem. Marc Sageman's seminal study of al-Qa`ida networks downplayed the presence of mental disorder. His first study of 172 individuals highlighted one case of "probable mild mental retardation or borderline intellectual functioning" and two cases of "psychotic disorders." Sageman notes this is "about the incidence of these disorders in the general population."[13] In Sageman's updated analysis of around 500 individuals, "there were about four with hints that they experienced beliefs that were not based in reality," but there was "little evidence for any personality disorder."[14] It should be noted, however, that these figures may be a function of the actors being largely network-based. The current threat is more varied with a higher propensity for lone actors, so we may also expect the presence of mental disorders to differ. It may be better to focus on al-Qa`ida inspired lone-actors for insight. In Paul Gill, John Horgan, and Paige Deckert's study of 119 lone-actor terrorists, 43% were al-Qa`ida-inspired. Of this sub-sample, 25% had a diagnosed mental disorder, which is essentially the same as the population base rate. This figure, however, was significantly lower than those lone actors inspired by single-issue causes (52%) such as anti-abortion, environmentalism, and animal rights.[15]

In preparing this article, the authors looked at 55 attacks (totaling 76 individuals) between May 1, 2014, and September 30, 2016,

b   A large-scale worldwide epidemiological investigation based on the International Classification of Diseases (ICD) diagnostic tool highlighted that the average prevalence for a diagnosis of any disorder is 27.43%. Ronald Kessler and Bedirhan Üstün, *The WHO world mental health surveys: Global perspectives on the epidemiology of mental disorders* (Cambridge: Cambridge University Press, 2008). Whereas a worldwide study utilizing the Diagnostic and Statisticians Manual (DSM) as a diagnostic tool identified a lifetime prevalence of 25.0%. Jordi Alonso et al., "Prevalence of Mental Disorders in Europe: Results from the European Study of the Epidemiology of Mental Disorders (ESEMeD) Project," *Acta Psychiatrica Scandinavica* 109 (2004): pp. 21-22.

c   The cases were based on information found in open source accounts, including court documents. Diagnoses were confirmed through extensive cross-checking of sources. Court decisions were deemed most reliable, but in some cases, mental health status was not argued at trial as the individual had an established history.

d   Developed from the MMPI by James Neal Butcher, it is utilized by mental health professionals to clinically assess personality traits and mental health problems. James Neal Butcher, "Minnesota Multiphasic Personality Inventory (MMPI), *International Encyclopedia of the Social & Behavioral Sciences* (1989): pp. 9,891-9,894.

e   An individual in a group (three or more individuals) involved in or intent on carrying out acts of terrorism. This database consists of 544 actors, with links to 85 designated terror organizations. (Cross checked with Terrorism Research & Analysis Consortium, Global Terrorism Database, and the U.S. Department of State's list of terrorist designations and state sponsors of terrorism).

where media reports indicated they were possibly influenced in some way by the Islamic State.[f] (See appendix). These cases encompass both Islamic State-inspired attacks and Islamic State-directed attacks as well as attacks enabled by communications with Islamic State operatives who provided guidance to attackers without them ever connecting to the group in person.[g] And they include both confirmed Islamists and troubled individuals with unconfirmed ideological commitment to Islamist causes who may just have been influenced by the group's calls to violence. A history of psychological instability[h] was noted in 21 (27.6%) of the individuals. This is broadly comparable to the current worldwide average (25-27%). The authors were not able to find examples of psychological instability in the media reporting on those alleged to have taken part in Islamic State directed attacks (for example, the November 2015 Paris attacks and the March 2016 Brussels attacks). Excluding Islamic State-directed plots, the percentage of attackers with reported psychological instability was 34.4%.

It is worth noting that *some* of those with overt mental health problems *may* not have been inspired by the Islamic State but were simply professing *Allahu akbar* because it is well recognized as a phrase used in violent attacks. As these cases were dismissed as not being terrorism, there was barely any (in many cases no) further media reporting as to the individual's intentions, and therefore, the degree to which they were truly Islamic State inspired is not currently known.

These are extremely preliminary results.[i] There are several practical constraints to a full-blown study akin to Sageman's at this moment. On a very basic level, it is difficult to put a true figure on the prevalence rates simply because the vast majority of cases have yet to be examined in a court of law. If one thinks about the reliability of sources on a credibility continuum with trial evidence on the highest end, the vast majority of cases are still reliant on sources from the lower end.

When dealing solely with this lower end, researchers need to be careful of a number of potential pitfalls. Many high-profile, Islamic State-inspired individuals have undoubtedly either shown symptoms of psychological distress in earlier years or have been formally diagnosed with a disorder. However, at a time when rigorous and interdisciplinary insight was needed, many researchers, reporters, and practitioners turned to flippant language and coinage. Such phrases not only failed to explain the relationship (if any) between terrorist engagement and psychopathology but also potentially stigmatized the infinitesimally greater number of individuals suffering from some form of mental disorder with absolutely no hint of radicalization or plans to engage in violence. These include Max Abrahms' "loon wolf'"[16] phrase, a term that he applies to any lone terrorist suffering any form of mental disorder or psychological distress. The "loon" connotation also implies crazy or deranged and misses the fact that rational planning often occurs in the presence of a mental disorder.

Corner and Gill[17] (these authors) empirically compared a sample of lone-actor terrorists with mental disorders with a sample of lone-actor terrorists without mental disorders. They found that those with a mental disorder were just as (and in some cases more) likely to engage in a range of rational pre-attack behaviors as those who were not. Offenders with mental disorders were more likely to express violent desires, seek legitimization for their intended actions, stockpile weapons, train, carry out a successful attack, kill and injure, discriminate in their targeting, and claim responsibility. Most of these traits are typically viewed as rational behaviors to achieve terrorism goals.

Other popular terms used on Twitter are "Islamopsychotics" and "Mentalhadist," terms that conflate religious devotion with mental illness, thus simplifying and demonizing both.[18] Such conceptually loose and boundary-less terms may have the impact of also inflating perceptions of the prevalence of mental disorders (which have a very strict set of operationalized and bounded criteria).

A second obvious problem with this lower end of the credibility continuum is that the sources are sometimes highly questionable. Again, this may artificially inflate the true prevalence rate. In many cases, anonymous sources allude to the individual's (usually unspecified) strange and erratic behaviors prior to their radicalization. It is often implied and assumed that this is related to mental health problems, but the reporting is unspecific. For example, on September 23, 2014, Numan Haider stabbed and injured two counterterrorism officers in the parking lot of a police station in Melbourne, Australia. Haider was shot dead at the scene. There is evidence that his family previously encouraged him to seek help from a counselor for erratic behavior.[19] However, this was most likely linked to their worries over his potential radicalization rather than mental health issues.[20] Other cases reporting "erratic behavior" include Michael Zehaf-Bibeau (the Parliament of Canada shooter) and Zale Thompson (who attacked four New York City police officers with a hatchet). All three examples fall short of a confirmed mental health diagnosis of any sort. All three, however, have been held up as irrefutable evidence of the link between mental health problems and radicalization. The bar for confirming evidence should be higher within research and practitioner communities.

Other cases highlight instances where mental health problems were alluded to by non-experts (often family, friends, neighbors) but

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f   Cases were chosen following expansive searches of multiple open source outlets, using the LexisNexis open source archive of academic and media articles as a starting point. Cases were determined to be "possibly influenced" by the Islamic State following cross-referencing of information. The authors did not include cases where media reporting indicated inspiration came from Islamist terrorist groups other than the Islamic State, such as the July 2015 Chattanooga, Tennessee, attack. See Devlin Barret and Arian Campo-Flores, "Investigators See Radicalization in Chattanooga Shooter," *Wall Street Journal*, July 21, 2015.

g   By "Islamic State-directed" attacks, the authors mean attacks involving Islamic State fighters recruited in person into the group and tasked by the group to launch attacks.

h   The threshold the authors used for determining psychological instability was individuals reported to have had a history of psychiatric or psychological intervention for perceived mental problems or mental health interventions and/or diagnoses after their attacks. Cases in which family members reported depression or erratic behavior or mental health issues that did not result in such interventions were not included. For example, Orlando nightclub shooter Omar Mateen was not classed as having psychological instability because although his former wife told reporters he was "mentally ill," the authors were not able to find any evidence there was any mental health intervention. Greg Toppo, "Ex-wife: Orlando shooter 'very short-tempered,' violent," *USA Today*, June 12, 2016.

i   These results differ from the earlier work of the authors, where more comprehensive cases, particularly regarding mental health status, could be formed. The cases of Corner and Gill (2015), and Corner, Gill, and Mason (2016) were drawn from individuals who had either been convicted of a terrorist act or died in the commission of their offense. The large majority of Islamic State-linked cases referenced in this article have not reached trial stage, and there is therefore less concrete information to draw from and analyze.

latched onto by the wider media as concrete evidence of a disorder's presence (and presumably direct role in the violent intent/actions). Worryingly, now that concrete empirical evidence has demonstrated the greater propensity for lone-actor terrorists to have a mental health problem, it is often one of the first lines of investigation in media reporting. The below examples, while interesting, show the disturbingly low levels of evidence provided within some reporting that depicts the individual as having a mental disorder. Such reporting has potentially overinflated the true rates.

On October 20, 2014, Martin Couture-Rouleau, a 25-year-old French Canadian who converted to Islam in 2013, deliberately rammed his car into two Canadian Armed Forces soldiers in a shopping center parking lot in Saint-Jean-sur-Richelieu, Quebec, Canada. One soldier was killed. Couture-Rouleau was shot following a chase and altercation with a female police officer. No confirmed diagnoses exist, but neighbors claim he was "depressed," and one additional source claimed Couture-Rouleau's father had previously attempted unsuccessfully to admit him to psychiatric care.[21]

On January 7, 2016, Edward Archer shot and wounded a police officer in Philadelphia. When apprehended, Archer confessed that he committed the attack in the name of Islam and pledged allegiance to the Islamic State. Archer's mother claimed that he had sustained a traumatic head injury from a moped accident and that he had "some form" of mental illness because "he's been talking to himself ... laughing and mumbling" and "hearing voices in his head."[22]

On June 12, 2016, Omar Mateen, a 29-year-old American citizen of Afghan descent, attacked the Pulse nightclub in Orlando, Florida, killing 49 individuals. Mateen was shot and killed by law enforcement following an extended standoff. Mateen had a history of disruptive behavior while at school. When Mateen applied for his security guard's license in 2007 and its renewal in 2013, no psychological issues were noted at screening. Mateen was a habitual user of steroids, and his first wife claimed that he was "mentally unstable and mentally ill."[23] There is no further evidence to support this claim, however. Confusion remains over Mateen's exact motives, as he pledged allegiance to the Islamic State just prior to this attack over the phone. Multiple witnesses have also claimed that Mateen was homosexual and struggled to come to terms with his sexuality.[24]

Other cases are complicated by continuing questions over the degree of psychological distress and other vulnerabilities. On July 24, 2016, Mohammad Daleel, a 27-year-old Syrian refugee, carried out a suicide bombing in Ansbach, Germany. Only the assailant was killed. Investigators believe he had planned to detonate the device remotely, was planning follow-on attacks, and his death was an accident.[25] Daleel, who had been treated by a trauma therapist who warned he might engage in a "spectacular" suicide attempt,[26] twice was reported as attempting suicide following failed asylum applications in Germany, after which his deportation was stalled.[27] Eleven days before the bombing, Daleel was again served a deportation order. Given the Islamic State's claim that he was previously part of the group in Syria[28] and detailed instructions he was receiving in communication with a suspected Islamic State handler overseas,[29] some have pointed to the possibility that he might have exaggerated his mental health problems to escape deportation.[30] As it is difficult to determine whether his earlier suicide attempts were used as a function to avoid deportation or due to underlying distress, it is difficult to disentangle these actions from the form of violence he ultimately chose to engage in on behalf of the Islamic State.

Orlando shooter Omar Mateen (F.B.I.)

In other cases, specific diagnoses were made but are not publicly available. On March 14, 2016, Ayanle Hassan Ali, a 27-year-old Canadian, stabbed two soldiers at a recruitment center in Toronto, Canada. Following the attack, Ali told officers "Allah told me to do this, Allah told me to come here and kill people." Ali was initially deemed unfit to stand trial due to "psychotic symptoms of a major mental illness," but following mandatory treatment, Ali was found fit to stand trial for a range of charges.[31]

On July 14, 2016, Mohamed Lahouaiej-Bouhlel, a 31-year-old Tunisian with French residency, drove a 19-ton cargo truck into a crowd of individuals celebrating Bastille Day on the Promenade des Anglais, Nice. Lahouaiej-Bouhlel was shot and killed by police after he managed to drive over one mile through the crowded streets and pedestrian areas. According to reports, Lahouaiej-Bouhlel had only started attending a mosque two months prior to the attack.[32] Lahouaiej-Bouhlel's father claimed that his son had undergone psychiatric treatment prior to 2005 and had a nervous breakdown and a history of substance misuse and depression.[33]

On July 26, 2016, Adel Kermiche and Abdel Malik Petitjean took six people captive in the church of Saint-Étienne-du-Rouvray, Normandy, before killing a priest. Kermiche was born in Algeria, and he had twice attempted to travel to Syria in 2015 and was jailed.[34] The attackers were shot and killed when police stormed the church. Following the attack, psychological reports carried out at Kermiche's trial prior to the attack in October 2015 suggested that Kermiche had a history of mental health problems.[35] This also highlights an additional problem: when the offenders die at the scene of the attack, psychiatrists cannot access the offenders to assess their mental health. If not for his previous dalliance with the law, Kermiche's mental health issues might have been missed entirely.

The fact is that confirmed diagnoses in recent cases remain few and far between. In December 2014, Man Haron Monis, a 50-year-old Iranian living in Australia, took hostages at the Lindt Cafe in Sydney. The siege lasted over 12 hours and ended when security officials stormed the cafe and shot Monis. Two others were killed. Monis had claimed allegiance with the Islamic State, and following

the siege, the Islamic State praised his actions in its propaganda.[36] Monis had an extensive history of mental health issues. Forensic psychologist Kate Barrelle, advisor to the coroner in Monis' case, concluded that the attacker suffered from "narcissism, paranoia, and antisocial behaviour disorder."[37] Forensic psychiatrist Jonathan Phillips concurred with Barrelle. He dismissed the possibility that Monis also suffered from comorbid disorders by explaining that earlier non-psychosis-related diagnoses were no different from "what everyone experiences 'from time to time.'" Phillips explained that his diagnostic decision was based on Monis' history of sexual assaults and that he "orchestrated the incident in a meticulous and callous manner."[38] Counsel assisting the coroner at the inquest, Jeremy Gormly, SC., surmised Phillips' conclusions: "[Monis] was suffering from some definable personality disorders, including anti-social, paranoid and narcissistic tendencies, but did not suffer a mental illness and his actions cannot be attributed to mental illness."[39]

On January 7, 2015, Amedy Coulibaly, a French extremist claiming to act on behalf of the Islamic State, shot and wounded a jogger in Paris.[40] A day later, he is suspected of having killed a French municipal police officer. The following day, he murdered four hostages at a kosher supermarket. A psychiatrist had previously assessed him following earlier criminal behavior and found that Coulibaly had an "immature and psychopathic personality" but stopped short of diagnosing a specific mental disorder.[41]

In December 2015, Muhaydin Mire attacked commuters at Leytonstone underground station in London with a breadknife, injuring three. Mire reportedly claimed, "This is for Syria, my Muslim brothers."[42] Mire had a history of mental illness and had spent time in psychiatric institutions for delusional and paranoid tendencies with some reports of paranoid schizophrenia.[43] Mire's family had also sought to have him admitted one month prior to the attack.[44]

In a recent and complicated case, Esteban Santiago-Ruiz killed five and injured another six in a shooting at Fort Lauderdale airport in January 2017. Federal officials confirmed that Santiago-Ruiz had received psychological treatment. His family members claim that his problems stemmed from witnessing two fellow servicemen die in combat in Iraq.[45] Two months prior to the attack, Santiago-Ruiz visited an F.B.I. field office and reported the U.S. government controlled his mind and made him watch Islamic State-related videos. The C.I.A. was also forcing him to join the group, according to Santiago-Ruiz. After the attack, Santiago-Ruiz initially made similar claims. However, after Santiago-Ruiz was transferred to an F.B.I. office following the attack, he claimed he carried out the attack on behalf of the Islamic State and had not again mentioned mind control, an F.B.I. agent testified on January 17. Despite Santiago-Ruiz' later claims, the Islamic State are yet to claim responsibility for the attack.[46] Investigators are continuing to disentangle Santiago-Ruiz' motivation, and whether the attack was motivated by voices in his head telling him to commit acts of violence.[47] Here, the link between mental state and the violence appears to be much clearer than in many other cases. However, the depth of his ideological orientation toward the Islamic State is highly questionable at the time of writing. For the authors, he looks far more like other mass murderers such as Myron May (the Florida State University shooter), Aaron Alexis (the Washington Navy Yard shooter and Jiverly Wong (the

Binghamton shooter).[j] All three individuals reported being 'targeted individuals' and acted violently in order to get the government to turn off their mind-control machines.

In many other cases, when confirmed diagnoses were present, there was a tendency to try dismiss the possibility of terrorism altogether. For example, on December 21, 2015, an unnamed 40-year-old ran over 11 pedestrians across the city of Dijon, France, while shouting "Allahu akbar," claiming he was "acting on behalf of the children of Palestine," and brandishing a knife. Police knew the assailant for previous minor offenses, and he had spent time in psychiatric services. Due to the psychiatric history of the assailant, authorities deemed the attack not to be an act of terrorism.[48] A similar attack that injured 10 in December 2014 in Nantes was similarly dismissed as non-terrorism because the individual was "unbalanced."[49] On May 10, 2016, an individual attacked commuters with a knife at Grafing train station near Munich. One victim died from his wounds. The assailant reportedly shouted "Allahu akbar" and continued to espouse similar sentiments such as "all infidels must die." This was later confirmed by police authorities but dismissed as terrorism because the individual was "mentally disturbed."[50] Moussa Coulibaly's stabbing of three anti-terrorism police officers in Nice in February 2015 was similarly rejected by authorities as terrorism because he was viewed as an "unbalanced individual."[51]

Nowhere was this debate on whether attacks were terrorism or non-politically motivated acts of mentally disturbed individuals more evident than in the Man Haron Monis inquest. Many commentators reasoned it was his history of mental disorder that best explains his actions and that he should not be considered a terrorist. For example, Dr. Rodger Shanahan, a research fellow at the Lowy Institute, argued at the inquest that Monis was "not motivated by political, ideological or religious causes, but rather was someone with mental health issues acting on his own personal grudges."[52] Shanahan also argued that "if he [Monis] was following IS [Islamic State] direction why didn't he go in there and kill everyone?"[53] Shanahan instead believed that Monis chose the Lindt Cafe for personal rather than political reasons, highlighting Monis' historical grievance with Seven Network's Sunrise television program, whose studios were across the road from the cafe. Shanahan also drew on Monis' lack of direct connection to the Islamic State and his wearing of a headband, which has an association with the Shi`a sect of Islam and is considered heretical by the Islamic State.[54] Clarke Jones of Australian National University agreed with Shanahan, explaining that due to his mental health problems, Monis was desperate to attach himself to a cause, further explaining that his actions were extremely hard to predict.[55] Terrorism scholar Bruce Hoffman held an opposing view. Monis' history of mental disorder, in Hoffman's opinion, was "immaterial" as to whether he carried out a terrorist attack.[56]

The debate rests on the question about whether the presence of a mental health diagnosis is enough to state that it was a driver of the radicalization-linked behavior or whether it was just one ingre-

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j   Myron May recorded an extensive explanation (1 hr. 47 min. video) of his opinion regarding being a targeted individual shortly before carrying out the shooting at Florida State University. Within the recording, he refers to "other targeted individuals, Aaron Alexis, and Jiverly Wong." This video was uploaded following his attack and death. "The Apprentice of Honor "Myron May mind control victim," YouTube, March 27, 2015.

dient in the individual's vulnerability profile and grievance structure. Some tentative answers are available in the wider research literature.

Corner and Gill[57] utilized a sample of 119 lone-actor terrorists and investigated whether certain behaviors within the chain of events that led to a terrorist attack were more likely to co-occur with certain diagnoses than others. Those diagnosed with schizophrenia and associated disorders were the only diagnostic group to be significantly associated with previous violent behavior and this supports previous research in the general violence literature.[58] This could be linked to the lowering of inhibitions against violence or potentially the increased chances the individual had previously engaged in (non-terrorist) violence.[k] Those with personality disorders and autism were less likely to have a spouse/partner involved in a terrorist movement, which may be indicative of not having a spouse due to the detrimental nature of these disorders. Because mental disorders often share symptoms (and because diagnoses are often not available), further research may also focus on analyzing symptoms of mental illness rather than purely the diagnoses themselves.[59] The results of this investigation offer insight into links between specific disorder types, and specific behaviors, that in isolation can be linked to a wide range of activities, not just those found in a terrorist attack. Researchers are yet to study temporal trajectory of behaviors, and how these interact with each other and the wider environment in space and time. We just know some behaviors co-occurred at some point in the individual's life-course. John Horgan correctly notes that although studies of lone actors often find high preponderance of mental health issues within the sample, "detailed research would be needed to further clarify the precise nature and role (if any) of mental health problems in the development of their violent activity."[60]

This debate is on-going within the wider study of crime as well. On the one hand, a strand of research assumes a consistent causal link between psychiatric symptoms (where they are found to be present) and criminal behavior.[61] On the other hand, a more nuanced strand of research argues there are "a (small) group of offenders whose symptoms relate directly to crime and a (larger) group whose symptoms and crimes are not directly related."[62] For example, various studies illustrate that the offender (across a range of crimes) experienced his/her psychiatric symptoms at the time of the (often violent) crime between 4% and 18% of the time.[63] There is no reason to suggest this should be any different for a terrorist subset of offenders. If anything, one might presume the figures to be lower given the wider ideology and ideologues underpinning it provide a grievance and set of instructions on who to target and how. A complex mixture of personality, situational, and personal drivers (among others) likely drives most general crime. Terrorism is no different but for the addition of an overarching ideology. The presence of this ideology in the motivational mix therefore likely lessens the relative cognitive response to mental health problems.

k   For over 40 years, argument has ensued in the schizophrenia and violence literature as to whether schizophrenia *is* definitively linked to an increased risk of engaging in violence. There are multiple extraneous risk factors that individuals with schizophrenia may be exposed to (e.g. drug use, homelessness) that are now recognized as increasing the risk of violence across populations, not just among those with schizophrenia.

Conclusion

It is simply too early to come to a definitive answer regarding the role of mental health problems and various forms of Islamic State terrorism. Mental disorders appear more prevalent among those inspired by Islamic State than those directed by it. Beyond that, however, it is difficult to make clear conclusions. The available open-source information is clouded by poor reporting practices, the tendency to treat all mental health disorders equally, and the fetishized way mental health is reported. The answer is likely to differ wildly from case to case depending upon the individual's diagnosis, prior life experiences, co-existence of other stressors and vulnerabilities, and lack of protective factors. Researchers need to have a mature enough response in practice, research, and public discussion that is comfortable with this complexity; understand that where it is present, it is usually one of several drivers; and do so by not stigmatizing the vast majority that suffer from mental health problems while remaining non-violent, non-radicalized, and in need of care.

What we see from the existing research is that lone-actor terrorism is usually the culmination of a complex mix of personal, political, and social drivers that crystalize at the same time to drive the individual down the path of violent action. This should be no different for those inspired by the Islamic State. Whether the violence comes to fruition is usually a combination of the availability and vulnerability of suitable targets and the individual's capability to engage in an attack from both a psychological and technical capability standpoint. Many individual cases share a mixture of personal life circumstances coupled with an intensification of beliefs that later developed into the idea to engage in violence. What differs is how these influences were sequenced. Sometimes personal problems led to a susceptibility to ideological influences. Sometimes long-held ideological influences became intensified after the experience of personal problems. This is why we should be wary of mono-causal 'master narratives' about how this process unfolds. Mental health problems are undoubtedly important in some cases. Intuitively, we might see how in some cases it can make carrying out violence easier. In other cases, it may make the adoption of the ideology easier because of delusional thinking or fixated behaviors. However, it will only ever be one of many drivers in an individual's pathway to violence. In many cases, it may be present but completely unrelated. The development of radicalization and attack planning behaviors is usually far more labyrinthine and dynamic than one single factor can explain, be it mental disorders (today's go-to silver-bullet explanation), online radicalization (another popular silver-bullet explanation), or root causes that encompass socio-demographic characteristics.

We must also bear in mind that the relationship between mental health problems and terrorist engagement is just one part of the story. Given the scale and types of violence being conducted by the Islamic State, many perpetrators will develop mental health problems as a byproduct of involvement as opposed to it being a driver of involvement. There will also be a generation of children who were born within the Islamic State and/or trained as fighters, many of whom will return to their parents' country of origin in the coming years. The interface of mental health practitioners and the Islamic State will, therefore, not just be limited to assessing the risk of whether someone will become a terrorist but will be extended to safeguarding and treatment.

In conclusion, after many years in the dark, the link between

mental health problems and terrorist engagement is now often the "go-to" explanation. This is partially due to the studies, cited above, that showed the relatively high rates within specific terrorist sub-samples. These studies coalesced in time with an uptick in Islamic State lone-actor plots and attacks and were latched onto by media, the public and policymaker communities hungry for intuitively appealing and straightforward answers. Much of the nuance within these studies was lost, however. Just because a factor (such as mental disorder) was present, does not make it causal. Nor does it necessarily make it facilitative. It may be completely irrelevant altogether. Contemporary media reporting may have led to a potentially overinflated sense of how prevalent the link truly is and how closely tied it is to the individual's pathway into terrorism.   CTC

Appendix: Attacks Possibly Influenced by the Islamic State and Psychological Instability

Month/Year	Attacks Possibly Influenced by the Islamic State (according to media reports)	Media Reporting on Psychological or Psychiatric Intervention
May 2014	Brussels Jewish Museum shooting	No
September 2014	Endeavor Hills, Melbourne stabbing	No, but evidence of counselor intervention for radical behavior
September 2014	Moore, Oklahoma beheading attack	Yes
October 2014	Saint-Jean-sur-Richelieu, Quebec vehicular ramming	Yes
October 2014	Ottawa Parliament shooting	Yes
October 2014	New York hatchet attack	No, but family reporting of depression
October 2014	Kvissel, Denmark murder	No
December 2014	Sydney Lindt Cafe siege	Yes
December 2014	Joué-lès-Tours, France police station stabbing	No
December 2014	Dijon vehicular ramming	Yes
January 2015	Metz police assault	Yes
January 2015	Paris kosher market attack and murder	No; received psychological assessment without specific diagnosis or treatment
February 2015	Nice police stabbing	Yes
February 2015	Copenhagen shootings	No
April 2015	Zvornik, Bosnia police station shooting	No
May 2015	Garland, Texas shooting	No
June 2015	Saint-Quentin-Fallavier, France factory attack	No, but attacker committed suicide in prison
August 2015	Thalys train attack	No
September 2015	Sandholm asylum center police stabbing	No
October 2015	Parramatta, Sydney police shooting	Yes
November 2015	University of California stabbing	No
November 2015	Marseille anti-semitic stabbing	No
November 2015	Paris attacks	No
December 2015	San Bernardino attack	No
December 2015	Leytonstone, London Tube attack	Yes
January 2016	Valence, France soldier vehicular ramming	No
January 2016	Goutte d'Or, Paris police station attack	No
January 2016	Philadelphia police shooting	Yes
January 2016	Marseille Jewish school machete attack	No

February 2016	Rochdale Imam murder	No
February 2016	Hanover police stabbing	No
March 2016	Toronto army recruitment center stabbing	Yes
March 2016	Brussels attacks	No
April 2016	Kempsey, Australia prison assault	No
April 2016	Essen Sikh temple bombing	No
May 2016	Saint Julien du Puy, France soldier stabbing	No
May 2016	Grafing, Germany train station stabbing	Yes
June 2016	Etterbeek, Brussels stabbing	No
June 2016	Florida Pulse night club shooting	No
June 2016	Magnanville, France stabbings	No
July 2016	Nice truck attack	Yes
July 2016	Würzburg, Bavaria train stabbing	No
July 2016	Ansbach, Bavaria suicide bombing	Yes
July 2016	Saint-Étienne-du-Rouvray church attack	Yes (for one assailant)
August 2016	Charleroi police stabbing	No
August 2016	Strasbourg stabbing	Yes
August 2016	Queensland hostel stabbing	Yes
August 2016	Oberhausen music festival stabbing	Yes
August 2016	Toulouse police stabbing	Yes
August 2016	Copenhagen shooting	No
September 2016	Vincennes, Paris stabbing	Yes
September 2016	Osny, France prison attack	No
September 2016	Taranto, Italy prison attack	No
September 2016	Minto, Sydney stabbing	Yes
September 2016	Rimini police attack	No

Islamic State-directed attacks by individuals recruited in person into the group and tasked with launching attacks are shaded in gray. The Brussels Jewish museum shooting by a French Islamic State recruit was not categorized as Islamic State-directed because it is not yet clear whether he was tasked by the group to launch an attack.

All the attacks involved one attacker except the Paris attacks (nine attackers), the Brussels attacks (five attackers), the stabbing attack on a Jewish teacher in Marseille (three attackers), the Sikh temple bombing in Essen (three attackers), the San Bernardino attack (two attackers), the Kvissel murder (two attackers), the Saint-Étienne-du-Rouvray church attack (two attackers), the Rochdale murder (two attackers), and the Saint Julien du Puy attack (two attackers). In total, there were 55 cases involving 76 attackers. There was media reporting indicating psychological instability for 21 of the attackers (27.6%). Excluding Islamic State-directed attacks, the percentage of attackers with reported psychological instability was 34.4%.

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A View from the CT Foxhole: Peter Edge, ICE Acting Deputy Director, and Wil van Gemert, Europol Deputy Director

By Paul Cruickshank

Peter T. Edge was appointed Acting Deputy Director of U.S. Immigration and Customs Enforcement (ICE) on January 20, 2017. At the time of this interview, he was Executive Associate Director of Homeland Security Investigations (HSI). Prior to this position, Mr. Edge served as Deputy Executive Associate Director and the Special Agent in Charge in the HSI Newark, New Jersey, regional office. Mr. Edge has extensive experience conducting narcotics, money laundering, commercial fraud, and corruption investigations.

Wil van Gemert was appointed Deputy Director of Europol and Head of the Operations Department in May 2014. He previously filled several positions in the Dutch police and joined the Dutch National Intelligence Service in 2004. In 2012, he was Director of Cyber Security of the Dutch Government. In his current role at Europol, he manages a department of experts, specialists and analysts dealing with serious and organized crime as well as terrorism and cybercrime.

CTC: What role do your organizations play in identifying, tracking, and potentially interdicting foreign terrorist fighters who have traveled to Syria, Iraq, and other jihadi battlegrounds?
Edge: When it comes to foreign terrorist fighters, Homeland Security Investigations [HSI, a directorate within the U.S. Department of Homeland Security's Immigration and Customs Enforcement (ICE) component] is a border security investigative agency that conducts transnational, criminal organization-related investigations around the world. We have a very vibrant investigative footprint here in the United States. We also have a very active intelligence program that processes a lot of human intelligence information through various means, and we have a significant international footprint. We're in 47 countries, and we have 63 offices. We've leveraged that international connectivity to enhance our investigative efforts and to share information with our partners, not only on a bilateral but on a multilateral basis. And that's where the relationship with Europol has been critical to our collective success.

Van Gemert: Europol is the European informational hub and fusion center for law enforcement. Unlike CBP [U.S. Customs and Border Patrol] or ICE HSI, we don't have our own investigatory powers. But we have a threefold task: firstly, to build up and analyze the data and information available in the 28 E.U. member states in different fields of crime including terrorism; secondly, to be the center of expertise in those fields in which we are active—organized crime, terrorism, migration, and cyber crime—and finally, to coordinate the actions of the different member states so as to ensure that information is turned into operational actions and real time cross-border investigations. In recent years, we moved from not only *collecting* information but to *connecting* information. For the

purpose of thorough analysis, we therefore centralize information from member states and international partners in what we call focal points, including on foreign fighters. The information flow from member states and international partners, including the U.S., has significantly increased since the emergence of the ISIS threat.

We have now in our headquarters in The Hague more than 210 liaison officers coming from 41 different countries and representing 74 different agencies. That gives us a huge opportunity to work together closely. After the attacks in Paris and Brussels, I was able also to call up all member states involved on very short notice to sit together and to exchange information, including also with U.S. partners like ICE, HSI, or CBP. We set up an emergency response team at Europol to make sure that we could deliver additional information to the ongoing law enforcement investigations. Directly after the Paris attacks, we had more than 60 people involved as part of an emergency response team. More than one year later, we have on a permanent basis still more than 10 people working on making sure that all information we receive on these cases is crosschecked, connected, assessed, and turned into new intelligence. As regards ICE HSI in particular, we have even increased the extraordinary cooperation we already had with HSI in making sure that all available financial information and cross-border information was brought to the attention of agencies in Europe and the United States, and it delivered a very rich view of those who were involved in and supporting this network. The data Europol has is, I think, our biggest added value. We have more than 30 million entities in our databases, and our data on organized crime is particularly valuable because we've seen a very strong relationship between organized crime and terrorism.

CTC: Can you elaborate on that link?
Van Gemert: If you look at the Paris and Brussels attackers and their backgrounds, there are a lot of criminal links. This is also a feature of the support networks behind ISIS terrorism in Europe. We see an increased interweaving of terrorism and criminal activities. They make use of the same crime service model as criminals do. And that can be an advantage to investigators. With the attacks in Brussels and Paris, it's clear the attack network made use of a criminal service in providing them identification documents. And this means that through a normal criminal investigation on fraudulent documents, you could also find very important information on terrorism. The risk we face is, to a significant degree, a known risk that's already in our systems because most of the foreign fighters from Europe had criminal backgrounds before they left for the battlefields.

CTC: How are HSI and Europol cooperating, and what type of broader transatlantic cooperation are you engaged in?
Edge: Traditionally, our international connectivity with our foreign partners had been on a bilateral basis. Ever since we have assigned

agents and analysts to Europol, we have enjoyed multilateral relationships, and we have been able to share the benefit of our combined experience and investigative expertise. That has resulted in greater information sharing.

Let me give you one example. What Wil mentioned with regard to the sharing of financial information is critical to every investigation and every crime that we enforce against. HSI has built very, very good relationships with other industries—both in the private sector and other law enforcement—which help us with financial investigations. In the instance of the horrific events in Brussels and in Paris, we were able to leverage those relationships and get that information quickly. As Wil mentioned, our strong links to Europol afforded us the opportunity to then share that information with the member states in a very timely fashion.

We have also become members of other focal points that have a nexus to our mission—including migrant smuggling. To have that connectivity in that multilateral environment has been very helpful. I like the way Wil put it—"from collecting to connecting." For years, we've always collected information, but now thanks to enhanced information sharing, we're connecting the dots. And that's critical to the public safety of all of our countries.

Van Gemert: I would totally agree with Peter. At Europol, we have more than 200 liaison officers who know each other, work with each other, and speak one language—English. And we are also the go-to point for countries to reach out to. While we also see the value of bilateral relationships, the experience we have in cyber and now also in terrorism has shown it's necessary not only to connect our information flows but to have operational meetings on a multilateral basis. The significant rise in the number of U.S. liaison officials stationed here at Europol headquarters, including very dedicated staff from ICE HSI, has really helped in this regard, as have regular visits and exchanges at the managerial and leadership levels. There are now 11 U.S. agencies represented over here, taking part in various focal points and high-priority cases. You don't have to send a message via cable and wait for the answer. You just sit with each other and directly engage.

CTC: Western counterterrorism officials have sounded the alarm about the large cohort of foreign fighters from Europe and the West who have trained in Syria and Iraq. FBI Director James Comey has warned that this terrorist diaspora is going to be like "we've never seen before."[1] From your perspective, how can the United States and Europe work together to mitigate the threat?
Van Gemert: If you look at foreign fighters, there will be a window of risk coming up as the pressure increases on ISIS. There have been between 6,000 and 7,000 foreign fighters who have traveled from Europe. Only a third of them have so far returned, so there's the possibility a lot more will return as ISIS loses territory. That said, in recent months, we've not yet seen a big exodus of European fighters returning home from the battlefield. Those recently fleeing back to Europe have mostly been women and children.

Moving forward, we need to interdict foreign fighters on their return to Europe and, when appropriate, charge them and put them on trial. With the coalition making advances and taking ISIS fighters into custody, we will probably get more people that can tell us something about those fighters who have been active over there and will find more forensic evidence to obtain convictions. We also have

Peter Edge (right) is pictured with an HSI colleague. (HSI ICE)

to increase our capability to detect document fraud and monitor travel to Europe. The European Counter Terrorism Center (ECTC) will need to be at the center of these efforts. We have deployed guest officers in Greece (and will do soon in Italy) that conduct secondary security checks on those immigrants that give us reason to double check. These persons are referred to us by the local authorities and border guards, which perform the first-line checks. We have set up diagnostic tools that can be used by our border patrol officers to look at connections that could indicate whether a person might have intentions other than claiming asylum.

But the threat is actually not just from foreign fighters, because ISIS has also tasked fighters who are from Syria, Iraq, and other non-Western countries to travel to launch attacks. We saw that in the November 2015 Paris attacks. At Europol, we refer to these as "tasked fighters." These are not directly on our radar, and identifying them is difficult. And then there are those inspired to act as a result of ISIS social media or through contact with the group. We've seen examples of people becoming radicalized in a very short period, going from 'zero to hero' in six weeks or less, sometimes making themselves available for attacks to atone for past 'un-Islamic' behavior.

All this means the threat is very broad and is coming from very different angles. Over the long-term, I think ISIS will be defeated on the battlefield, and at least the existing caliphate will disappear. But something will replace it. ISIS already has a strategy to create a cyber caliphate, and more than 20 groups around the world have pledged loyalty to ISIS. We're seeing that to a significant degree in Asia, including countries like the Philippines, so the threat is likely to come from there as well as the Middle East in the future. All this means we're probably not going to see this threat going away for decades. It will just have a different appearance. It will be focused especially on reaching our communities through social media, which is why we really try to invest in counteracting them in this field.

Edge: At HSI, we have 6,700 special agents, and they are encouraged to identify the threat streams and smuggling routes. They look for document fraud day-to-day. We have seen more special-interest alien travel through non-traditional smuggling routes, and just being able to identify those routes is going to be critical. The capturing of biographical information on these actors through our BITMAP

program is also going to be very important.[a]

We have charged our personnel to prioritize focusing on illicit travel, including document and benefit fraud that is utilized to facilitate foreign fighter travel. We are actively acquiring information on fraudulent passports and travel documents. We have a forensic document lab that analyzes and processes this information and maintains a repository of hundreds of thousands of false passports and other travel documents. I think terrorists traveling with false papers will be a big problem in the future, and it's going to be critical to identify them and share that information because these actors typically go all over the world.

As well as looking at non-traditional smuggling routes, we are continuing to work to identify those individuals attempting to come though the prevailing smuggling routes. We have a joint task force model in the Department of Homeland Security that focuses primarily on our southwest border, the gateway into the United States for almost all illicit trade, travel, and commerce. We are working very closely with our international partners in South and Central America to encourage their law enforcement to work with us. And to that end, we've created transnational criminal investigative units in certain countries that have helped us identify threat streams and smuggling routes where people are using false documents to try to transit into the U.S.

CTC: More than half the members of the Islamic State terrorist cell dispatched from Syria that attacked Paris in November 2015 and Brussels in March 2016 were already on the radar screen of Western intelligence agencies. Yet they succeeded in infiltrating Europe undetected in the fall of 2015 by exploiting refugee flows, several by using doctored Syrian passports.[2] What lessons have been learned since the Paris and Brussels attacks?

Van Gemert: A lot of lessons have already been identified. One has to bear in mind that this was part of a huge immigration flow of more than one million people, in which the systems were simply not able to function as they should. If you have 5,000 people coming every day to a Greek island as you had in the autumn of 2015, it's nearly impossible to control it completely. Since then, the European Union has made political agreements to control the flow.

We're working to identify indicators that can be used in training and guiding our border patrol officers to check identity papers better. As mentioned earlier, we're doing secondary security checks and have set up "hotspot teams" at various entry points in the Mediterranean. This means Europol staff and guest officers from E.U. member states coordinated by Europol are present in refugee camps on 5 Greek islands identified as "hotspots" on the migration routes to Europe. All migrants arriving on these islands are taken to these camps after arriving onshore. Within the camps, additional security checks take place against our databases if there is some form of suspicion regarding a migrant's background or motivation.

All these activities are part of Europol's European Counter Terrorism Center, which was set up after the Paris attacks. It brings to-

Wil van Gemert (Europol)

gether in one place all of Europol's CT tools in order to enhance our role as the E.U. information hub on CT matters and to deliver operational support and analysis to E.U. member states' CT investigations, drawing on Europol's unique capabilities relating for example to terrorist financing, firearms, or online propaganda. At the heart of ECTC is a Joint Liaison Team with dedicated CT investigators from E.U. member states and selected international partners such as the U.S. These CT experts are specifically deployed to Europol for the purpose of enhancing European cooperation in counterterrorism matters. Enhancing information exchange on Foreign Terrorist Fighters or on the criminal support networks for terrorist structures are just some of the specific projects currently on the operational agenda in the fight against terrorism on the European level.

CTC: Just to follow up, Europol Director Wainwright recently stated, "ISIL are in the business of getting their people back into Europe in increasingly sophisticated ways," which includes obtaining high-quality, false travel documents.[3] As early as 2015, HSI raised concerns about the Islamic State acquiring blank passports and passport-printing machines in Syria.[4] Given that the Islamic State has been able to create identity papers for its operatives from real Syrian passports,[b] how are security agencies working to verify those claiming asylum in Europe are who they say they are?

Edge: The 2015 report illustrates the need for our continued efforts to identify and address potential vulnerabilities as they pertain to

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a   Biometric Identification Transnational Migration Alert Program (BITMAP) is an HSI-led initiative that fills biometric databases with data collected from special interest aliens, violent criminals, fugitives, and confirmed or suspected terrorists encountered within illicit pathways. This data helps HSI form strategic pictures of the trends, networks, and individuals connected with these pathways.

b   Editor's note: Interpol has data on 250,000 lost or stolen Syrian and Iraqi passports, including blanks. The Paris attack cell and a trio of Syrians arrested in Germany in September 2016 appear to have been supplied with doctored Syrian passports by the same forger, according to German officials. A significant number of the Islamic State operatives who have infiltrated Europe have come in using doctored Syrian passports. At least two of the Paris attack network reportedly had adulterated Syrian passports, which were part of a batch of 3,800 blank Syrian passports obtained by the Islamic State in Raqqa and Deir-ez-Zour. These were reportedly flagged to Interpol by the Syrian regime well before the Paris attacks: Giulia Paravicini, "EU's passport fraud 'epidemic,'" *Politico*, January 28, 2016; Euan McKirdy, Stephanie Halasz, and Jason Hanna, "Germany: 3 alleged ISIS members arrested in Paris attacks probe," CNN, September 13, 2016; Manuel Bewarder and Florian Flade, "Die geheimen Reisen des BND nach Damaskus," *Die Welt*, May 29, 2016.

terrorist travel. The acquisition of documents through fraudulent means is what worries me the most, and we are going to have to continue to address it by working with our European counterparts on the Turkey, Greece, and Balkan routes. HSI collects relevant information within our core mission spaces of document and benefit fraud, and we share that information through our investigative and liaison activities to ensure our partners are aware of the potential threats we identify. HSI works with the Department of State and other federal agencies to share biometric and biographical information on potential travelers. Visa and other applicants to the U.S. are vetted both biometrically and biographically. Individuals denied nonimmigrant visas based on severe derogatory information are watch-listed. Lost or stolen passports are flagged and checked across various datasets to include asylum information. Finally, the HSI Forensic Laboratory conducts forensic examinations of Syrian passports to determine authenticity. The laboratory has produced a document alert and Syrian document reference guide to assist law enforcement and border control authorities in the identification of fraudulent Syrian passports. This information is disseminated to partners worldwide, including to European counterparts. These reference products are based on information developed from forensic examinations of Syrian passports and received through law enforcement channels, but the lack of reliable information from the issuing government limits what can be disseminated to field officers.

Also, from the U.S. perspective, we've got to do more in the continent of Africa. We need to work closer with our law enforcement partners in Africa to identify places where these folks will go for training and then will begin their illicit travel from. At HSI, leveraging our intelligence portfolio and our international partnerships is going to be critical to identify the smuggling and document forgery networks used by foreign fighters. They're ever-evolving. It's going to take cooperation again through the law enforcement partners we have around the world to identify those smuggling routes, share that information, and connect the dots of the biometric information and the biographical information available to us.

Van Gemert: And I should add we can certainly learn from one another across the Atlantic when it comes to improving vetting procedures. When it comes to identifying document fraud, information is key, including extracting information from documents recovered from the battlefield. They could provide the key informational links in identifying travelers that were unknown or give indications on travel documents that could be used by returnees and attackers.

In identifying document fraud and other efforts to track foreign fighters, one thing we need to do better in Europe is connect the dots between information developed by law enforcement agencies in criminal investigations and by intelligence agencies in national security investigations. This is the discussion we are now having in Europe: how do we do this in a proper way, how to make sure that we have the right watch list that is fed not only by intelligence services but also by law enforcement, and how to make sure information is flowing between the two. And that's still something that we are getting better at but have not solved.

CTC: There has been concern that the visa waiver program between the United States and Europe could be exploited by European extremists or terrorist recruits to enter the United

States.[c] **How are the United States and Europe working together to mitigate risk in this area?**
Edge: One of the things that is going to be critical is being able to identify asylum fraud, a pervasive problem. Smuggling networks are using false documents to transport special-interest aliens from Europe into countries in the Western Hemisphere on a routine basis. But there is actually a technological fix to the whole issue of document fraud. Key to clamping down on illicit travel will be greater use of biometrics, and we are already moving in this direction. More widespread use of biometric passports will make our visa security program much more comprehensive. It will help us verify exactly who we're dealing with and then share and cross-check that information with our counterparts at Europol.

CTC: Given the potentially significant economic costs and logistical challenges, how far away are we from the biometric fix?
Edge: At present, neither Syria nor Iraq issues electronic passports.[d] While technical solutions have enhanced the ability to recognize document fraud, there are also inherent limitations. The lack of interoperability, resources, funding, and technological limitations have presented challenges for implementation. In addition, these solutions do not address the ability of persons obtaining genuinely issued documents via fraudulent means.

Technological solutions are an important component in verifying the integrity of the traveler and his/her associated legitimate travel document. To date, through DHS' Secure Real-Time Platform, we have vetted over 300,000 immigration applications for international partners, helping them to identify potential travel by known or suspected terrorists. We have also recently begun to compare select refugee applications and enforcement cases against foreign data.

However, revisiting themes I referenced earlier, we have seen situations where this is still only a partial solution. For technological solutions to be effective, any country that could be used to further illicit travel must have the capability to scan biometric passports and identity cards. Deploying the feature in travel documents and having the interoperable capacity to use them are two different things. For example, we have seen smuggling networks use authentic documents acquired through theft or purchase to enter the Western Hemisphere. The networks will push use of legitimate

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c   Editor's note: In the more than 25-year period of the visa waiver program, there have been around 300 million entries into the United States, but according to RAND terrorism researcher Brian Jenkins, only three Islamist terrorists have reached the United States by plane from the countries concerned. Brian Michael Jenkins, "Inspiration, Not Infiltration: Jihadist Conspirators in the United States," testimony presented before the House Oversight and Governmental Reform Committee, December 10, 2015, pp. 5-6; Jenkins email to *CTC Sentinel*, January 2017.

d   Editor's note: Electronic passports (also known as e-passports) issued by the United States and countries belonging to the Visa Waiver Program contain a "biometric identifier," with the United States requiring that the chip contain a digital photograph of the holder. The United States requires that travelers entering the United States under the Visa Waiver Program have an e-passport if their passport was issued on or after October 26, 2006. British e-passports contain the holder's "facial biometric," and facial recognition software is deployed at e-passport gates at all major airports in the United Kingdom. See Department of Homeland Security, "E-Passports;" HM Passport Office, "Guidance: Biometric passports and passport readers," August 8, 2016; NIDirect, "Using ePassport gates at airport border control."

travel systems to the fullest extent possible to realize efficiencies, but will incorporate smuggling and fake documents as necessary to evade screening and border controls until finally approaching the U.S. southwest border and declaring asylum.

Van Gemert: I agree greater introduction of biometrics will really help us in identifying who is really traveling. In Europe, all Schengen countries are obliged to include biometrics in all new passports since 2006 (facial image) and 2009 (fingerprints). But it will take a long transition time, of course, until all passport holders have new passports with these features. Just to put it in perspective, the E.U. has 500 million inhabitants and 28 member states.

In the meantime, we need to make better use of the tools already in place, and we need to work to create a legal architecture better equipped to deal with the threat. Data protection requirements at the time of the November 2015 Paris attacks created separations between the different European systems we were using such as the Schengen Information System and the Visa Information System and systems we use at Europol. And when politicians ask us, "Why are these systems not aligned with each other? Why is this not happening?" the answer is "that's because there was a conscious political decision in the past not to align these systems, which were built for different purposes." I think there's a common political understanding now in the European Union on the need to remove such legal barriers and to create better interoperability between the different information systems.

CTC: Concerns have been expressed that the Islamic State operatives may seek to gain entry into the United States by exploiting refugee flows from Syria and elsewhere.[e] What is being done by DHS to mitigate risk in this area?
Edge: DHS is certainly doing its part to address the Syrian refugee crisis. Citizenship and Immigration Services in conjunction with the Department of State is doing most of the work in that space. They've admitted more than 10,000 Syrian refugees in this fiscal year alone. All these refugees, including the Syrians, have been admitted only after completing a series of stringent security and screening and vetting processes. Security checks have been implemented, as well as categorizing them as frequent travelers or infrequent travelers. HSI has been included in the vetting process from a criminal investigative perspective and has provided all the information we have acquired to the lead agencies.

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e   Editor's note: In 2015, the National Counterterrorism Center (NCTC) informed Congress that it had identified "individuals with ties to terrorist groups in Syria attempting to gain entry to the U.S. through the U.S. refugee program." The U.S. government has resettled about 12,000 Syrian refugees in the United States since the Syrian civil war began, around 80 percent of whom are women and children. Some American law enforcement and intelligence officials have said there are informational black holes creating challenges in screening such refugees. There have been no publicly identified cases of refugees from the Syrian civil war charged with terrorism offenses in the United States. Haeyoun Park and Rudy Omri, "U.S. Reaches Goal of Admitting 10,000 Syrian Refugees. Here's Where They Went," *New York Times*, August 31, 2016. "McCaul Statement on Concerns Regarding Syrian Refugee Program," Homeland Security Committee, December 7, 2015; Jared Goyette, "Most Syrian refugees coming to U.S. are women, children," *USA Today*, August 9, 2016; "The ISIS Terror Threat in America," Majority Staff, Homeland Security Committee, November 2016; "Nation's Top Security Officials' Concerns on Refugee Vetting," Majority Staff, Homeland Security Committee, November 19, 2015.

CTC: The numbers of irregular migrants entering Europe through the Turkey-Greece-Balkan route sharply dropped this year. Given the Islamic State was able to exploit the fall 2015 migrant crisis to infiltrate operatives into Europe, what kind of contingency planning has been done to prevent a reoccurrence of this infiltration in case there is a future surge in the numbers?
Van Gemert: With everything in place now, with the E.U.'s coordinated efforts in the migration hotspots, with the support we are delivering to frontline countries like Greece and Italy, and with improvements in our capability to quickly react, I think that even if there were an opening of the borders again, there would be a better response than in late 2015 and early 2016 because we're better prepared. But still, this would be a big issue for us, and it would be something that would need to be solved on the political level rather than just by police or law enforcement.

CTC: How useful have the thousands of registration documents and other documents recovered from the Islamic State[5] been in identifying Westerners who have joined the Islamic State and other terrorist groups in Syria and Iraq?
Edge: The registration documents have been critical to our ability to analyze the travel of the Westerners who have joined the Islamic State. So that has been something that has been very, very important to us. From the perspective of HSI, it's also important to note that ISIS has demonstrated the capability to exploit a lot of travel-related vulnerabilities, which means we need to continue to leverage our resources to acquire information, including information obtained by the United States from the battlefield, and share it through Europol. One of the things that has been critically helpful to us and something that we're earnestly investing in is analyzing social media linked to foreign fighters to see what they're saying to each other and what sources of information they're accessing so that we can stay two steps ahead of them as they are traveling the world and can make the appropriate notifications to our partners.

Van Gemert: I agree that the registration documents and other battlefield intelligence has been critical. Convictions in criminal trials for returning fighters require proof and these kinds of documents are essential in that regard.

I have the same view on the importance of social media analysis as Peter. The biggest innovation I've seen in the last year at Europol was our emphasis on social media and open source monitoring. This has resulted in a better understanding of foreign fighters and the smuggling and financial networks they are accessing. The biggest added value in my view is improving understanding of how ISIS uses social media and being able to analyze the social media presence of a target including identifying his network and, in that way, being able to create a cyber profile next to the target's regular real-life profile, which generally delivers very useful new information to investigators.

Another important tool for us is Europol's internet referral unit,[6] which detects terrorist and violent extremist online content, flags and refers such content to internet providers, and asks for its removal. The referrals are made to platforms like Twitter or Facebook notifying them that particular content is in conflict with their own terms of service, after which, in 90 percent of the cases, the content is removed by the company itself.   **CTC**

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2   Jean Charles Brisard and Kevin Jackson, "The Islamic State's External Operations and the Belgian-French Nexus," *CTC Sentinel* 9:11 (2016).

3   Michael Birnbaum, "E.U. authorities brace for wave of Islamic State fighters after Mosul assault," *Washington Post*, October 23, 2016.

4   Michele McPhee and Brian Ross, "US Intel: ISIS May Have Passport

Printing Machine, Blank Passports," ABC News, December 10, 2015.

5   Brian Dodwell, Daniel Milton, and Don Rassler, *The Caliphate's Global Workforce: An Inside Look at the Islamic State's Foreign Fighter Paper Trail* (West Point, NY: Combating Terrorism Center, 2016).

6   For more on Europol's Internet Referral Unit, see Europol, "Europol Internet Referral Unit One Year On," July 22, 2016.

Fighting the Long War: The Evolution of al-Qa`ida in the Arabian Peninsula

By Michael Horton

The civil war in Yemen is providing an ideal operational environment for al-Qa`ida in the Arabian Peninsula (AQAP). The war has acted as a catalyst for the organization's evolution. AQAP is now focused on implementing a more covert strategy that allows it to expand its ties to local communities and to further enmesh itself within some forces battling the Houthis and their allies. These deepening ties with local communities and anti-Houthi forces mean that AQAP will be even more resilient and more difficult to combat.

The civil war in Yemen has been a gift to al-Qa`ida in the Arabian Peninsula (AQAP). AQAP, like all insurgent groups, thrives in environments where state authority is weak or non-existent, where poverty is endemic, and where opposition forces are fragmented. The months of unrelenting war in Yemen have amplified all of these conditions. AQAP is honing and refining its capabilities in multiple areas, and in what is a dangerous parallel with Syria, it is deepening its ties to local communities and enmeshing itself within the groups that oppose Yemen's Houthi rebels and their allies.

Yemen's political landscape is as complex and unforgiving as its rugged terrain. The country's civil war mirrors this complexity. The civil war is not being fought by two parties but rather by multiple groups whose loyalties are often fluid. The war has drawn in outside powers, most notably Saudi Arabia and the United Arab Emirates (UAE), that are backing Yemen's internationally recognized government in its fight against Yemen's Houthi rebels. The Houthis, a predominantly Zaidi Shi`a revivalist movement, are currently allied with former Yemeni president Ali Abdullah Saleh along with a significant portion of the Yemeni Army that has remained loyal to the former president.

In March 2015, Saudi Arabia and its coalition partners launched "Operation Decisive Storm," a military campaign that was ostensibly designed to defeat the Houthis and reinstall Yemen's government in exile, led by President Abd-Rabbu Mansour Hadi. While the campaign has thus far failed to achieve its aims, it has helped create an ideal operational space for AQAP, one of al-Qa`ida's most nimble and resilient franchises. AQAP acted decisively to fill the power vacuum left by the unraveling of Yemen's Armed Forces (YAF) and its limited state structures. While AQAP is no longer overtly holding territory, the organization's influence and operational reach extend across much of southern Yemen.[1]

AQAP, which is now better funded and armed than at any point in its history,[a] has implemented a three-point strategy. First, AQAP has realized that it cannot alienate those it seeks to govern by enforcing all aspects of its understanding of Islamic law. It is thus demonstrating its capacity to 'govern' and provide basic services, most particularly security. Second, AQAP is deepening its ties with Yemen's tribes whose power has been enhanced by the civil war. Third, AQAP is enmeshing itself within some of those forces fighting against the Houthis and their allies. Concurrent with this three-point strategy and in support of it, AQAP is working to further develop its intelligence and counterintelligence cells. It is also developing its capacity to utilize what can be termed semi-conventional tactics on the battlefield.[b]
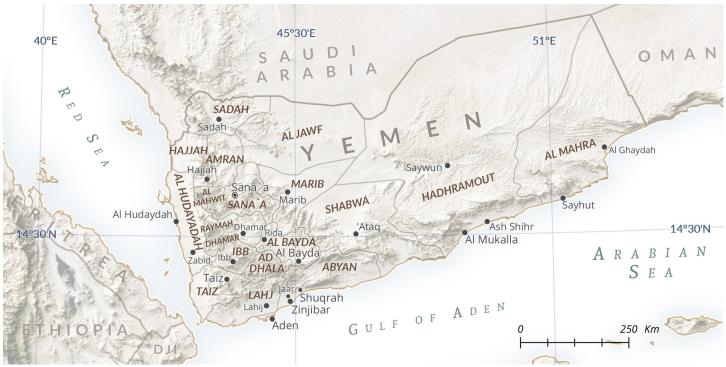
Lessons Learned

The popular uprising against Saleh in 2011 provided AQAP with an operational environment that was not too different from the one that now exists in large parts of southern Yemen. The contested uprising against Saleh—who remained popular with many Yemenis—sowed dissent within the YAF.[2] The dissent within the Yemeni Army and the removal of key units from vulnerable parts of southern Yemen left a void that AQAP quickly filled. By March 2011, AQAP was in control of large parts of the governorates of Abyan and Shabwa and declared the formation of an Islamic emirate in parts of both governorates.[3] In late May 2011, AQAP, which by then had begun referring to parts of its organization as Ansar al-Sharia, seized the town of Zinjibar, the capital of Abyan. AQAP was able to maintain control of parts of Abyan and Zinjibar until May 2012 when a successful offensive was launched by a combination of Yemeni Army units and tribal militias that were carefully aided by the United States.[4]

AQAP's seizure of Zinjibar and the surrounding areas provided it with its first opportunity to hold and 'govern' a territory. While

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a   This observation by the author is based on numerous interviews with observers of al-Qa`ida in Yemen as well as open source information.

b   The Yemeni Armed Forces, in particular the Yemeni Army, have never been a particularly cohesive fighting force. Many units were and are administered like personal fiefdoms by their commanding officers, where soldiers frequently view orders from their commanders as suggestions rather than orders. Many units up to the brigade level are organized according to tribal affiliations with 'stronger' tribes being assigned to the better-funded and better-equipped units.

Yemen (Rowan Technology)

AQAP was eventually forced out of the governorate with heavy losses, the year in which it controlled the area was instructive. AQAP's reign over parts of Abyan and Shabwa was an experiment in which its leadership was able to test how far it could go in imposing its interpretation of Islamic law. During this period, AQAP's leadership was divided among those who favored a maximalist approach, which involved enforcing all aspects of its version of sharia law, and the gradualists, who favored a step-by-step approach.[5 c] For most of the year in which it ruled over Abyan, AQAP pursued more of a maximalist approach by introducing the Islamic penal code and irregularly enforced a ban on the widely used mild-narcotic qat.[d]

Most critically, AQAP's version of sharia law in many cases superseded tribal law, which is relied upon to settle disputes between tribal members. This undermined the authority of tribal law and of tribal leaders who were not prepared to cede authority to men who were not from the area, not members of local tribes, and—in some cases—were not even Yemeni.[e]

AQAP also attempted to implement public works programs. It refurbished a number of water wells, fixed damaged streets, repaired water mains, and, in the early months of its control over the governorate, provided limited food aid to the poorest residents—though always with strings attached.[6 f] However, as the organization came under pressure during the early months of 2012, it became far less concerned with meeting the needs of the population it claimed to govern. It increasingly targeted tribal figures deemed to be non-compliant.

More than anything, AQAP's harsh approach to governance cost it its gains in Abyan and paved the way for a serious—if temporary—defeat. In May 2012, the YAF, supported by elements of the United States Armed Forces, launched an offensive that relied heavily on tribal militias.[7] The support of these militias proved critical to the defeat of AQAP. Tribal militias provided intelligence on AQAP's positions, movements, weapons caches, and escape routes.

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c   There is an ongoing debate among AQAP's relatively diffuse leadership about how critical tribal allies are, which also impacts arguments about how flexible AQAP should be when it comes to enforcing its understanding of sharia and, more broadly, how it governs. AQAP's current leader, Qasim al-Raymi, worked closely with AQAP's former leader Nasir al-Wuhayshi who advocated for a gradualist approach to governance. It is likely that al-Raymi shares at least some of al-Wuhayshi's ideas about how to engage with local populations. However, it should also be noted that al-Raymi referred to the United States in late 2015 as the 'primary enemy.' This view, if still held, will have to be balanced against AQAP's very local battle against the Houthis and their allies. Thomas Joscelyn, "AQAP Leader says America is the 'Primary Enemy,'" Long War Journal, December 24, 2015.

d   Reports from residents of the towns of Jaar and Zinjibar reflect the variance of AQAP's—or Ansar al-Sharia's—approach to enforcing Islamic law and the ban on qat. In some areas under the control of AQAP, all aspects of Islamic law were rigorously enforced while in other areas AQAP was more tolerant. With qat in particular, AQAP's willingness to enforce varied over the months in which it ruled parts of Abyan. While qat is not as popular in southern Yemen as it is in the north, it is still used by a significant percentage of the population, and most critically, the trade in qat is the only lucrative source of employment in many areas.

e   In 2011 and 2012, AQAP had a significant number of fighters from Somalia and of Somali descent. Coastal Abyan and Aden are home to large numbers of Somali refugees and second- and third-generation immigrants from Somalia. AQAP's use of foreign fighters proved to be highly problematic in the non-coastal and more 'tribal' parts of Abyan. It has been the author's observation that a significant number of Yemenis—especially those living in the north and more mountainous areas—are quite racist when it comes to Africans. AQAP's fighters of Somali descent were subject to summary execution when caught by tribal militias. Author interviews, various Yemeni tribal engagement officers, 2012-2013.

f   As conditions deteriorated in Abyan in 2012, AQAP made the provision of food and other items dependent on a community's willingness to provide recruits for AQAP. These recruits—most of them forced—were regarded by AQAP as unreliable and therefore largely expendable. Thus, they were frequently used as decoys and in suicide operations.

In a period of weeks, AQAP went from a high level of operational freedom to fleeing—often on foot—either singly or in small bands.[8]

AQAP's defeat did not go unanalyzed by its leadership. In May and August of 2012, Nasir al-Wuhayshi, the late leader of AQAP, penned two letters to his counterpart in al-Qa`ida in the Islamic Maghreb (AQIM).[9] In these letters, al-Wuhayshi claimed that AQAP was not defeated but had staged a strategic withdrawal. In the same letters, he warned his counterpart to adopt a gradualist approach to implementing Islamic law. Al-Wuhayshi also wrote that local tribes were AQAP's most formidable enemies and the greatest obstacle to it maintaining control. Some of AQAP's leaders realized that to be successful, at least over the long-term, they must have abiding local support.[10] Apart from some coastal areas, this support is contingent on successfully engaging with Yemen's tribal leaders. Yet, many of Yemen's tribes are quite democratic and resist top-down authority, especially when those trying to assert their authority are outsiders.[11]

A New Approach to Tribal Engagement

Following AQAP's expulsion from Abyan and parts of Shabwa in 2012, many of its members fled to the mountain redoubts of the governorate of al-Bayda, where AQAP has long maintained a presence.[12] Since antiquity, this strategic area has been contested because it is a gateway from the southern coast to Yemen's central highlands. The clans and tribes of al-Bayda are particularly fractious and extractive. The divided nature of its tribes has meant that AQAP has had more success penetrating al-Bayda's tribal matrix than elsewhere in Yemen. AQAP and its earlier iterations had tried and largely failed to secure the enduring support of cohesive and insular tribes in other parts of Yemen, such as the governorates of Marib and al-Jawf.[13]

Al-Bayda is different. Here, AQAP exploited inter-tribal rivalries by leveraging its access to arms, funds, and the military acumen of some of its ranking members in exchange for safe havens. In 2012 and 2013, AQAP inserted itself into one of al-Bayda's inter-tribal feuds by backing Tareq al-Dhahab, a ranking member of the Dhahab clan who had been passed over for a leadership position within the locally powerful Qayfa tribe.[14] However, the mistake AQAP made was backing al-Dhahab in an overt manner and insisting that al-Dhahab's fighters proclaim their loyalty to AQAP. This led to al-Dhahab's defeat by tribal militias backed by the Yemeni Army. The Yemeni government, which at that time was still functioning, used the threat of airstrikes and, most critically, the promise of increased aid to get local tribes to fight al-Dhahab and his men.[15]

It was not until 2014, when AQAP faced a sustained offensive by Houthi and allied forces, that it began refining its approach to tribal engagement.[16] AQAP made a conscious effort to mirror the Houthis'

more successful engagement efforts.[17][g] The Houthis, who have long relied on coalition-building among Yemen's northwest-based tribes, do not insist on—and often discourage—overt alliances. Their approach is pragmatic and strategic.[18] They offer arbitration, expertise, weapons, and, most importantly, funds to those tribal leaders who agree to fight on their behalf.[19]

Embracing Gradualism

AQAP's modified approach to tribal engagement was a victory for those among its leaders who pushed for the acceptance of a more nuanced strategy. This new strategy, which included promises of cash payments in exchange for support, was used in the lead up to AQAP's April 2015 seizure of al-Mukalla, Yemen's fifth largest city. AQAP's move into al-Mukalla was rapid and appeared to come with little warning. The swiftness of the group's takeover of al-Mukalla and much of the southern half of the Hadramawt governorate was aided by months of preparation.[20] The preparation consisted of overtures to those tribal leaders and local leaders that AQAP deemed to be sympathetic to its cause. In effect, AQAP spent months building coalitions with leaders that they identified as amenable to its cause and bought off those whom were not with promises of money and weapons.[21] These efforts laid the groundwork for the rapid and largely bloodless April takeover of the city.

The speed of its takeover of al-Mukalla allowed AQAP to seize weapons and materiel from nearby Yemeni Army and Central Security Force bases. Most importantly, AQAP seized an estimated $100 million from the al-Mukalla branch of the Yemeni Central Bank.[22] The money, far more than the weapons, was critical to AQAP's continued success; it allowed it to expand its recruitment efforts and most importantly, to fund its engagement efforts and limited public works projects in al-Mukalla.[23]

While AQAP focused on recruitment, training, and engagement efforts across the southern half of Yemen, it left the day-to-day governance of al-Mukalla and much of the southern half of Hadramawt to local leaders with whom it had established relationships.[24] The decision to empower local leaders and allow them to govern as proxies is reflective of AQAP's acceptance of a more covert strategy. This strategy is labeled by some within AQAP as the *al-yad al-makhfi,* or invisible hand strategy.[25] AQAP also—with some exceptions—largely resisted the temptation to impose the most severe aspects of its

g   AQAP's renewed focus on tribal engagement is due in part to what it has learned from the Houthis, who have built coalitions that cross tribal and sectarian divisions. Both groups emphasize engaging with tribal leadership as a means to penetrate and sustain a presence within communities. AQAP is mirroring the Houthis' relatively successful attempts to gain allies and build 'coalitions' of supporters in strategic parts of al-Shabwa, al-Bayda, Marib, and Dhamar. They are not observing from afar. Rather, in many areas, AQAP is competing directly with the Houthis for the same promises of support, access, and information from tribes and clans. In places like al-Bayda, tribal leaders routinely play one organization off the other in an attempt to extract better terms. AQAP lost a great deal of support in al-Bayda during 2014-15 due to its heavy-handed approach and its unwillingness to acknowledge the authority of established elders. In contrast with AQAP, the Houthi leadership went directly to the elders— those that were left—and asked them what they wanted and needed in exchange for their support. Author interviews, various Yemen-based experts and ex-government officials, September-November 2016.

Screen capture from a November 2016 AQAP video

interpretation of Islamic law in al-Mukalla.[h] In al-Mukalla, AQAP managed to build a measure of goodwill due to this relative restraint and its provision of limited public works.[26]

In April 2016, Saudi- and Emirati-backed pro-government forces retook al-Mukalla. While coalition officials claimed that this was a resounding defeat for AQAP, AQAP called its withdrawal from the city a strategic retreat that was undertaken to ensure civilian lives were not lost.[27] The coalition effort to retake the city resulted in few deaths and in little damage to the city. In many respects, AQAP's yearlong occupation of a city of 300,000 validated the benefits of gradualism and of the 'hidden hand' approach to governance.

The 'Hidden Hand' Strategy

While AQAP has moved its forces from al-Mukalla, thanks to its gradualist approach, it still exercises control within the city and over the surrounding countryside.[28] AQAP anticipated and planned its withdrawal from al-Mukalla. Its leadership learned firsthand the perils of trying to face down conventional forces backed by air assets in 2012. AQAP is also watching the war against the Islamic State in Iraq and Syria where conventional forces have inflicted heavy losses on the Islamic State. AQAP's gradualists clearly favor giving up territory rather than exposing the organization to heavy losses that would also cost it much of the limited goodwill that it has accrued over the last two years. This goodwill is viewed as critical by many within AQAP. This view has been further buttressed by the fact that the Islamic State in Yemen's brutal tactics have cost it much of the limited support that it once enjoyed.

This control is exercised through the network of informants and sympathizers that AQAP built during its year in al-Mukalla. This network acts as its eyes and ears in the city as well as its envoys to some members of the globally linked Hadrawmi business community. The network was designed to function as a stay-behind force when AQAP withdrew.[29]

Enhancing intelligence and counterintelligence capabilities has long been a priority for AQAP both as a means to ensure the sur-

vival of the organization and as a means to achieve its short- and medium-term goals. However, its use of a hidden hand approach to governance and influence operations has meant that it has prioritized the vetting, funding, and training of more intelligence and counterintelligence cells.[30][i] AQAP clearly recognizes the value—and dangers—of human intelligence in particular. It assigns a high priority to assassinating members of Yemen's intelligence services who pose a threat to the group.[31] AQAP's prioritization of the formation of more intelligence cells aligns with its leadership's embrace of what could be called the long war. It is employing tactics that will prevent it from being easily targeted and that allow it to continue to act through proxies.

Many of these new intelligence cells are tasked with infiltrating tribal militias and other nominally pro-government forces that are fighting the Houthis. The members of these AQAP cells—some of whom have been recruited from the Yemeni intelligence services—are charged with identifying ranking individuals who may be sympathetic to AQAP's cause and then offering financial and military aid.[j] While these efforts are ongoing throughout southern Yemen, AQAP is focusing on the strategic frontline areas of Taiz and Ibb as well as northern al-Bayda.[32]

In these areas, forces opposing the Houthis—especially in Taiz—are stretched thin and often suffer from shortages of money and materiel. As one commander of a militia based in Taiz explained, "when you are days, if not hours from being over-run, you do not care where the supplies or men come from or what their beliefs are so long as they can fight and are fighting the same enemy you are." The commander added, "we can sort out al-Qa`ida after we've beaten the Houthis."[33]

Enmeshment

It is likely that many of the leaders of rebel groups involved in the early stages of the uprising against Bashar al Assad's government in Syria thought the same thing as the commander in Taiz—that al-Qa`ida can be dealt with after defeating Assad. As is now clear in Syria, al-Qa`ida and—to a lesser degree—the Islamic State have

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h   AQAP did publicly execute two men accused of spying and later displayed their bodies on planks. Mohammad Mukhashaf, "Al-Qaeda kills two Saudi accused of spying for America," Reuters, June 17, 2015. AQAP is also reported to have overseen the stoning of a married woman who was accused of adultery. "Al-Qaeda stones woman to death for adultery in Yemen," Middle East Eye, January 4, 2016. See also Gregory Johnsen, "Al-Qa`ida and the Islamic State Benefit as Yemen War Drags On," *CTC Sentinel* 9:1 (2016).

i   Much like Yemen's civil war, the targeting of AQAP by drones in particular has sped up AQAP's evolution. The drone attacks, some of which have successfully targeted AQAP's leadership, have meant that AQAP has had to develop its counterintelligence capabilities and ability to 'go dark' in order to avoid being targeted. The drones attacks may well be acting as a kind of artificial form of 'natural selection' whereby those operatives who are sloppy and break protocols are killed, leaving behind operatives who are more careful and disciplined. The attacks on AQAP's top and mid-tier leadership have also spurred the development of 'apprenticeship' programs whereby more experienced operatives train their replacements. While it is beyond the purview of this article, it should be noted that there are parallels with AQAP's heightened attention to the development of intelligence cells and al-Shabaab's development of its amniyat intelligence wing. The amniyat has proved critical to al-Shabaab's ability to manage internal security and to co-opt, most often through violence, leaders among Somalia's clans and sub-clans. Given that AQAP maintains a relationship with al-Shabaab, it is likely that the two organizations have exchanged notes on the best ways to set up and operate intelligence units.

j   Yemen's two primary intelligence services, the National Security Agency (NSA) and the Political Security Bureau (PSB), have a checkered past when it comes to making use of militant salafi organizations when this is deemed useful to them and of being home to officers who are sympathetic to radical ideologies. Michael Knight, "Strengthening Yemeni Counterterrorism Forces: Challenges and Political Considerations," Washington Institute, January 6, 2010.

woven themselves into the very fabric of these groups by leveraging their fighting capabilities, their access to weaponry, and their superior organizational capabilities in exchange for support.[34] In effect, AQAP, like many of the al-Qa`ida franchises, is undergoing a kind of indigenization whereby they identify with—at least on a tactical level—the aims of some of those groups fighting the Houthis. There is also a sectarian element to the war in Yemen, although this is far more limited than in Syria. In Yemen, AQAP readily taps into these sectarian tensions and exacerbates them where possible. In fighting the Houthis, AQAP's messaging emphasizes the idea that it is fighting Shi`a apostates that are acting as agents of Iran.

The sectarian tensions and the fragmentary nature of those forces fighting against the Houthis are providing AQAP with ample opportunities to enmesh itself within those forces fighting against the Houthis.[35 k] Though it must be noted that AQAP has also targeted some pro-government forces, the tempo of these attacks has decreased markedly over the last year.[l] Many of the militias and reconstituted units of the Yemeni Army that are loyal to the government in exile are poorly trained and poorly equipped. In addition, many of these forces are also unwilling and uninterested in fighting the Houthis and their allies. This is due to both the Houthis' reputation as formidable fighters and the fact that most of the men who make up these units are drawn from the south. As southerners, many of them are more interested in southern independence than fighting against the northern-based Houthis and for a unified Yemen.[36]

The Saudi-led coalition has struggled to motivate newly created and reconstituted pro-government forces to consistently support frontline fighters in fiercely contested areas like Taiz. The failure by Saudi- and Emirati-backed forces to consistently support frontline fighters has allowed AQAP to fill the void by providing relatively well-trained and well-equipped operatives. AQAP views this as an opportunity and has enmeshed its fighters among the anti-Houthi militias fighting in these areas. In places like Taiz, AQAP maintains an overt and covert presence. It has advisers and members of its intelligence cells who do not openly identify as AQAP operatives serving within anti-Houthi groups. At the same time, AQAP has assembled groups of fighters who openly fight under its flag. These detachments frequently act as strategic reserves for anti-Houthi militias fighting in Taiz and parts of Dhale governorate. A commander of a pro-government militia in Dhale explained, "they [AQAP] have prevented many defeats [of pro-government forces by Houthi-allied forces] and because of that they are winning support. As many of my own men know, they pay better and their men never seem to run out of ammunition or food. Many of the men who were fighting with us have joined them not because of what they teach but because of how they fight and what they pay."[37]

In what seems to be another indication of the acceptance of a more gradualist approach to achieving its goals, AQAP is focused on making itself indispensable to many of the anti-Houthi forces fighting along the frontlines of Yemen's civil war. Its ideological and religious goals have been made secondary—at least temporarily—to its goal of securing local support. This has been reflected by the diminished tempo of its attacks on anti-Houthi forces. There are few reports in recent months of attacks on anti-Houthi forces in frontline areas.

AQAP's enmeshment within anti-Houthi forces has also allowed AQAP to enhance its war fighting capabilities in multiple areas. The civil war has acted as a catalyst for AQAP's understanding of and ability to fuse irregular warfare tactics with conventional tactics reliant on heavy weaponry. Due to its seizure of stockpiles of weapons in 2015, AQAP now has access to a range of heavy weaponry.[38] It initially had little experience with using such weapons systems, but this has changed over the last year as AQAP has fought set piece battles against Houthi-allied forces. AQAP, much like the Houthis and the Islamic State, has dramatically increased its ability to engage in semi-conventional warfare.[39]

Looking Forward

Local support is fundamental to AQAP's ability to sustain itself and to its expansion in Yemen. However, such support is, to a great extent, contingent on AQAP's willingness to restrain itself and not alienate those it seeks to govern. The leadership of AQAP has incorporated the lessons learned during its defeats and setbacks in 2012-2014. This is evidenced by AQAP's acceptance—at least for now—of the gradualist approach advocated for by its late leader, al-Wuhayshi, and accepted by, at least to some degree, its current leader, al-Raymi. Fighting the long war necessitates patience, time, and a far more nuanced approach to engaging Yemen's tribes and the fragmented forces opposing the Houthis and their allies.

This strategy suggests that AQAP is currently focused on organizational growth in Yemen. While AQAP's increasing attention to more parochial concerns likely means that it is less concerned with direct attacks against foreign targets, its adoption of what is a far more pragmatic path to growth should be of great concern to the region and the United States.[m] AQAP's enmeshment within some anti-Houthi forces and its deepening ties with some tribal communities mean that it is even more resilient and harder to combat. This combined with the fact that the civil war in Yemen will likely continue—at least on a low level—for years means that AQAP's future is more secure than ever.   CTC

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k   There are a multiplicity of forces fighting against the Houthis and their allies. These include reconstituted units of the Yemeni Army, tribal-based militias, people's defense committees, and forces aligned with various southern separatist organizations.

l   AQAP offered harsh criticism of the December 10 Islamic State attack on Yemeni soldiers at an army base in Aden. "Yemen's Al-Qaeda distances itself from 'deviant' IS," Middle East Online, December 15, 2016.

m   While AQAP is presently devoting most of its resources and organizational energy on fighting the near-enemy in Yemen, it is still advocating attacks on the far-enemy. In the November issue of its English language publication, Inspire, AQAP continued its call for lone-wolf attacks on Western targets. The lone-wolf attacks cost AQAP very little if anything in terms of resources and allows them to maintain continue to burnish their 'jihadi' credentials. The attacks also are less likely to provoke a sustained response by Western powers that could cost the group local support. AQAP is arguably on a clear trajectory to becoming a far more parochial organization. AQAP's recruitment strategies reflect this. It is more of a purely Yemeni organization than ever before. It is very careful not to use Somalis and other foreign recruits in sensitive areas. This now applies—though far less so—to Saudis as well, given the antipathy to Saudi Arabia in many parts of the country (even in those parts under the nominal control of KSA-backed forces).

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Drone, Counter Drone: Observations on the Contest Between the United States and Jihadis

By Don Rassler

Armed military-grade drones have been a central tool for the United States to counter the threat posed by al-Qa`ida and the Islamic State. It is therefore not surprising that the West's use of drones has been a subject of intense interest for these groups and their supporters online. Indeed, the jihadi community for years has sought ways to disrupt and limit the effectiveness of armed drones and to deploy its own drones in offensive ways. As the United States and other countries begin to deploy counter drone solutions to mitigate the jihadis' offensive drone threat, it would be wise to game out creative and inexpensive ways to defeat countermeasures being deployed by the West so the jihadis' response to those methods can be anticipated and pre-empted.

I n early October 2016, the Islamic State used an explosive-laden drone to kill two Kurdish fighters and injure two French Special Forces soldiers. The group was able to achieve the feat not by some sophisticated technical breakthrough, but rather through a combination of deception (hiding the explosives inside the device) and creativity (detonating the device after it had been downed by Kurdish forces and was taken back to their base for inspection).[1] This event, and other similar incidents involving terrorist use of explosive-carrying drones over the past year, has led to a push by the United States and other nations to more rapidly field a plethora of drone countermeasures.[a] These solutions range from drone-disabling guns and small, armed attack drones to eagles and electronic and cyber countermeasures.[b]

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a   Many of these drone countermeasure systems have been in production for years. For background, see Colin Clark, "New Weapons Spell Death for Drones: the Countermeasure Dance," BreakingDefense.com, October 13, 2014.

b   Since the early 2000s, the U.S. Department of Defense's Black Dart exercise has served as a venue to test out these various types countermeasures. For background, see "Black Dart: The U.S. Military's Countermeasure against Drones," NBC Nightly News, August 8, 2016. For background on the use of eagles to take down commercial drones, see Kelsey D. Atherton, "Trained Police Eagles Attack Drones on Command," *Popular Science*, February 1, 2016.

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As these various approaches are pursued, it is worth considering how groups like the Islamic State are going to respond to the deployment of these systems and how they are going to try and defeat them.[2]

The way the jihadi community has sought previously to counter the West's use of armed drones provides a useful window in this regard, as the topic has been a thread of online discussion among jihadi organizations and their supporters for years. This article provides a general overview of those discussions on Arabic language jihadi forums, drawing on postings between July 2005 and December 2013 collected by the Combating Terrorism Center, as well as other open source material.[3] This article specifically outlines the creative and resourceful ways that jihadis have sought to counter armed military drones since 9/11,[c] and it does so with the aim of providing insight into how the jihadi community might defeat U.S. countermeasures against jihadi drones.

The Jihadis' Approach
The mujahidin in Somalia should be careful of the air

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c   Due to their popularity when data was collected (2014), attention was specifically placed on three forums: Shumukh al-Islam, Al-Fida, and Ansar al-Mujahidin. The CTC gathered and cataloged all of the material it could find on these three forums that directly referenced or commented on drones, unmanned aerial vehicles, remote control planes, or other similar search terms during a search it conducted during the early months of 2014. This search process yielded 218 drone-related posts that were included on the forums between July 2005 and December 2013. The material that was recovered as part of this process fell into three categories: 1) official publications or statements made by jihadi groups; 2) discussions threads or posts submitted by senior forum writers or forum administrators (i.e. individuals who manage and run the forum sites and serve as links between jihadi organizations and other users of the forums); and 3) posts and comments made by forum members, individuals who are believed to be jihadi sympathizers. There are a number of problems and limitations associated with this approach, and in using the second and third categories of forum-derived information specifically. First, while the forums have served as an aggregator of jihadi content, it is not clear how representative the material posted on the forums is of the broader Sunni jihadi collective. Second, since a direct connection usually cannot be made between jihadi terrorist groups and the statements made by forum members and administrators, the latter category of information functions only as a proxy for the views of jihadi terrorist entities themselves. This is not to say that the views of administrators and forum members are not useful, but rather that researchers should be cautious about making strong conclusions about jihadi groups from this material alone. Third, due to concerns over surveillance and forums being targeted by government agents as a form of collection, forums users typically mask their true identities. Thus, it is not possible to establish which forum users are genuine jihadi sympathizers and to differentiate them from those who are not. Readers should read this article with these caveats in mind. For background on Arabic language jihadi forums, see Edna Eraz, Gabriel Weimann, and Aaron Weisburd, "Jihad, Crime and the Internet: Content Analysis of Jihadist Forum Discussions," Report Submitted to the National Institute of Justice, October 31, 2011, and Mohammed al-Musawi, "Cheering for Osama: How Jihadists Use Internet Discussion Forums," Quillam Foundation, August 2010.

bombardments and should benefit from the art of gathering and dispersion experience, as well as movement, night and day transportation, camouflage, and other techniques related to war tricks.
—Letter from al-Qa`ida operative Atiyyah Abd al-Rahman to Mujahidin in Somalia (al-Shabaab)[4]

The facts prove that the American technology and advanced systems cannot capture a mujahid if he does not make a security violation that will lead them to him. Commitment to operational security makes his technological advancement a waste.
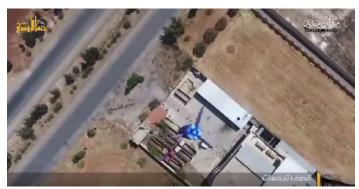—Letter from Usama bin Ladin to Atiyyah[5]

The two quotes from Atiyyah and bin Ladin above speak to the important role countermeasures, counterintelligence, and defensive strategies have played and continue to play in the survival and endurance of groups like al-Qa`ida and the Islamic State. They reinforce two points. First, the threat to these groups and their allies across the globe from armed drone strikes is real. And second, good operational security is not only critical to their survival but is also required to counter or nullify the advantages that superior U.S. technology affords. To protect themselves and limit the effects of drones, writers active on jihadi forums have released tips and operational tradecraft guides, which provide recommendations one should follow to avoid being targeted by a drone, for their followers. To draw upon the collective strength and knowledge of their community, jihadi forum administrators have also opened the discussion to the masses, as an attempt to crowdsource countermeasures and other solutions—and they have been doing so since at least 2011.[6] Cash prizes have even been offered.[7]

The approach that the jihadi community has taken to this issue is fairly thorough, as in the discussion threads online one can easily see jihadi forum members conduct vulnerability assessments of drones. There were examples of different individuals—or small groups—trying to find weaknesses in each component, from sensors and encryption to spies, that could be exploited to defeat a drone, limit its accuracy, or enhance survivability.

Such investment in countermeasures, is certainly not new as terrorist groups of all persuasions have long sought ways to reduce the effectiveness of their adversaries' actions and to learn from others.[8] As noted by Brian Jackson and his colleagues at RAND,[9] countermeasures, even when successful, usually only have a limited shelf life, necessitating consistent focus for any terror group.[10]

To make sense of terror counter-technology dynamics, Brian Jackson and his colleagues at RAND developed a typology with four meta-categories. This typology is useful in that it helps to situate analytically the countermeasures deployed by terrorist groups. The four meta-categories created by RAND include: altering operational practices, making technological changes or substitutions, avoiding the technology, and attacking the technology.[11] While a terrorist group's effort to counter drones can usually be placed into one of these categories, they are not mutually exclusive. As revealed below, sometimes a terror group's approach is more complex and

Screen capture from a video released by Jund al-Aqsa in September 2016 showing a munition being dropped from a commercial drone in Syria

fits into several of them.[d]

The solutions proposed by the jihadi community in its online marketplace for ideas are best thought of as a spectrum that ranges from the silly to the somewhat sophisticated. A jihadi who went by the name Abu `Ubayda `Abdullah al-`Adam served as a pioneer in this space and added some institutional structure and formality to the jihadis' discussions on the topic. Before his reported death in a drone strike in Pakistan during the spring of 2013, U.S. intelligence agencies believed al-`Adam served as al-Qa`ida's intelligence chief.[12] He also authored and released a series of "reports"—all identified by the *Terrorism Industry* title that they carried—that provided decentralized advice on operational tradecraft and security to anyone perusing the jihadi forums. Several of al-`Adam's reports focused on drone strikes so that the specific practices that contributed to the strikes could be diagnosed and corrected. What follows is a summary, organized along the lines of the RAND typology described above, of the countermeasures that al-`Adam and other jihadi sympathizers have discussed, recommended, or practiced.

Altering Operational Practices/Avoiding the Technology

Physical Responses and Efforts to Conceal
One major area of discussion by jihadi forum members online were efforts to harden and camouflage facilities. As explained by al-`Adam, "the camouflage is used to mislead [the enemy], and prevent [one from] becoming a clear target. For example: The place that we use to build VIEDs [Vehicle-Borne Improvised Explosive Devices] should be covered. It is a big mistake to use an open space to build VIEDs even if we are doing that here, in Afghanistan, or in a secure area [that] cannot be reached by the enemy."[13] He made the consequences of not concealing your position clear: "If you do your work in an open area, you'll become an easy and open target for the unmanned aerial vehicles and the spying planes."[14] In addition to working inside and covering sensitive locations, other jihadis re-

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d As noted by RAND in its report, "reflecting this complexity, the four strategies are likely better viewed as the extremes of four overlapping sets ... in which specific counterefforts may draw on one or more of the basic strategies in an effort to defeat or circumvent a specific defensive technology." Brian A. Jackson et al., *Breaching the Fortress Wall: Understanding Terrorist Efforts to Overcome Defensive Technologies* (Santa Monica, CA: RAND Corporation, 2007), p. 118.

sponded to this thread online with more trivial ideas, such as hiding under dense trees, burning tires (so that a smokescreen would be created), and digging tunnels.[15]

The most sophisticated concealment measure investigated by jihadi forum users online was a line of counter-surveillance clothing created by New York City designer Adam Harvey in 2013.[16] The product that Harvey developed, in which the jihadis took particular interest in and reposted, were garments made out of material that masks and suppresses body heat—material that, as a video released on Harvey's website illustrates, limits the effectiveness of forward-looking infrared imaging (FLIR) systems, a key sensor drones use for targeting.[17] In addition to having an awareness of Harvey's work, jihadi members online also discussed how to create homemade remedies, with one user suggesting that sand should be sewn between two pieces of clothing to achieve a similar effect.[18]

Hardening facilities was an additional area of focus with another prominent writer, Abu `Abd al-Rahman al-Qahtani, suggesting people should move their offices to the basement of a house, work out of caves, or place sand bags on their roofs to limit attrition and dampen the blast effects of strikes.[19]

Altering Personal Tactics, Techniques, and Procedures (TTPs) to Reduce Targeting and Evade Drones
Discussions regarding changes to personal TTPs were predicated on a general understanding of the sensors with which most military grade drones are equipped. This included jihadi contributors having an awareness of high-resolution cameras and thermal imaging technology that drones can have on board and the ability of these platforms to work as "efficiently at night as they do in the day time."[20] There was also an awareness that drones study their targets' movement and pattern of life. As al-`Adam explained in Episode 12 of his *Terrorism Industry* series, "the unmanned aerial vehicle (UAV), especially, is able to determine your location and watch your movements and there does not need to be a mobile phone [in your possession]. The UAV has the ability to precisely pinpoint your position via your movements."[21] To address these issues, al-Qahtani suggested common operational security practices such as frequently changing travel routines and bed-down locations (to include shifting to those far away from areas with known drone activity).[22] Abdullah al-`Adam, citing the reasons and mistakes that led to the assassination of Abu Hamza al-Rabia—an Egyptian who served as al-Qa`ida's international operations planner before his death by drone strike in 2005—recommended that changes also be made to the circle around oneself after a failed assassination attempt.[23] Al-`Adam believed that al-Rabia's demise was a result of him not making these changes after a prior attempt on his life.[24]

Not surprisingly, the use of electronic devices to evade drone surveillance and associated strikes was a rich thread of discussion.[e] It was on this topic, perhaps more than any other, that the jihadi community's concerns over operational security were most evident.[25] It was also the area where the countermeasures and operational tradecraft guidance was the most specific.

Attacking the Technology
As one might expect, a considerable amount of attention was paid to devising ways to attack, disrupt, or sabotage drones and the logistics chain associated with them.

Jamming
One particular area of interest for the jihadis was disrupting the signals that guide and control drones, a practice commonly known as 'jamming.' For this to be accomplished, the actor seeking to disrupt a system needs to deploy radio or other electronic measures to interfere with a specific drone's system, which—if executed properly—would limit that device's ability to operate effectively. The jamming solutions proposed by jihadi sympathizers online were mostly do-it-yourself in character and consisted of, for example, using "a regular water pump generator… after attaching to it a 30-meter copper pipe," "old pieces of [unspecified] communications equipment, because their frequencies are very strong," or the "Russian-made Rascal device."[26] The latter is software that broadcasts "frequencies or a band of frequencies to cut off the communications or to jam the frequencies that are used to control the drone."[27] More recently, in a forum post from November 2015, a participant encouraged Islamic State fighters to use a GPS signal and radio frequency jammer called Wave Bubble.[28]

Intercepting Feeds, GPS Spoofing, and Hacking
Another related area of vulnerability that jihadi forum users focused on were the data links/feeds that allow drones to communicate and share data with their controllers. Particular emphasis in these discussions was placed on intercepting drone feeds. In late 2009, media reports surfaced detailing the ability of Kataib Hezbollah, a Shi`a militant group active in Iraq, to intercept data from U.S. drones.[29] According to these accounts, the Shi`a militants intercepted the "feeds by taking advantage of an unprotected communications link in some of the remotely flown planes' systems."[30] They did so by using a Russian software program called SkyGrabber that was "intended to steal satellite television" and was available for purchase for $26 on the internet.[31] By creatively repurposing this software, Kataib Hezbollah was able to "download real-time video feeds from American surveillance drones as they flew over Iraq … [which allowed them to] both monitor and evade U.S. operations."[32] The U.S. military learned of the problem after "they apprehended a Shiite militant whose laptop contained files of intercepted drone video feeds."[33] Jihadi forum contributors were aware of this software, as their posts directly referenced both the software and press coverage about its use by insurgents in Iraq.[34]

Jihadi forum users also had awareness of successful 'spoofing' of a small, commercially purchased drone by a team at the University of Texas at Austin's Radionavigation Laboratory, which was featured in U.S. media in June 2012. The researchers were able to take control of the drone's GPS navigation system so they could fly and direct the device themselves.[35] It should be noted that military-grade drones, like the Reaper and Predator, are more sophisticated, and their feeds have higher levels of encryption than commercially available drone variants, making it more difficult for an external party to spoof or otherwise send those more advanced versions false instructions. Yet, a number of incidents reveal that the encryption of military-grade drone feeds is a cat-and-mouse game being played out between the United States and its adversaries, as America's enemies are looking for—and in some cases have

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e   Another interesting thread of discussion contained conversations about the tactical and operational behavior of drones in the area and the apparent trends or signs that the jihadis have noticed about their altitude and other performance immediately before a strike. For background, see `Abir Sabil5, "A Temporary Solution to the UAV: Participate with what you Know," Ansar al-Mujahidin forum, October 2012.

previously found—ways to gain access to military drone data feeds.

A number of cases that have been publicized involve Iran and its proxies, which is not necessarily surprising as Hezbollah successfully tapped into Israeli drone feeds in 1996, an advantage that led to the 1997 massacre of 11 Israeli commandos during a cross-border operation in Lebanon.[36] (Hezbollah's ability to gain access to Israel's drone feeds at the time allowed it to gain insights into the facilities the Israelis were monitoring. This meant that instead of the Israeli targeting operation surprising Hezbollah fighters, they were there waiting for it.) In 2011, Iran claimed that it was able to take over the GPS system of the United States' advanced, stealth RQ-Sentinel drone while it was conducting a reconnaissance mission near Iranian territory.[37] The United States has disputed the charge and claims that Iran recovered the drone after it crash-landed within its borders.[38]

Another form of drone takeover can be achieved via hacking. For example, in 2013, an enterprising programmer based in the United States developed software called SkyJack that allows the user to seek "the wireless signal of any other [commercial] drone in the area."[39] The program then "forcefully disconnects the wireless connection of the true owner of the target drone, then authenticates with the target drone pretending to be its owner," which allows the user to take control of the drone.[40] All that was required to facilitate this takeover was "a Parrot AR.Drone 2, a Raspberry Pi, a USB battery, an Alfa AWUS036H wireless transmitter, aircrack-ng, node-ardrone, node.js, and … SkyJack software."[41] Another researcher has developed a way to hack into DSMx, "a widely used remote control protocol for operating hobbyist drones, planes, helicopters, cars, and boats," allowing the hijacker to control other nearby drones.[42] Given the jihadis' interest in counter-drone technologies, it has to be assumed that both these tools have caught their attention.

Homing Beacons, Spies, and Counterintelligence
Discussions on the jihadi forums also centered on attempts to attack and defeat the methods that the jihadis believe link a drone missile to its target. The majority of their attention focused on learning about homing beacons that transmit electromagnetic or infrared signals and local spies who they believe place the beacons or use other means to identify which facility or individual should be targeted.[43] Official jihadi publications have even included pictures of specific beacons that were allegedly recovered from spies in Pakistan's tribal areas.[44] To defeat these beacons, al-Qahtani send out a request across the forums for additional information on these devices and how they work. He specifically wanted to know "the frequency these waves work on" and recommended that people send in strategies for how they could be defeated.[45]

Jihadi terror groups have also set up, or bolstered, counterintelligence units to root out spies.[f] These efforts have been accompa-

nied by efforts to share knowledge regarding how spies operate as well as practical steps that group members can take to help identify them or limit their effectiveness. The information being shared ranges from the obvious—"anyone who uses communication devises should be secretly tracked"—to the more specific, including information aimed at creating awareness about methods used by local and state intelligence units to recruit spies.[46] For example, a significant portion of issue 19 of the *Terrorism Industry* series provides a detailed overview of the method used by the Pakistani Army to coerce a local shopkeeper in Waziristan to target a wanted individual. According to the report, the Pakistani Army got the shopkeeper to act on its behalf through an incremental approach that started with an exchange of small favors involving money.[47] This created an environment where the shopkeeper became—even if on a small scale—indebted to his recruiter and took actions that he might not have otherwise, such as placing a tracking device in a militant's car.[48] The sharing of these types of anecdotal stories with online jihadi sympathizers is designed to both educate those on the forums and to serve as a cautionary tale to deter future spies and potential collaborators, as the story told in issue 19 ends with the local spy being discovered and killed.[49]

Conclusion
Although many of the countermeasures outlined above are amateurish and driven by common sense, they also speak to a certain level of focus and commitment by the jihadi community to achieve two goals: 1) to understand their adversaries (and their strengths) and 2) to be resourceful and work with what they have. A central lesson for the United States and its allies, given the cost and time associated with the development of drone countermeasures, is that efforts should be made—and made early—to defeat the countermeasures being deployed by the West so the jihadis' response to those methods can be anticipated and pre-empted.

Two ways to achieve this, if not already being done, would be for the United States to integrate such efforts into its annual Black Dart drone exercise and to sponsor a competition—accessible by a wide range of participants—that rewards the discovery of low-cost and practical ways to overcome Western drone defeat devices. Such an approach would take a page out of the jihadi playbook and could produce interesting revelations about the tools the United States plans to deploy in the field, and it could also highlight other drone defense gaps that have yet to be considered. To protect any vulnerabilities, it would be important not to publicize the findings from these efforts, as the jihadi community is paying attention to media coverage of these types of topics.

Another major takeaway is that detailed drone countermeasure conversations by jihadis online should be mined for useful solutions that can be exploited by U.S. forces and their partners in the field. The jihadis identification of software like SkyGrabber and other similar programs that are more current could prove useful to understanding the myriad mix of countermeasures that may be deployed to circumvent or fool drone defeat systems.   CTC

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f   Hamas has set up similar units to hunt down Israeli collaborators. See Jackson et al., *Breaching the Fortress Wall*, p. 25; for a comprehensive overview of terrorism and counterintelligence, see Blake W. Mobley, *Terrorism and Counterintelligence: How Terrorists Avoid Detection* (New York: Columbia University Press, 2012).

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7   Al-Qahtani.

8   For background on this issue, see Jackson et al., *Breaching the Fortress Wall*.

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10   Ibid.

11   Ibid.

12   For background, see Bill Roggio, "Al Qaeda Intelligence Chief Reported Killed in a Drone Strike," Long War Journal, April 22, 2013. Al-`Adam also wrote under the name Abu Ubaydah al-Maqdisi.

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14   Ibid.

15   `Abir Sabil5, "A Temporary Solution to the UAV: Participate with what you Know," Ansar al-Mujahidin forum, October 2012. These online discussions covered the same ground as a jihadi document discussing drone countermeasures discovered in Mali. See "The Al-Qaida Papers: Drones," Associated Press, February 2013. The smokescreen idea sparked off a debate online with some posters recognizing that RPA sensors likely have the ability to see through smoke; see also Abduallah Saqar, "The Unmanned Aerial Vehicles," Fateh al-Islam Organization, August 2013.

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32   Marc Goodman, "Criminals and Terrorists Can Fly Drones Too," *Time*, January 31, 2013.

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39   For background on this product and a video illustrating its use, see http://samy.pl/skyjack/.

40   Ibid.

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42   Dan Goodin, "There's a new way to take down drones, and it doesn't involve shotguns," Arstechnica.com, October 26, 2016.

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44   Muhib al-Jihad al-Akbar, "The Drones: A Very Important Announcement." See also Adam Rawnsley, "CIA Drone Targeting Tech Revealed, Qaeda Claims," *Wired*, July 8, 2009.

45   "The Al-Qaida Papers: Drones."

46   Abu `Ubayda `Abdullah al-`Adam, *Terrorism Industry: Episode 19*, February 2012. Al-Qahtani noted in his "The Dirty UAV" post that "anyone who uses communication devises should be secretly tracked." He added that "each [drone] strike needs 1-3 spies … because this is the only reason that explains the accuracy of these strikes."

47   Al-`Adam, *Terrorism Industry: Episode 19*.

48   Ibid.

49   Ibid.

Sub-Saharan Africa's Three "New" Islamic State Affiliates

By Jason Warner

Although global attention toward the Islamic State has generally focused on the Middle East, the group is finding adherents throughout sub-Saharan Africa as well. Three "new" Islamic State affiliates have come to the fore: the Islamic State in the Greater Sahara, the Islamic State in Somalia, and the Islamic State in Somalia, Kenya, Tanzania, and Uganda. What commonalities do these three new Islamic State franchises in Africa have with one another? Where do they converge or diverge ideologically, operationally, and strategically, and more importantly, what might their presence mean in the future?

While recent news on the Islamic State centers on the siege of Mosul in Iraq, the group's ideological hold in sub-Saharan Africa has been quietly growing, and not simply in relation to its well-known merger with Boko Haram. Indeed, over the past year-plus, three new Islamic State affiliates[a] have gained prominence in sub-Saharan Africa. In West Africa, the group known as the Islamic State in the Greater Sahara (ISGS) has gained prominence with a string of deadly attacks in September and October 2016. Simultaneously, across the continent, in the semi-autonomous northern Somali stretch of Puntland, a group known as the Islamic State in Somalia (ISS) was recently the first Islamic State affiliate to hold territory in that county, while further south, another Islamic State affiliate known as the Islamic State in Somalia, Kenya, Tanzania, and Uganda (ISISSKTU) has raised

concerns.[b]

Besides their emergence at broadly similar times, this article examines the commonalities these three new Islamic State franchises in Africa have with one another as well as their convergences and divergences at the ideological, operational, and strategic levels. It also assesses what their presence could mean in the long-term.

Islamic State in Greater Sahara

The story of ISGS begins with the merging of two other jihadi groups: the Movement for Oneness and Jihad in West Africa (MU-JAO) and the Masked Men Brigade, which created a third group, al-Mourabitoun, in August 2013. Under the leadership of Mokhtar Belmokhtar—the infamous, one-eyed commander of al-Qa`ida in the Islamic Maghreb (AQIM)—al-Mourabitoun operated without any official affiliation for the first two years after its founding.[1]

However, in May 2015—and evidently taken with the pro-Islamic State tide during its brighter times of mid-2015 (the month the Islamic State took over both Ramadi in Iraq and Palmyra in Syria)—Adnan Abu Walid Sahraoui, then a senior leader within al-Mourabitoun, issued a pledge of *bay`a* to the Islamic State. For his part, Belmokhtar rejected that pledge, emphasizing that Sahraoui's *bay`a* was made as an individual pledge, and not on behalf of al-Mourabitoun as a group. An internecine battle within al-Mourabitoun ensued between Belmokhtar's pro-AQIM faction[c] and Sahraoui's pro-Islamic State faction. Reports suggest that the battle may have actually been physical.[2] Shortly thereafter, Sahraoui and other pro-Islamic State members of al-Mourabitoun defected, forming the Islamic State in Mali, which has now become the Islamic State in the Greater Sahara.[3] Despite Sahraoui's defection, his group's May 2015 pledge to the Islamic State went unanswered. ISGS seemingly fell dormant.

However, in late 2016, the group showed itself to be far from defunct. In the last quarter of 2016, it carried out three notable

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a   It should be noted that although this article refers to these groups as "Islamic State affiliates," this terminology is used in a colloquial (not technical) sense. Indeed, only one group, the Islamic State in Greater Sahara, has actually received acknowledgment from Islamic State leaders, thus meeting the reciprocal requirements of a true "affiliate." While the other two have pledged *bay`a*, the fact that Islamic State leaders have not accepted them suggests more tenuous links between the two groups. Nevertheless, after much consideration, the author believes that "affiliate" more accurately captures the relationships between the groups than alternatives such as "ally," "sympathizer," or "adherent."

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b   Despite the fact that this article refers to these groups as the "Islamic State in X," these nomenclatures are derivatives of Western media and analytical practices and not always reflective of the names by which the groups refer to themselves. Instead, when referring to themselves, the ISGS has previously called itself both "the Greater Sahara Division" and "al-Mourabitoun" (though a distinct branch from the Belmokhtar-led, al-Qa`ida-affiliated al-Mourabitoun that is contemporarily better known by that name); Boko Haram under Shekau has historically referred to itself as "Jama'atu Ahlis Sunna Lidda'awati wal-Jihad," "Wilayat Gharb Afriqiya," and "Wilayat West Africa;" ISS has referred to itself as "Abnaa ul-Calipha;" and the ISISSKTU self-references as "Jahba East Africa."

c   After Sahraoui's defection, the shura council of al-Mourabitoun declared Belmokhtar the new leader of the group in August 2015. Under his leadership, al-Mourabitoun has been firmly allied with al-Qa`ida.

Screen capture from October 2016 video of Murabitoun's bay`a *to the Islamic State*

attacks[d] near the borders of Burkina Faso, Niger, and Mali. The first attack occurred on the nights of September 1-2, 2016, when ISGS targeted a gendarmerie in Burkina Faso near the Nigerien border and killed two guards. The second occurred about a month later on October 12. The group attacked a police outpost in Intoum, Burkina Faso, just kilometers from the Mali border, which killed three police. The third, and certainly most sophisticated, was ISGS' orchestration of an attempted jailbreak of the high-security Koutoukale Prison in Niamey, Niger, on October 17, 2016. Though guards ultimately fully repelled the attack—killing one assailant wearing a suicide vest—the attempted prison break was important in that the prison held suspected Boko Haram affiliates and other suspected Islamist militants from the Sahara and Sahel. Apart from these larger-scale attacks, ISGS has undertaken other criminal activities.[e]

It is perhaps no coincidence that just weeks after the third major attack, the Islamic State finally acknowledged the *bay`a* that ISGS had pledged nearly 17 months earlier in May 2015. Although the Islamic State is no longer in the habit of officially "accepting" *bayat*,[f] by virtue of the fact that it posted the video of Sahraoui's pledge (which refers to his brigade as "al-Mourabitoun," though

the pro-al-Qa`ida Belmokhtar faction of that group still exists) on its Telegram channel on October 30, 2016, it has *de facto* accepted the pledge.[4] Yet, despite the Islamic State's acknowledgement of its pledge, ISGS has not been declared an official Islamic State wilayat, or province.

Though the question of why it took so long for the Islamic State to acknowledge ISGS's *bay`a* has percolated in various outlets, three factors are likely at play. First, the newly proven capacity of ISGS to carry out deadly attacks, as highlighted by its two notable efforts in October 2016, signaled to the Islamic State that ISGS was more than just a nominal fighting force. Second, the Islamic State's losses of land in Syria, Iraq, and Libya throughout 2016 have highlighted its vulnerabilities. Yet, because of its concomitant need to appear viable and expanding, ISGS was likely viewed as a welcome addition to forward that illusion.

Third, the Islamic State's decision to recognize ISGS was likely simultaneously informed by the disarray plaguing its other affiliate in the region, the Islamic State West Africa Province (ISWAP), formerly (and to a degree, currently) known as Boko Haram. Since coming under the leadership of Abubakr Shekau in 2009, the group had always been aligned with al-Qa`ida. Yet, in March 2015, Shekau pledged *bay`a* to the Islamic State, which it accepted, transforming Boko Haram— at least nominally—into the first (and still only) sub-Saharan African Islamic State wilaya, known as Wilayat West Africa. Yet the marriage remained fraught. Shekau's interpretation of takfirism, or the justifications by which Muslims can rightly be attacked in the orchestration of jihad, conflicted with that of Abu Bakr al-Baghdadi, the leader of the Islamic State.[g] Moreover, Shekau's roguish and erratic demeanor, coupled with his general insubordination to al-Baghdadi also caused friction, reciprocated

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d   Despite these notable attacks, others have argued that ISGS has, in fact, carried out many other attacks without claiming responsibility. "West Africa Analysis: Islamic State recognizes ISGS as West African affiliate following increased attacks in recent months, despite 17 month silence," Max Security, November 17, 2016.

e   The group is believed to have kidnapped and to still be holding a Romanian national, abducted by Sahraoui's contingent in Tambao, Burkina Faso in 2015, just before it officially split from Belmokhtar's contingent of al-Mourabitoun. Moreover, ISGS seems to understand its area of operation to be quite wide, having issued threats, for example, against the United Nations in Western Sahara as well as civilians and other targets of the Moroccan state. Caleb Weiss, "Islamic State's Sahara branch claims first attack in Burkina Faso," Long War Journal, September 4, 2016.

f   While the Islamic State has not released any statements declaring that it no longer officially accepts *bay`a*, the last one that it accepted was by the group now recognized as Wilayat al-Kavkaz on June 23, 2015, despite pledges from other potent Islamic State sympathizers.

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g   Indeed, although al-Baghdadi has his own interpretation of takfirism and has justified the circumstances under which Muslims can be killed, Shekau's less nuanced vision, which broadly fails to offer a clear distinction between Christian and Muslim targets, was a point of contention. Freedom Ohuoha, "Split in ISIS-Aligned Boko Haram Group," Al Jazeera Centre for Studies, October 27, 2016.

when at least eight letters that Shekau had sent to al-Baghdadi went unanswered.[5]

In light of these tensions, the Islamic State announced in August 2016 that Shekau had been replaced by Abu Musab al-Barnawi, believed to be the son of Boko Haram's founder, Mohammed Yusuf. For his part, Shekau rejected the change in leadership, asserting that he remained in charge of ISWAP/Boko Haram. Though he has remained largely silent since then, Shekau recently resurfaced in late December 2016, asserting that, contrary to statements from the Nigerian government, the group had not been driven from its stronghold in the Sambisa Forest.[6]

Presently, ISWAP has two factions: the al-Barnawi-led faction that controls territory in the Lake Chad Basin area in northern Borno state and the Shekau-led faction, which controls land in central and southern Borno state, including in the group's historical stronghold of the Sambisa Forest. Since the split, though, distinguishing in a refined manner the nature of activities between the two factions remains difficult. What is clear, though, is that the Islamic State image in West Africa has been both burnished and tarnished. On one hand, it has shown itself capable of remaking the contours of ISWAP's leadership. On the other, Shekau's rejection of the change signals that the Islamic State is, in fact, not entirely omnipotent in its wilayat.

And yet, despite there being now *two other* Islamic State affiliates in the same broad, though not exact area of operation as ISGS, there has been little evidence that either of the ISWAP factions (Shekau's or al-Barnawi's) has actually had any interaction with the Islamic State's newest faction in the region, ISGS.[h] Yet, given that cooperation *between* the Islamic State's wilayat is rare—except between Iraq and Syria—the lack of coordination between ISGS and ISWAP is perhaps unsurprising.

The Islamic State in Somalia (Abnaa ul-Calipha)

The second relatively new Islamic State affiliate in sub-Saharan Africa is known as the Islamic State in Somalia (ISS). The group, which emerged in 2015 when it broke away from al-Shabaab, is led by Abdulqadir Mumin. Somali by birth, Mumin spent years in Sweden and the United Kingdom, gaining citizenship in the latter, where he earned a reputation as an extremist cleric. In 2010, he returned to Somalia to fight inside al-Shabaab. Once in Somalia, he was sent to the relatively remote northern Puntland region—distanced from al-Shabaab's primary area of operation, much further south near Mogadishu—in 2012 to attract recruits. When his supervisor there, Mohamed Said Atom, surrendered to the Somali government in 2014, Mumin took control of the al-Shabaab-affiliated outpost.[7]

The Mumin-initiated defection leading to ISS began when the Islamic State launched a wide-ranging social media campaign attempting to convince al-Shabaab to switch allegiances from al-Qa`ida to the Islamic State, making overtures to form Wilayat Somalia.[8] Al-Shabaab leaders angrily refused, especially given that dissent in al-Shabaab's ranks had been brewing for years—partic-

ularly in 2012 and 2013, under the leadership of Ahmed "Mukhtar Abu al-Zubayr" Godane[9]—and the invitation from the Islamic State deepened fissures. In September 2015, Abu Ubaidah, the leader of al-Shabaab, sent out an internal memo stating that not only did his group reject the Islamic State's overtures and pledged to remain loyal to al-Qa`ida, but it would kill its own members and members of the Islamic State if they promoted the split.[i]

Back in Puntland, and serving as a relatively autonomous al-Shabaab commander in the Galaga mountains, Mumin began to consider himself the commander of a separate entity, despite having no battlefield experience. Feeling physically and increasingly ideologically distanced from al-Shabaab, Mumin pledged *bay `a* to al-Baghdadi and the Islamic State in October 2015. That same month, he began recruiting soldiers in the Galaga hills area, especially among members of villages who have felt aggrieved by the government of Puntland. Though interviews with early defectors suggest that Mumin's pro-Islamic State contingent originally had as few as 20 followers, it is now believed that the group has between 100 and 200 fighters. Importantly, the Islamic State has not officially acknowledged Mumin's pledge of *bay `a*, nor is ISS an official wilaya.[10]

Nevertheless, operationally, ISS has arguably been the most powerful of the new Islamic State affiliates in sub-Saharan Africa. On October 26, 2016, approximately 50 members of ISS seized the port town of Qandala in the Bari region of Puntland, making the town the first territory the Islamic State has held inside Somalia. This was particularly worrisome as Qandala's location would have given the group port access on the Gulf of Aden and potentially afforded it proximity to linkages with Yemen. As of late December 2016, however, Qandala is reported to have completely fallen to Somali maritime forces.[11] Regardless, ISS's holding of the town, even for a short time, could be interpreted as an important symbolic victory for the group.

Beyond simply denying the Puntland Islamic State affiliates physical land, security forces inside Puntland are pushing back. A court in Puntland sentenced two locals to death for suspected links to the group in November 2016,[12] and in December 2016, seven of its members were killed by Somali forces in the Bari region.[13] For its part, an African Union-led meeting of security chiefs from around East Africa in early December 2016 took seriously the presence of the Islamic State in Somalia, noting that it was "aggressively seeking to establish its influence … in northeastern Somalia."[14]

The Islamic State in Somalia, Kenya, Tanzania, and Uganda (Jahba East Africa)

The third important, and even newer, Islamic State-affiliated group in sub-Saharan Africa is Jahba East Africa, which is also known as the Islamic State in Somalia, Kenya, Tanzania, and Uganda (ISIS-SKTU). Like the Islamic State in Somalia, ISISSKTU is a splinter

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h   Despite Shekau's "ouster," even his offshoot group seems not to have fully renounced its allegiances to the Islamic State. Given that both he and al-Barnawi seem to be in broad agreement that al-Baghdadi is the caliph—even after the split—this indeed signals some potential for reconciliation between the two factions. Freedom Ohuoha, "Split in ISIS-Aligned Boko Haram Group," Al Jazeera Centre for Studies, October 27, 2016.

i   For its part, the al-Shabaab internal security service, known as the amniyat, has been known to arrest its members who sympathize with ISS. Moreover, a senior official of al-Shabaab in the Middle Juba region of Somalia, who was known to be sympathetic to the al-Shabaab/Islamic State merger, was ambushed and killed by other al-Shabaab members. See Jason Warner, "Choosing Alliances, Creating Fissures: How the Emergence of ISIS in Africa Affects the Relationships Between Boko Haram, Al-Shebab, and Al-Qaeda," *OE Watch: Foreign News & Perspectives of the Operational Environment* 6:10 (2016): pp. 54-56.

group of al-Shabaab. Jahba East Africa was reportedly initiated by Mohamed Abdi Ali,[15] a medical intern from Kenya who, along with his wife, was subsequently arrested in May 2016 for plotting to spread anthrax in Kenya to match the scale of destruction of the 2013 Westgate Mall attacks.[16] As the group's name suggests, ISIS-SKTU counts among its ranks citizens from the aforementioned countries. Thus, given that the group is composed of East African citizens who had previously been part of al-Shabaab, ISISSKTU is thought to contain elements of al-Shabaab that were once described as that group's "foreign fighters." Like the Islamic State, Jahba East Africa emerged when fighters previously loyal to al-Shabaab sought to realign with the Islamic State. Jahba East Africa pledged *bay`a* to the Islamic State on April 8, 2016.[17] To date, al-Baghdadi has not yet accepted.

Operationally, Jahba East Africa has proven to be more of an ideological threat than a physical one. Its most notable attack was on a convoy from the African Union Mission in Somalia (AMISOM) in April 2016, registering as the first time that an Islamic State affiliate had claimed an attack in Somalia.[18] Beyond this, there have been scant other claims of violence. Instead, despite the attacks from al-Shabaab, Jahba East Africa continues to take a hard line against its former parent group, issuing statements such as one in July 2016 that claimed:

> "Al-Shabaab has become stubborn, arrogant and refuses to accept the Khalifah. Today, Al-Shabaab ONLY jails and kills innocent Mujahideen from East Africa. Today, Al-Shabaab is weak, and everyday Mujahideen from Kenya, Tanzania and Uganda are leaving to join the Khalifah. Today, Al-Shabaab is in GREAT crisis."[19]

Finally, before proceeding to comparing the newly created affiliates, it should be noted that al-Shabaab's leader in Kenya, Ahmad Iman Ali,[20] also pledged *bay`a* to the Islamic State in September 2016, though an acknowledgment from the Islamic State has not been forthcoming.[21] As observers have noted, it is unclear if this group will merge with one of the other pre-existing Islamic State affiliates in the Horn or attempt to stake its claim as a third Islamic State-driven center of power. Thus, counting the two Boko Haram/Islamic State in West Africa affiliates; the Islamic State in Greater Sahara; the Islamic State in Somalia; the Islamic State in Somalia, Kenya, Tanzania, and Uganda; and now, the Islamic State in Kenya, sub-Saharan Africa now boasts at least six pro-Islamic State groups, only three of which were detailed in this piece.

Similarities and Differences between the Affiliates

How then do these three newer and lesser-known sub-Saharan African pro-Islamic State groups compare to one another? All three demonstrate some degree of commonality. First, each emerged as breakaway groups when the leadership of their predecessor groups decided to remain loyal to al-Qa`ida. Moreover, all three groups emerged around the same time, in mid-2015, just as the Islamic State was exhibiting the height of its power. Third, none of the groups are particularly large, nor are they very well-understood.

Yet, there are indeed notable differences between the three Saharan and sub-Saharan African Islamic State affiliates. For one, the Islamic State in the Greater Sahara might be thought to be slightly more institutionalized than those Islamic State affiliates in the East African region. This is the case for two reasons. First, it is the only one of the "new" Islamic State affiliates whose *bay`a* to the Islamic State has actually been acknowledged. Second, ISGS is the only one

of these groups to have carried out multiple attacks. It is important to recall, however, that the Islamic State in Somalia is the only group to have held occupied (i.e. not desert) territory in the form of the town of Qandala—even though, as of this writing, it does not currently hold it—a fact that might encourage the Islamic State to accept its *bay`a* soon.

Conclusion

What does the current operational environment suggest for the future of these new Islamic State-affiliated groups in Africa? While speculative, it could be argued that as the Islamic State's fortunes decline—with the likely fall of Mosul in 2017 and impending attack on the Islamic State's Syrian stronghold of Raqqa—so too might these groups' loyalty to the Islamic State. Two options exist: if the Islamic State's global fortunes decline significantly, the three aforementioned groups could just as easily reestablish an al-Qa`ida allegiance, or members could reintegrate themselves back into the "parent" group, theoretically leading to a contraction in the number of Islamist insurgencies on the continent. On the upside, given the small number of fighters in each of the three pro-Islamic State groups under discussion, there is seemingly little room to splinter further, unlike the much larger al-Qa`ida-affiliated groups that gave birth to them.

In light of this, what should we expect to be the nature of interaction between Islamic State-affiliated groups and al-Qa`ida-affiliated groups on the ground? Answers are mixed depending on the region. In the Horn, more conflict between Islamic State-affiliated groups and al-Qa`ida-affiliated groups seems likely. First, al-Qa`ida-affiliated al-Shabaab is already known to have attacked and killed many of its pro-Islamic State defectors. Second, it is not at all likely that al-Shabaab leadership will soon reverse course to support the Islamic State's overtures. Conversely, in the Sahara and Sahel, antagonism between ISGS and other al-Qa`ida-affiliated groups in the Sahara and Sahel seems somewhat less likely given that there appears to be little bad blood between Sahouri's ISGS and its parent group, Belmokhtar's al-Qa`ida-affiliated al-Mourabitoun. Moreover, some analysts have interpreted the openness of Yahya Abu el Hamman Okacaha, the leader of al-Qa`ida's Sahara branch, toward maintaining open lines of communication with Saharoui as evidence of potential cooperation between the two groups.[22] More broadly, as former C.I.A. Director John Brennan has suggested, it is potentially the case that the further afield groups move from the "heartland" of Syria and Iraq, the more likely that collaboration between Islamic State-affiliated groups and al-Qa`ida-affiliated groups might be.[23]

Finally, it is important to remember that despite the outcropping of these three "new" Islamic State-affiliated groups, none really rivals the major al-Qa`ida-aligned affiliates on the continent, which dominate in terms of number of groups, number of adherents per group, and length of time in operational area. Nor do such groups present any real challenges to either of the Islamic State-aligned Boko Haram factions. Nevertheless, with the uncertain future of the Islamic State globally, observers should stay vigilant about the current and future activities of these three new Islamic State affiliates, whose presence and activities seems likely to grow, at least in the short term.   **CTC**

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