

‘Bugsplat’ and Fallible Humans: the Hi-Tech U.S. Drone Campaign over North-West Pakistan

By Lieutenant Colonel Andrew Roe

It is an almost daily occurrence to read of U.S. armed pilot-less drones, or more correctly unmanned aerial vehicles (UAVs), killing suspected militants in north-west Pakistan. U.S. officials consider the precision strikes a vital weapon in the war against Islamist extremists. However, the attacks are a source of deep frustration and tension between Washington and Islamabad. Many in Pakistan say they violate national sovereignty and also cause widespread civilian casualties. For their part, the U.S. has criticized Pakistan for failing to crack down on fighters who stage attacks in Afghanistan and has stepped up UAV attacks in the tribal region to combat them. Washington considers Pakistan’s semi-autonomous north-western tribal belt to be the main hub of Taliban and Al-Qaeda activity in the region. This article looks at the current U.S. air campaign over north-west Pakistan by outlining the advantages and disadvantages of employing UAVs. It concludes by drawing a number of historical parallels; it is now almost a hundred years since airpower made its first appearance on the frontier.

Introduction

The social workers recalled arriving at a home that was hit, in Miranshah [Waziristan], at about 9.00 p.m. (May 2009) ... The drone strike had killed three people. Their bodies, carbonized, were fully burned. They could only be identified by their legs and hands. One body was still on fire when he reached there. Then he learned that the charred and mutilated corpses were relatives of his who lived in his village, two men and a boy aged seven or eight. They couldn't pick up the charred parts in one piece. Finding scraps of plastic they transported the body parts away from the site. Three to four others joined in to help cover the bodies in plastic and carry them to the morgue. But these volunteers and nearby onlookers were attacked by another drone strike, 15 minutes after the initial one. Six more people died. One of them was the brother of the man killed in the initial strike.

Case Study North West Pakistan, 'Convenient Killing'

Regardless if Osama is killed or survives, the awakening has started, praise be to God.

Osama bin Laden, videoed speech, broadcast 27 December 2001

Drones: A Weapon of Choice for the New Millennia

The precipitous and rugged Pashtun-inhabited borderlands of north-west Pakistan, designated the Federally Administered Tribal Areas (FATA), are now home to al-Qaeda's command structure, Taliban insurgents,¹ rogue elements within the Pakistani military, Uzbek Islamic militants² and Western *jihadists*.³ It is an out-of-the-way refuge to rest, heal, rearm, train, gain 'inspirational leadership' and plan for future operations across the porous border in Afghanistan, or against internal targets in Pakistan. It is also the area where many of al-Qaeda's top leaders are probably hiding and a regular target for U.S. drone strikes against radical tribesmen. Growing evidence suggests that it is a region in which militants can draw wide-ranging support from elements of Pakistan's all-powerful Inter-Services Intelligence Directorate (ISI).⁴ Recent Pakistani military operations destroyed militant forces and caused mass civilian dislocation, yet efforts to provide a lasting peace deal with the local tribesmen and the Taliban have proved futile. Gains, at best, have been cosmetic; the limited pressure exerted on the militants quickly dissipated. The region, particularly the troublesome, barren and remote areas of North and South Waziristan, remains dangerous, volatile and unpredictable with the potential to unhinge President Hamid Karzai's fragile regime in Afghanistan, threaten the Pakistani government, and pose a major challenge to regional stability.⁵

In the ongoing fight against militancy in north-west Pakistan, armed pilot-less drones,⁶ or more correctly unmanned aerial vehicles (UAVs), have become an indispensable element of United States of America (U.S.) policy in the region.⁷ Employing radically new technology, drones are controlled via satellite communications and flown by intelligence officers and private contractors (often retired military personnel) in the U.S., 7,500 miles away, using

joysticks that resemble video-game controls.⁸ They are America's state-sanctioned weapon of choice for hunting al-Qaeda and Taliban leaders (known as high value targets (HVTs)) in what is widely considered to be one of the most wild, impregnable and dangerous regions in the world. The remote-controlled aircraft, predominantly General Atomics Aeronautical Systems MQ-1 'Predators' and MQ-9 'Reapers,' offer computerised pinpoint attacks against key leaders and, hopefully, minimise the loss of innocent life.⁹ A successful hit is often referred to as a 'bugspat.' It is now nearly one hundred years since air power made its first appearance over the frontier. This article looks at the current U.S. air campaign over north-west Pakistan by outlining the advantages and disadvantages of employing drones. It concludes by drawing a number of historical parallels.

The Argument for the U.S. Drone Campaign – 'Mosquitoes' Over the Frontier¹⁰

The employment of advanced U.S. Central Intelligence Agency (CIA) hunter-killer drones¹¹ over militant strongholds in north-west Pakistan is a deliberate tactic to locate and conduct targeted killings of al-Qaeda and Taliban leaders.¹² Initially a small-scale intelligence, surveillance and reconnaissance mission focused on a relatively short list of high-level al-Qaeda leaders, the drone campaign has developed exponentially over recent years. It now includes the Taliban leadership, rank-and-file fighters and – in some cases – other militants determined to destabilise the region or prepared to provide sanctuary for al-Qaeda leaders and operatives. Front-footed strikes keep militant groups off balance, slowly but methodically rooting out key leaders. They force the abandonment of radio and mobile-phone communication, restrict freedom of movement and reduce the inflow of new recruits into the region. It is difficult to plan and conduct major operations when key commanders and operatives are constantly being killed or kept on the move. Drones also allow the U.S. to monitor routine activities and achieve tactical surprise. Due to the accuracy of attacks, militant infighting has become commonplace and panic and suspicion ubiquitous.

Drones accomplish these goals without putting soldiers on the ground, where a costly, protracted counter-insurgency campaign, with politically damaging casualties, could unhinge or overstretch the U.S. and its allies. Advanced computers and communication systems, new cameras and sophisticated technology, have made it possible to prosecute a campaign without the necessity for ground forces. Multiple drones hunt for targets using sensors, both by day and night.¹³ They go where troops cannot. Round-the-clock surveillance and detailed imagery allow operators to build up a rich and detailed picture of the 'pattern of life' in a particular area of interest, allowing a distinction to be made between peaceful tribesmen and those facilitating hostilities before a target is engaged with laser-guided bombs or Hellfire air-to-ground missiles.¹⁴ There are also no pilots to be shot down and captured, a challenge which the USSR experienced during its war with Afghanistan. Today's heat-seeking shoulder-launched portable missiles do not work above 3,000 metres and pose no threat to drones. Without a pilot there is no need to carry bulky survival equipment (pressurisation and temperature control) that keeps them alive. Drones can be smaller, stealthier and more efficient than conventional jet aircraft.¹⁵ It also makes it easier for Pakistan to permit their

employment, either tacitly or explicitly; the threshold for the use of drones is lower than manned aircraft.¹⁶ Medium-altitude drones can fly at heights of up to 50,000 feet above sea level and can loiter over a target for up to 40 hours before refuelling,¹⁷ thus providing continuous over-watch – a capacity well beyond the duration of manned aircraft.

Taking the human out of the cockpit permits persistent surveillance and tracking.¹⁸ Drones can survey an area of suspected militancy virtually indefinitely, often without the insurgents even realising it. Pictures gathered by sensors, including near real-time video, are examined by expert image analysts who look for signs of militant activity or other immediate threats, turning raw data into targeting data. In a challenging, fast-moving and complex battlespace, persistency is a valuable attribute. Drones enable target development to a level of detail which was previously unachievable by manned aircraft. They also permit a swift reaction, which is critical as events can develop quickly and windows of opportunity are often short-lived. Persistency also facilitates multiple drone attacks and follow-up action if required.

A US drone targeted a vehicle in South Waziristan tribal region of northwest Pakistan today [12 July 2011], killing six suspected militants just hours after another missile strike in North Waziristan killed 10 suspected rebels. A CIA-operated unmanned spy plane fired two missiles at the vehicle in Barmal area of South Waziristan Agency. Five suspected militants were injured in the attack, TV news channels reported. The missile strike occurred in an area close to the border with Afghanistan. Yesterday, US drones targeted a compound and a vehicle in North Waziristan Agency, killing 10 suspected militants. Several others were injured in that attack.¹⁹

It is instructive that in 2009, the U.S. Air Force announced that they would be training more UAV operators – who do not need conventional flight training – than new fighter and bomber pilots. Training UAV operators costs less than a tenth as much as training fast-jet pilots.

Consequently, the appeal of armed drones is understandable from a U.S. point of view. They can carry an array of sensors that facilitate targeted killings of high value targets and low-level militants at no risk to the personnel flying the aircraft. Exploiting advanced technology, they can deliver precise and overwhelming force without being seen and are more cost effective than conventional aircraft.²⁰ They are also able to present results that are easily measured and demonstrate progress against al-Qaeda, eliminating many of the most wanted HVTs. They can even pre-empt attacks on the U.S. and its allies. Some commentators suggest their use could win the war against terrorism all by themselves.²¹ 'The idea that drones offer a low cost, low risk solution is a seductive one in military circles.'²² They are also increasingly autonomous. A single operator can instruct a drone to remain in a specific airspace or track an individual vehicle; a single control station is capable of operating multiple aircraft at once. 'According to the official [a former White House counterterrorism official], "there are so many drones" in the air that arguments have erupted over which remote operators can claim which targets, provoking "command-and-control issues."²³

Evidence suggests drone strikes have had a positive effect on the region, without risking U.S. lives. They have succeeded in killing senior al-Qaeda leaders, degraded the movement and demoralised the Taliban leadership as well as the rank-and-file. Target intimacy has increased and individuals can be tracked from place-to-place and compound-to-compound. The pressure is unrelenting and militants have nowhere to hide. Drones have achieved this independently without the requirement for extensive cooperation with multiple actors. Despite significant numbers of Pakistani troops in the area, ground forces have done little to hinder militant operations, often turning a blind eye to unconcealed activities. Barack Obama warned during his presidential campaign that America must go after terrorist targets if Pakistan did not act first. It could be argued that the U.S. has had, and continues to have, little choice in the matter. The argument for employing drones unilaterally when confronted with an uncooperative government is understandable. Furthermore, there is growing evidence that drones do not result in significant civilian casualties, as many uninformed commentators suggest; missile accuracy prevents collateral damage and few innocent civilians have been killed. The targeting process is precise, often based on near real-time full-motion footage:

On the 5th [October 2009], officials at the Central Intelligence Agency, in Langley, Virginia, watched a live video feed relaying closeup [sic] footage of one of the most wanted terrorists in Pakistan. Baitullah Mehsud, the leader of the Taliban in Pakistan, could be seen reclining on the rooftop of his father-in-law's house, in Zanghara, a hamlet in South Waziristan. It was a hot summer night, and he was joined outside by his wife and his uncle, a medic; at one point, the remarkably crisp images showed that Mehsud, who suffered from diabetes and kidney ailment, was receiving an intravenous drip.²⁴

Pakistan's Interior Minister at the time, A. Reham Malik, who watched the video footage later noted: 'It was a perfect picture.'²⁵ The image remained just as stable and obvious when two Hellfire missiles were launched from a Predator overhead.

Predictably, the credibility of many Pakistani reporters, who advocate that drone strikes are indiscriminate and result in considerable collateral damage, is questionable; the truth is often distorted or misreported. Pro-Taliban journalists manipulate any strike to radicalise and mobilise local tribesmen. Evidence suggests that not all tribesmen are against drone strikes. A number of international media reports depict a positive tribal opinion of drone attacks.²⁶ Many approve of them because they remove the militants from tribal society. They are also a preferable course of action to a costly – in terms of life – counter-insurgency ground campaign. The Aryona Institute for Regional Research Advocacy (AIRRA), which undertook a public survey of U.S. drone attacks in part of the FATA, confirmed this. The study challenged widespread opinion that drone strikes are feared and hated. Instead, the report claimed that the number of civilian casualties has been greatly exaggerated and that the drones are accurate.²⁷ Others suggest that individuals killed alongside militants are unlikely to be innocent bystanders, pressured into providing hospitality. Instead they are highly likely to be supporters, collaborators or fellow militants (i.e. 'bad by association'). Moreover, the drones are

so precise that the law-abiding tribesmen do not fear drones when seen flying overhead; the chance of collateral damage is slim.²⁸ Accurate strikes do not necessarily lead to anti-American sentiment or an increase in militancy. However, drones have helped distort north-west Pakistan forever. Demographically, the tribal population has disaggregated and the region has become increasingly isolated and insular. It is unlikely that the drone campaign will abate anytime soon. Driven by a powerful multi-billion dollar industry and a target of defeating al-Qaeda, CIA drone strikes will continue at record levels, generating public outrage, both within Pakistan and the U.S.

Drones Have a Down Side...The Case Against

Drone strikes occur over the protest of many Pakistani politicians, who cite a gross violation of national sovereignty as the basis for opposing their employment.²⁹ Relations between the governments in Islamabad and Washington are deeply troubled by the issue. Pakistan has recently closed a number of air bases used for drone strikes and expelled teams of military advisors. 'For its part, the U.S. has frozen £500 million worth of aid and has made it clear that it will have no hesitation in launching further unilateral action in defence of its own security interests.'³⁰ Internally, there is also significant opposition in the Punjab and Sindh, Pakistan's two most populous provinces. The reason for this is increasingly clear. 'According to figures from the New American Foundation, based on press reports, between 2004 [the start of the drone campaign in Pakistan] and 2007 there were just 9 drone strikes, yet in 2010 alone there were 118 strikes, killing between 607 and 993 people last year. Since 2004, up to 2,500 people have been killed in the strikes.'³¹ The BBC summarised the U.S. approach to dealing with militants in north-west Pakistan simply as '... drones – marvellous inventions that can kill but not be killed, that can fly for hours, whose anonymous operators can strike from the silent comfort of an anonymous control room.'³² This one-sided view is not shared in Islamabad, where sovereignty and civilian casualties, amongst other issues, lie at the centre of the growing discomfort.

The CIA is concerned about civilian casualties and takes comprehensive and robust measures to minimise them.³³ Targeting is a precise and carefully controlled process, and not merely based on visual evidence. Cautious screening processes are in place and high-level approval to strike a target (up to the head of the CIA Counter-Terrorist Centre) is required when civilians are known to be in or near al-Qaeda and Taliban targets. If a school, hospital, or mosque is within the blast radius of a missile, detailed analysis occurs before a strike is authorised. Lawyers provide approval for offensive operations and strikes are frequently called off when it becomes clear that civilian casualties might occur. There has also been a conscious move away from destroying compounds to targeting vehicles, where the risk of collateral damage is reduced. Even when compounds have to be hit, smaller missiles are used to restrict damage and there has been a genuine effort to understand the second and third order effects of a drone strike on the local population. A flow of additional signals intelligence provides an electronic means of corroborating that a target has been correctly recognised. Still, if the operator does not know the language and the specific tribal culture intimately, how can

he determine what is normal and who is hostile when viewing the locale from above? The impression of a carefully-controlled high-tech precision weapon does not always stand up to scrutiny. Some critics suggest that more civilians are being killed than America and Pakistan will admit. Although accurate and reliable figures are difficult to obtain, there have been a number of mistakes; some have involved hitting wedding and funeral parties. A conservative estimate of civilian deaths in Pakistan suggests that one third of the deaths from drone strikes are civilian.³⁴ Others suggest it may be far higher.³⁵

A number of drone strikes have involved significant loss of innocent life.³⁶ One such example occurred in 2009:

U.S. drones launched an attack on a compound in South Waziristan. Locals rushed to the scene to rescue survivors. A U.S. drone then launched more missiles at them, leaving a total of 13 dead. The next day, local people were involved in a funeral procession when the U.S. struck again [allegedly 70 of the mourners were killed] ...³⁷

Indeed, in the foreword to an article on drones, published in *Military Review* in May-June 2011, the editorial team note: '*Military Review* expresses deepest condolences to the families of Navy Corpsman Benjamin Rast and Marine Staff Sergeant Jeremy Smith, who lost their lives in April 2011 in what may have been an accidental attack by a Predator drone flying in support of operations near Sangin, Afghanistan.'³⁸ Although this was a U.S. ground operation in Afghanistan, the alleged accident highlights the realities of using drones and human fallibility. Technical failures may also lead to civilian casualties and so-called accurate errors. But most strikes are conducted by anonymous 'reachback operators' (consisting of a pilot and sensor operator) sitting in the comfort of a control room, watching a near live video feed on a flat-screen monitor from a drone, many thousands of miles away in the CIA headquarters in Langley, Virginia. The calm 'cockpit' of a drone operator, with access to real-time intelligence and constant advice, should permit greater concentration and better decision-making. Civilian casualties should, in principle, be minimal. This is not always the case and misinterpretation of video images or incorrect identity cannot be ruled out. Reporting of alleged mistakes is commonplace:

Black smoke and dust choked villagers as they dug through the rubble [after a drone strike in north-west Pakistan]. Four year old Zeerek's legs were severed. His sister Maria, 3, was badly scorched. Both were dead. When their cousin Irfan, 16, saw them, he gently curled them in his arms, squeezed the rumpled bodies to his chest, lightly kissed their faces, and slid into a stupor.³⁹

Imagery is also degraded by altitude, dust-storms (which sometimes reach a height of 7,000 or 8,000 feet above sea level), fog, heat haze, cloud and rain. Each has the potential to cause ambiguity, uncertainty or broken observation. Moreover, tribesmen routinely carry guns throughout the borderlands. Modern weapons, particularly Kalashnikov rifles, are a symbol of

an individual's status. The art of marksmanship is taught at a very young age and tribesmen carry guns for self-protection. Drone operators can mistakenly equate anyone carrying a gun with a militant; this is not always the case. There may also be greater acceptance of civilian casualties when attacking a HVT, which could go some way to help explain increasing incidents of collateral damage.

To make matters more complex, many commentators view drone strikes as an illegal form of extrajudicial assassination, 'conducted by unlawful combatants'.⁴⁰ Even the most vociferous supporters of drone strikes believe they could be deemed illegal under the laws of war, despite Pakistan being given some control over who is targeted. The U.S. is not at war with Pakistan, nor was Pakistan harbouring Osama bin Laden and al-Qaeda forces before 11 September 2001. It is difficult to claim self-defence in attacking targets in north-west Pakistan. Philip Alston, an Australian human-rights lawyer who served as the United Nations Special Rapporteur on extrajudicial, summary or arbitrary executions, recommends:

States should publicly identify the rules of international law they consider to provide a basis for any targeted killings they undertake. They should specify the bases for decisions to kill rather than capture. They should specify the procedural safeguards in place to ensure in advance of targeted killings that they comply with international law, and the measures taken after any such killing to ensure that its legal and factual analysis was accurate and, if not, the remedial measures they would take. If a State commits a targeted killing in the territory of another State, the second State should publicly indicate whether it gave consent, and on what basis.⁴¹

Due to the covert nature of drone operations in north-west Pakistan, there is no mechanism for the investigation of civilian casualties and no compensation paid. Likewise, there is no disclosure of the safeguards in place to ensure that attacks are legal and accurate, or the accountability procedures for violations. The local media reports on how many militants were killed in each attack, but few external reporters have access to the site of a drone strike.⁴² FATA's legal status and lack of control prevents independent media from travelling there. Places like North and South Waziristan, which have seen offensive operations by the Pakistani army, are virtually closed to Western media. Instead, second-hand information, rather than eyewitness accounts, is often manipulated by pro-Taliban media outlets or biased Pakistani intelligence officials. The propaganda costs of drone attacks have been high. The CIA rarely comments on the detail of drone strikes – the programme is still technically covert. Likewise, drone strikes rarely attract public attention in the West unless a high-ranking al-Qaeda leader is killed.

Therefore, the lawless and isolated region of the borderlands provides a grey area in which the U.S. can operate with a degree of freedom. The U.S. government argues that it has the legal right to use lethal force against suspected terrorists in 'anticipatory' self-defence. By characterising terrorism as an act of war, as opposed to a criminal act, the 'Bush Administration reasoned that it was no longer bound by legal constraints requiring the

government to give suspected terrorists due process.⁴³ Jeffrey Sluka highlights another unique aspect of drone strikes: 'Virtual war dehumanises the victims, desensitises the perpetrators of violence, and lowers the moral and psychological barriers to killing.'⁴⁴ Others go a step further:

Equally discomfoting is the 'PlayStation mentality' that surrounds drone killings. Young military [and civilian] personnel raised on a diet of video games now kill real people remotely using joysticks. Far removed from the human consequences of their actions, how will this generation of fighters value the right to life? How will commanders and policymakers keep themselves immune from the deceptively antiseptic nature of drone killings? Will killings be a more attractive option than capture? Will the standards of intelligence-gathering justify a killing slip? Will the number of acceptable 'collateral' civilian deaths increase?⁴⁵

This is not a position shared by all. Some argue that drones do not 'lower the threshold to the application of force,' but enable 'a perspective that we didn't have when you had a person in the cockpit.'⁴⁶ However, a question that remains unanswered is whether drone operators are more or less likely to drop bombs than manned aircraft? Interestingly, an Air Force Research Laboratory study in 2010, which compared drone operators to gunship pilots, noted:

They reported such SOs (sensor operators) performed their surveillance and reconnaissance duties well, but emotionally struggled with their role in taking lives of others, regardless of the threat enemy combatants posed to U.S. and allied forces ...⁴⁷

Operators do not have the advantage of flying overhead at altitude in a conventional platform. Close-up 'zoom in' sensor footage of people, vehicles and buildings presents a unique set of pressures. Prolonged exposure to death and damage, even by near real-time video, is stressful and harrowing for seasoned operators. Drone operators suffer from combat stress.⁴⁸ Moreover, strikes are subject to a greater degree of analysis and evaluation after a mission than is possible with a manned platform. There are other alleged local side effects associated with drone strikes. Dr. Munir Ahmad, a 50-year-old psychiatrist in Miranshah, suggests that drone strikes are leading to mental disorders, especially among women and children in the tribal areas. In 2009 he was treating 160 patients a day suffering from unmanageable fright and anger.⁴⁹

Moreover, some speculate that the go-it-alone attitude of the U.S. undermines the fight against militancy in north-west Pakistan, strengthening the hand of al-Qaeda and the Taliban, threatening any prospects of long-term reform by alienating the moderate people in the region. But notably, the line between the two organisations is becoming increasingly blurred:

There is no difference between Al-Qaeda and the Taliban. The formation of Taliban and Al-Qaeda was based on an ideology. Today, Taliban and Al-Qaeda have become an ideology. Whoever works for these organisations, they fight against Kafirs [non-Muslims]

or disbelievers] ... However, those fighting in foreign countries are called Al-Qaeda while those fighting in Afghanistan and Pakistan are called Taliban. In fact, both are the name of one ideology. The aim and objectives of both organisations are the same.⁵⁰

While drone strikes may be a catalyst for militancy, the real source of disaffection in the borderlands is social inequality, a lack of development, overseas meddling and Western misunderstanding. Besides, drones can only function successfully when allied to high-quality local intelligence. Human intelligence is provided by the CIA's own network of informants living in the tribal areas, as well as via the Pakistani intelligence agencies. Poor or over-inflated intelligence can lead to errors. In addition, 'tips' from informants on the ground are often driven by undisclosed reasons. Sometimes intelligence is fabricated to prove an informant's value, or so they can make money. On rare occasions, an innocent individual is claimed to be al-Qaeda or Taliban because an informant wants rid of inconvenient opposition. This form of 'touting' has a long history on the frontier.⁵¹

Despite eight years of drone strikes in north-west Pakistan, the Taliban and al-Qaeda allies, such as the Haqqani Network, remain firmly in control of the tribal areas. Although the use of drones has killed some of al-Qaeda's top leaders and kept militants' networks off balance, creating an unstable environment, they have not dismantled al-Qaeda or prevented the Taliban from physically holding ground. Nor are they seen as protectors by the tribesmen. Moreover, al-Qaeda is not solely based in the tribal areas. Osama bin Laden was located and killed in the garrison town of Abbottabad by U.S. Navy SEAL commandos, far from the tribal borderlands.⁵² Many other top leaders have relocated to Pakistan's major cities, where crowded millions provide the camouflage that terrain and *pashtunwali* (the austere moral concept of tribal behaviour) once did. The worst place to hide is the most obvious one. Extremism is not restricted to the border area and is spreading into areas such as northern Sindh. However, those militants remaining in the borderlands of north-west Pakistan have amended their *modus operandi* to reduce drone strikes. They now communicate by courier and move cautiously in small groups, diverting their energy from planning attacks. Militants have abandoned easily identifiable all-terrain vehicles in favour of public transport and, on occasions, Pakistani military vehicles. As many tribesmen refuse to rent space or give hospitality to al-Qaeda operatives for fear of a drone attack, many have gone underground, resorting to hideouts, caves and tunnels dug into the mountainside.⁵³ They have also become more suspicious. Militants are convinced that U.S. spies are working in the tribal areas, planting GPS tracking devices or tiny silicon-chips to guide ordnance on to their exact target. After every raid the Taliban reacts with fury, abducting, torturing and killing anyone suspected of planting a transmitter. Outsiders, particularly Arabs and Europeans are viewed with mistrust as potential American agents.

Four Europeans who were captured last December after trying to join Al-Qaeda in Pakistan described a life of constant fear and distrust amongst the militants, whose obsession with drone strikes had led them to communicate only with elaborate secrecy and to leave their squalid hideouts only at night.⁵⁴

In a climate of fear, even locals have begun to suspect one another. Therefore, it is clear that drones alone cannot deal a *coup de grâce* to the insurgency and need to be combined with other covert operations.

Additionally, drone attacks may be losing the 'hearts and minds' of the tribesmen, terrifying the local population, and increasing the threat of national and international terrorism.⁵⁵ Some tribesmen allegedly view them as frightening and haphazard assassins, creating a climate of fear and mistrust. Therefore, far from reducing militancy and radicalisation, their perceived indiscriminate nature may be creating resentment, suspicion and tribal division, as well as increasing Pakistan's difficulties in subduing the region. Some even go so far as to suggest that the current approach is leading to a loss of Pakistani government control over its own population.⁵⁶ Drone strikes may also be fuelling Afghanistan's powerful and mutating insurgency.⁵⁷ The militant backlash, attributed to drone strikes, is ever more evident. 'Several recent high-profile terrorist attacks in Pakistan and beyond have been carried out in direct response to the drone attacks, including a number of suicide attacks in public places in Pakistan, a suicide attack on a police academy in Lahore which killed 18 people ...'⁵⁸ In reaction to U.S. drone strikes and Pakistani operations in tribal regions, attacks on NATO supply vehicles increased from just eight in 2008 to at least 99 in 2010. Of note, David Kilcullen, a former special advisor to the U.S. State Department and counterinsurgency expert, testifying before the U.S. State Foreign Relations Committee, cautioned: 'If we want to strengthen our friends and weaken our enemies in Pakistan, bombing Pakistani villages with unmanned drones is totally counterproductive.'⁵⁹ One commentator cautions:

Before the drone attacks began the Taliban weren't so obvious among us and the militancy wasn't as strong. But now every home in North Waziristan seems to have one or two Taliban living in it. The youth are joining them. Feelings against the U.S. and Government are rising because of the [drone] attacks. Al-Qaeda has been badly affected by drones – but it has also benefited too.⁶⁰

Furthermore, drone strikes allow the Taliban to portray the U.S. as cowards, afraid to face their enemies and risk death. They also suggest that drone strikes make them more determined to fight.

There are a number of additional issues that challenge the ongoing utility of drones. Many militant fighters view north-west Pakistan, particularly the cities of Quetta and Peshawar, as 'inside' Afghanistan and reject the Durand Line, imposed in 1893 to suit British needs, as the official border between the two countries.⁶¹ This is in stark contrast to those who consider that whatever happens east of the international border is something that concerns Pakistan alone. Through tight familial and tribal links, the tribesmen based in north-west Pakistan remain an integral part of the tribal structure that transcends the artificial divide. What happens east of the border affects those in southern Afghanistan; whatever happens west of the border affects those in north-west Pakistan. The desire for revenge (*badal*) and the anger arising from

the loss of relatives or the destruction of property in a drone strike are powerful motivators in individual militancy. Families of drone victims are required under *pashtunwali* to seek revenge, which makes them ideal recruits for the insurgency.⁶²

Pashtunwali is the dominating factor that affects tribal behaviour.⁶³ A core value of the code is the protection of the weak and innocent – the women and children. An assault on them is an assault on the honour of every local male. When men fight in fair combat, death is expected. But the death of women and children is an affront to the tribe. And airstrikes are not viewed as fair combat. Further, even the slightest provocation or insult to the honour (*nang*) of the Pathan is enough to engender revenge. Tribesmen have to avenge a blemish on their reputation; shame (*sharm*) is intolerable. Each drone strike, therefore, has the potential to create a martyr, depending on the standing of the individual killed, and generate three or four potential suicide bombers. Even when drones hit the right compound, the force of the blast can often demolish surrounding houses, crushing or injuring those inside. Unsurprisingly, there may be a growing link between the radicalisation of the local population and the number of drone strikes. Moreover, tribesmen with no previous interest in 'global *jihad*' now have a broadened perspective. Tribesmen do not give up because the U.S. has the best technology. Instead, asymmetrical campaigns lead to new militancy and outrage among the tribesmen. Drone strikes could be creating more militants than they kill. They may also be isolating the Pakistani army from the tribes. The jury remains divided on the true utility of drones.

***Jasoos* (Spies) in the Air – Parallels with the Past**

Although almost a hundred years since airpower made its first appearance on the frontier, many of today's challenges, often above the same geographical locations, appear analogous with those of the past. Despite high resolution optics and greater persistency, drone operators, like the pilots before them, still find it difficult to positively identify and target militant tribesmen. Visual reconnaissance, even by high-tech near real-time video, is less effective than expected, due to challenging atmospheric conditions, poor weather and complex terrain. Success often turns out to be a matter of luck or chance encounter. It is also extremely difficult to distinguish between hostile and peaceful inhabitants from the air, especially as many tribesmen carry modern rifles for status and protection. Like the tribesmen of the 1930s and 40s, today's militants have become experts at camouflaging themselves physically and technologically from aerial observation. No longer hiding behind boulders and in deep ravines when an aircraft is heard overhead, safety is now sought in population centres, safe houses and remote hideouts. Militants have made changes to their *modus operandi* to negate the known technical capabilities of drones and CIA restrictions on their employment. Some of these techniques are as simple as individual camouflage and rugs or space blankets to absorb heat signatures or conducting false radio and telephone conversations or positioning heat sources to divert strikes. As a new scientific development comes online, local measures are put in place to nullify advances in technology. A complex cat and mouse game ensues.⁶⁴

Effective air power still relies on accurate intelligence and speed of employment. Like the RAF intelligence officers, who linked into the regional intelligence networks on the frontier, the CIA is supported by an army of intelligence and communication analysts. Equally, air power still requires local informers to achieve precision. Akin to those of the past, stool pigeons are prone to informing both ways and adept at providing misleading information for financial or personal gain; it is never easy to gain timely or accurate information in such a xenophobic environment. Similar to the slow-moving early bi-planes, drones are often accused of being an unfair and indiscriminate means of dominating the region, engendering permanent embitterment and alienation. Like their predecessors, drones also face criticism that their effect on the region is transitory, failing to put a lasting stop to the activities of the militants and in some cases fuelling the militancy. The drone, like the aeroplane, is still a weapon that the tribesmen cannot counter. Moreover, it is still viewed as a very unpleasant and troubling enemy. It is perhaps unsurprising with so many similarities between past and present that some local commentators see the employment of drones over north-west Pakistan as a continuation of a colonial-era policy. Wing Commander R.C.M. Pink would instantly recognise many parallels between today's drone campaign and the bombing and strafing activities he oversaw from 9 March to 1 May 1925.

But there are also significant differences, mainly due to advances in technology, policy and financial backing. The drive for greater technological advancement, driven by a multi-billion dollar drone industry, is in stark contrast to the early days of the Royal Flying Corps, where the aftermath of the Great War, including the shortage of suitable equipment, a lack of appropriate landing grounds and technical buildings, hampered the development of air power. General Atomics Aeronautical Systems, the defence contractor that manufactures Predator and Reaper, can barely keep up with today's demand. Moreover, at the end of a shift, private contractors and intelligence officers drive home to be with their families. In contrast, officers and airmen were posted to India for five years, often without families. Many lived and breathed every aspect of frontier life for the duration of their tour. Wing Commander Geoffrey Morley-Mower recalls:

Miranshah remains encapsulated in my memory, like a dream from a different century. Its location was as remote as the Cistercian monastery, and it shared other elements with a religious house. There were no women. The outer gate clanged shut at sunset. The P.A. [Political Agent] was as kind and strange as any abbot. The war against outlaws was a game which claimed fewer lives annually than the London-Brighton road. The flying was the best I've ever enjoyed. Much of it being close to the ground in wild country with the hills providing interest and danger; covering troops, picking up messages, scouting for road blocks in the steep defiles and dropping mail at the Tochi posts whose names will always be part of my personal poetry. Ghariom, Bichi Kaskai, Datta Khel, Kar Kama, Ladha, Damdil, Spinwam, Sara Rogha.⁶⁵

Today's operators will not have similar ingrained memories. Furthermore, there are no coloured paper warnings that attacks will occur if militants do not comply with government demands,

no war correspondents to provide firsthand accounts and no pilots to be shot down. Targets are hit with a degree of precision unheard of in the first half of the Twentieth Century. David Omissi notes that of the 182 bombs dropped on frontier tribesmen in November 1928, 102 completely missed the target villages.⁶⁶ Equally importantly, there are few inter-Service squabbles or rivalries; CIA unity of command and purpose pervades.

But perhaps the biggest difference with the past is that air power developed into a key component of the British approach to tribal control on the North-West Frontier. Experience proved that air power alone could not manage the region. Tribal territory was controlled and disciplined by a sliding scale of violence: first enticement, rewards and threats, next the tribal *kassadors* (tribal levies of policemen), then the lightly-armed scouts; only in extremis, when outbreaks were too excessive to be contained by the scouts, would the political authorities call on the army and RAF to restore order. Therefore, while air power played a central role in tribal management it was only one component of a truly joint and escalatory approach to the complexities for the frontier. Like today's drone campaign, the notion that tribal militancy could be solved by air power single-handedly is unrealistic and wishful thinking. The same logic applies to defeating al-Qaeda. A comprehensive, multi-strand political and military strategy will be required to re-establish order in north-west Pakistan and to finally root out al-Qaeda. Failure to address the long-term challenges of the region with a firm and consistent policy could be disastrous for both Afghanistan and Pakistan.

Notes

¹ Al-Qaeda – a network of Islamist ultra-radicals; Taliban – literally religious student(s), the term now largely used to indicate the Movement of the Taliban.

² Including the Islamic Movement of Uzbekistan (IMU) and the Islamic Jihad Union (IJU).

³ 'White Jihadis Key Target of Drones,' *The News*, 20 July 2011.

⁴ A. Giustozzi, *Koran, Kalashnikov and Laptop: The Neo-Taliban Insurgency in Afghanistan* (London: Hurst & Coy., 2007), 21-28. _____ (Ed), *Decoding the New Taliban: Insights from the Afghan Field* (London: Hurst & Co., 2009), 206. Admiral Mike Mullen, speaking as the Chairman of the Joint Chiefs of Staff before a Senate hearing in September 2011, made clear that the militant Haqqani Network is a 'veritable arm' of the Pakistan intelligence service. This was just the latest in a string of outspoken comments from the U.S. on Pakistan's well-documented links with Islamist terror groups (including the Afghan Taliban, the Haqqani Network, Gulbuddin Hekmatyar's fighters and the Lashkar-e-Toiba).

⁵ A.M. Roe, 'What Waziristan Means for Afghanistan,' *Middle East Quarterly* 18, no. 1 (2011), 37.

⁶ The 'drone' nickname comes from the constant buzzing 'beelike' noise that many early drones made in flight.

⁷ Drones are not new and have been in the U.S. arsenal for some time. On 26 February 1973, during a testimony before the U.S. House Appropriations Committee, the U.S. military confirmed that they had been utilising UAVs in Southeast Asia (Vietnam). The USAF 100th Strategic Reconnaissance Wing flew approximately 3,430 UAV missions during the war at a cost of about 550 UAVs lost to all causes.

⁸'The Predator War,' *The New Yorker*, 26 October 2009.

⁹'Pakistan Rehearses Its Two-Step on Airstrikes,' *New York Times*, 15 April 2009.

¹⁰The U.S. government runs two complementary drone programmes. The military's version, which is publicly acknowledged, operates in recognised war zones and targets enemies of U.S. troops stationed there. The Central Intelligence Agency (CIA) runs a parallel programme aimed at terror suspects around the world operating in countries that do not generally possess U.S. bases.

¹¹The CIA works in conjunction with U.S. special operations forces and with the assistance of civilian contractors. 'Pakistan Rehearses Its Two-Step on Airstrikes,' *NY Times*, 15 April 2009.

¹²'A targeted killing is the intentional, premeditated and deliberate use of lethal force, by State or their agents acting under colour of law, or by an organised armed group in armed conflict, against a specific individual who is not in the physical custody of the perpetrator.' P. Alston, 'Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions,' United Nations General Assembly A/HRC/14/24/Add.6 (2010), 3.

¹³Multiple drones enable a comprehensive 'soak' of an area of interest. They can also be layered to enable cross-cueing and redundancy – allowing the failing of any one asset to be compensated for.

¹⁴Pattern of life is maintained for the longest practicable period and includes times of anticipated civilian activity.

¹⁵There may not be a pilot in the cockpit but, for example, each Reaper requires approximately 180 specialists to keep it flying.

¹⁶An agreement to allow the U.S. to operate over Pakistani territory has never been publicly admitted, and successive Pakistani governments officially condemn the strikes as an incursion into Pakistani territory. However, since 2004, U.S. drones have been taking off from remote Pakistani airbases, principally the out-of-the-way Pakistani military installation known as Shamsi Air Base, located in the Quetta area near Washki. Other locations have included Jacobabad.

¹⁷Teams swap out every seven hours, to keep a fresh set of eyes on the ground at all times.

¹⁸'The Morality of Drones,' *EconoMonitor*, 5 July 2011. Available at: <http://www.economonitor.com/moran/2011/07/05/the-morality-of-drones/>

¹⁹'US Drone Strike Kills 6 Militants in Pakistan,' *The Press Trust of India Limited*, 12 July 2011.

²⁰The money saved in comparison to normal fighter jets is significant. A U.S. MQ 9 Reaper drone (originally a Predator B) costs *circa* \$10 million. By comparison, an F-22 fighter jet costs approximately \$150 million. In addition, the training for the drone pilot costs much less than training a conventional jet pilot. Drones are also a solution to the rising cost of producing human soldiers.

²¹J.A. Sluka, 'Death from Above: UAVs and Losing Hearts and Minds,' *Military Review* 91, no. 3 (2011), 70.

²²C. Cole, *Convenient Killing: Armed Drones and the 'Playstation' Mentality* (Oxford: The Fellowship of Reconciliation, 2010), 7.

²³'The Predator War: What Are the Risks of the C.I.A.'s Covert Drone Program,' *The New Yorker*, 26 October 2009.

²⁴*Ibid.*

²⁵ Ibid.

²⁶ For example: 'Drone Attacks Strike Debate in Pakistan.' Available at: http://www.rferl.org/content/Drone_Attacks_Strike_Debate_In_Pakistan/2192324.html

²⁷ 'Drone Attacks – a Survey,' *The News*, 5 March 2009. Available at: <http://criticalppp.com/archives/26239>

²⁸ 'In June [2011] John Brennan, President Obama's chief counter-terrorism advisor, claimed that there had not been a "single collateral death" from a drone attack in the previous year, an assertion strongly disputed by tribal leaders, human rights lawyers and independent researchers.' 'The Hidden Victims of US Drone Wars,' *The Times*, 5 November 2011.

²⁹ This coincided with the drawdown of the war in Iraq, allowing more drones, support personnel and intelligence assets to become available.

³⁰ 'Pakistan Will Remain A Suspect Until It Roots Out The Evil In Its Mist,' *The Daily Telegraph*, 15 July 2011.

³¹ 'Secret Strikes,' *The Guardian*, 18 July 2011.

³² 'Pakistan Article Says Drone Attacks "Displace, Not Defeat, Terrorism,' *Financial Times*, 21 July 2011.

³³ This includes: the law of distinction, which requires that attacks be limited to military objectives and that civilian or civilian objectives shall not be the objective of the attack; and the principle of proportionality, which prohibits attacks that may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, that would be excessive in relation to the concrete and direct military advantage anticipated.

³⁴ 'The Year of the Drone: An Analysis of US Drone Strikes in Pakistan, 2004-2010,' New American Foundation. Available at: <http://counterterrorism.newamerica.net/drones>

³⁵ Pakistan Body Count. Available at: <http://pakistanbodycount.org/drn.php>

³⁶ 'What Are Afghan Lives Worth?' Truthout, 7 July 2009. Available at: <http://truthout.org/070709B?>

³⁷ 'Now We See You, Now We Don't,' Truthout, 26 June 2009. Available at: <http://truthout.org/062609R?>

³⁸ J.A. Sluka, 'Death from Above,' 70.

³⁹ C. Cole, *Convenient Killing*, 8.

⁴⁰ P. Alston, 'Report of the Special Rapporteur on Extrajudicial, Summary or Arbitrary Executions,' 21.

⁴¹ Ibid., 27.

⁴² In an attempt to document U.S. drone strikes, the 'Transparency Project,' supported by Jemima Khan, the former wife of the cricketer Imran Khan, issued digital cameras to local tribesmen to record the effects of strikes throughout the FATA.

⁴³ 'The Predator War: What Are the Risks of the C.I.A.'s Covert Drone Program,' *The New Yorker*, 26 October 2009.

⁴⁴ J.A. Sluka, 'Death from Above,' 75.

⁴⁵ 'A Killer Above The Law,' *The Guardian*, 2 August 2010.

⁴⁶ P. McLeary, S. Weinberger, A. Batey, 'Fly and Smite; Impact of Drones on Pace of War Draws Scrutiny,' *Defence Technology International* 7, vol. 5 (2011), 19.

⁴⁷ Ibid., 20.

⁴⁸ 'The Predator War: What Are the Risks of the C.I.A.'s Covert Drone Program,' *The New Yorker*, 26 October 2009.

⁴⁹ 'Pakistan Outrage Over Continued Drone Attacks,' BBC News, 26 January 2009. Available at: http://worldblog.msnbc.msn.com/_news/2009/01/26/4376849-pakistan-outrage-over-continued-drone-attacks.

⁵⁰ A. Giustozzi (Ed), *Decoding the New Taliban*, 282.

⁵¹ A.M. Roe, *Waging War in Waziristan: The British Struggle in the Land of Bin Laden, 1849-1947* (Lawrence: University Press of Kansas, 2010), 107.

⁵² 'US Forces Kill Osama bin Laden in Pakistan,' *NBC*, 2 May 2011.

⁵³ 'Drones Batter Al-Qaeda and Its Allies Within Pakistan,' *The New York Times*, 4 April 2010.

⁵⁴ 'The Predator War: What Are the Risks of the C.I.A.'s Covert Drone Program,' *The New Yorker*, 26 October 2009.

⁵⁵ 'Aerial Bombing Makes Terrorists,' *Truthout*, 24 May 2009. Available at: <http://truthout.org/052409Y?>

⁵⁶ J.A. Sluka, 'Death from Above,' 73.

⁵⁷ It is interesting to note that: '... U.S. air strikes were among the principal motivations for suicide attackers in Afghanistan, and at the end of 2008 a survey of 42 Taliban fighters revealed that 12 had seen family members killed in air strikes, and six joined the insurgency after such attacks.' Ibid., 72.

⁵⁸ Ibid., 14.

⁵⁹ 'Call Off Drone War, Influential U.S. Advisor Says,' *Wired News*, 10 February 2009. Available at: <http://www.wired.com/dangerroom/2009/02/kilcullen-says/#ixzz0xjLROPhJ>

⁶⁰ 'U.S. Drone Strikes in Pakistan Tribal Areas Boost Support for Taliban,' *The Sunday Times*, 10 March 2010.

⁶¹ A. Giustozzi (Ed), *Decoding the New Taliban*, 206.

⁶² 'Death from Above, Outrage Down Below,' *The New York Times*, 17 May 2009.

⁶³ A.M. Roe, *Waging War in Waziristan*, 41-52.

⁶⁴ Historically, after the initial terror, populations under air attack have learned to adapt to their situation and develop workarounds, whether they are in London, Essen, Tokyo or Hanoi. Douhet's theory of air terror driving the citizenry to force their governments to sue for peace has not been realised. Air attack usually steels the resolve or fatalistic acceptance of the people under attack. Japan, for example, was prepared to fight on following the atomic bomb attacks against Hiroshima and Nagasaki. See D.M. Giangreco, *Hell to Pay: Operation DOWNFALL and the Invasion of Japan, 1945-1947* (Annapolis: Naval Institute Press, 2009). It was the emperor's decision that brought about Japan's surrender. The oft-cited Kosovo Air Campaign was supposed to last only three days. It went on for 80 days and did not destroy the Serbian Army. NATO pre-campaign demands were mostly unmet, large refugee populations resulted, the local economy and that of the Danube River basin were severely crippled and NATO ground forces have been permanent occupiers ever since to enforce the peace.

⁶⁵ G. Morley-Mower, *Flying Blind: A Memoir of Biplane Flying Over Waziristan in the Last Days of British Rule in India* (New Mexico: Yucca Tree Press, 2000), 160.

⁶⁶ D. Omissi, *Air Power and Colonial Control: The Royal Air Force, 1919-1939* (Manchester: Manchester University Press, 1990), 166.

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