Changing the Course of War through Targeted Aerial Strikes
Afghanistan 2008–09

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Targeted air strikes remain a cornerstone fighting technique in modern counter-insurgency and other military operations. Yet, scholars and practitioners remain divided on the question of the efficacy of this battle mechanism. This article examines some of the underlying assumptions made in their previous analyses, and serves to nuance those approaches. Specifically, it looks at war, not as a static phenomenon but rather as a constantly evolving environment—one where such aerial campaigns affect insurgent counter-strike capabilities and decisions. Using the US-led war in Afghanistan in 2008–09, the article discovers that air strikes limit non-sophisticated counterattacks but are unable to reverse a growing of sophisticated insurgent activity—a discovery that has academic and policy relevant implications.

Introduction

The use of targeted air power, and particularly drones, has been a very controversial issue for America's war in Afghanistan. What was first publicly acknowledged in the post 9/11 era as a covert Central Intelligence Agency (CIA)-led programme on targeted assassinations of individuals belonging to the al Qeada leadership in a way that would 'minimize the chance of unintentional casualties'[1] ultimately grew in scope into a larger and more overt programme, including the US Department of Defense (DoD) to target insurgent groups and individuals in Pakistan and Afghanistan.[2]

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The legal issues and normative implications arising from such a policy of targeted attacks aside, there are more fundamental questions at stake: has the use of targeted aerial strikes worked? In other words, does the use of airpower affect insurgency violence in Afghanistan and how (or how not)? More specifically, has the use of selective aerial battle support to interagency counter-insurgency operations served to restrain violence in Afghanistan?

The use of air power in counter-insurgency operations like the one in Afghanistan, or what sometimes is also referred to as 'small wars', is by no means a new phenomenon. James Corum and Wray Johnson have, for instance, painstakingly documented the instrumentality of the use of airpower in small wars in their seminal work titled *Airpower in Small Wars*. 'In 1913', they write, 'only a decade after man first took flight in a motor-driven, heavier-than-air machine, the French army deployed a flight of aircraft to Morocco to support military operations against native peoples resisting French authority'.[3] Great Britain's Royal Air Force has been engaged in 'peripheral conflicts' since 1918—from the Third Afghan War and the containment of the 'Mad Mullah' uprising in British Somaliland to Iraq, Northern Ireland, the North-west Frontier Provinces of British India, Palestine, Aden, Malaya, and Cyprus, among other places.[4] Similarly, air power has played a major role for a diverse set of countries including but not limited to the erstwhile Soviet Union, Rhodesia, South Africa, Guatemala, El Salvador and, of course, the United States.[5] Since that first deployment in 1913, the role of air power in small wars has grown, culminating in the modern day use of unmanned aerial vehicles (UAVs). Thus, airpower has become 'an indispensable tool for any military force fighting against guerillas, terrorists, and other irregular forces'.[6]

Despite the timeless military appeal of aerial strikes in small wars, few studies have methodologically studied the efficacy of the use of such technology in insurgency settings. Whether or not the use of air power works to deter insurgent violence is understudied. Robert Pape's book, *Bombing to Win: Airpower and Coercion in War*, and Horowitz and Reiter's study titled 'When Does Aerial Bombing Work?',[7] are two works that conduct multi-nation studies across the span of the twentieth century to look at whether or not air power is an effective coercive tool. Both regard air power as strategically important in shaping coercive success and failure and foreign policy outcomes. Pape's conclusions are, however, more pessimistic. According to him, coercion using air power is very hard,

and that the 'precision guided missile revolution' is not likely to enhance the coercive effects of strategic bombing.[8] Horowitz and Reiter qualify Pape's arguments by introducing specific circumstances in which air power's coercive effects might work.[9] Yet their works are limited because of their fundamental assumption of aerial strikes as being directed towards states, and not towards non-state entities like insurgent or terrorist groups.

One notable exception to the lack of studies on airpower and counter-insurgency operations is an article by Dennis Drew titled 'US Airpower Theory and the Insurgent Challenge'.[10] Drew extends Pape's, Horowitz, and Reiter's arguments by examining US involvement in aerial strikes in counter-insurgency operations between the end of World War II and 1992. His conclusions are cynical as well. The focus on 'doing' and not 'thinking' in the US Air Force (USAF), combined with an attraction for technology and mental fixation on battlefield fierceness against the enemy, has meant that the USAF has never really pursued the idea of a separate doctrine for aerial power in counter-insurgency operations like Vietnam and now Iraq and Afghanistan. In the four decades that the USAF has used air power in battlefield scenarios, they have never, according to Drew, revised the conceptual mould to account for changes in battlefield scenarios from 'strategic bombardment and atomic air power to the subtle complexities of protracted revolutionary warfare'.[11] As a result of this, the internal debates on the use of airpower in dealing with insurgency challenges have led to 'contradiction and confusion'.[12]

In the context of modern day counter-insurgency operations in Iraq and Afghanistan, targeted aerial strikes and the use of UAVs, also called drones, have generated a lot of debate on the effectiveness of the use of such technology in small wars settings. Drones are being used to take out high profile insurgent leaders in Pakistan's tribal belt, while also giving military and intelligence support to International Security Assistance Force (ISAF) and North Atlantic Treaty Organization (NATO) ground personnel, particularly in the eastern and southern provinces of Afghanistan. It is a technology that quickly became the busiest war fighting machine in the 'War on Terrorism'. For instance, between 2004 and 2007, there were nine drone strikes in Pakistan. In 2008, this increased to 33; by 2009, there were 53 targeted aerial strikes. In 2010, targeted attacks by drones culminated into the highest figure ever: 118.[13] Interestingly, however, although the number of militant casualties has risen with the rise in the number of aerial targeted attacks, so has the number of civilian deaths.

Between 2004 and 2009, civilian deaths in Pakistan from drone strikes rose between 20 and 80 per cent.[14]

In other battle contexts, for instance in Iraq, between mid-2005 and 2006, Predator drones were used on 2,073 aerial missions, logged 33,833 flight hours, followed 18,490 potential targets, and conducted 242 separate attacks.[15] One of the ground realities of the expansive use of aerial targeted violence, however, has been squaring it with the problem of escalating hostility resulting from the fall out in the aftermath of a miscalculated or accidental killing of civilians. According to one report, civilians have accounted for 32 per cent of all deaths resulting from drone strikes in Pakistan.[16] Yet, the Obama administration has authorized a record number of drone strikes in the last two years. Indeed it remains a puzzle why militaries would continue to resort to such an onerous technology which could lead to potential embarrassment from civilian deaths or worse, increased retaliatory attacks, such as ones on NATO and ISAF forces in Afghanistan? It also raises a deeper question of whether or not targeted aerial violence is actually effective in coercing belligerents into giving up their warring tactics. If so, how so? If not, why not?

This article puts to test the existing debates around the usefulness of targeted aerial strikes as a coercive mechanism for insurgent violence, specifically using the Afghanistan context. In other words, it examines whether targeted violence in Afghanistan in the form of airpower affects insurgent predisposition and capacity for violence. Part 1 explains the contemporary use of air power as it falls within the rubric of targeted violence. It looks at the theoretical debates around why or why not airpower may be effective in deterring insurgent attacks. Part 2 presents the research design, the dataset, the variables, and some descriptive statistics on the use of targeted aerial strikes in Afghanistan. It uses the recently released *Wikileaks* dataset to look at trends on the use of aerial attacks and insurgency violence. Part 3 documents the qualitative evidence on how and why targeted aerial strikes do or do not affect insurgent activity in Afghanistan. Part 4 returns to the aforementioned theoretical framework laid out in Part 1 and sees whether theories can be tweaked to get a better understanding of how aerial power affects insurgent capabilities to launch attacks and their personal motivations to participate in violence. Finally, Part 5 briefly discusses the challenges or potential weaknesses of this study, while also suggesting future areas of research.

Airpower and The Afghan War, Theoretical Debates and Reality Checks

In many ways, it is hard to frame the post 9/11 war in Afghanistan within a simple and straightforward rubric. One could say that it is a conflict of many different kinds involving a range of actors—it engages conventional armies, non-state armed actors, state security forces of various forms, warlord regimes, ideologically motivated fighters, narcotics and crime networks, war profiteers, grieving populations, foreign fighters, and private security contractors, etc. Although it has mutated over time, few would argue however, that in its essence one could use some all-encompassing terminologies like 'insurgency' or 'irregular war' or even 'small war'.

As with all insurgencies, the war in Afghanistan has remained in a state of flux and tested the will and capacities of all those involved. Such is its historical complexity, that it prompted one former CIA analyst-turned-writer to call Afghanistan the 'graveyard of empires'.[17] After the overthrow of the Taliban regime, in what became known as the 'Afghan Model', the US combined aerial attacks with proxy forces on the ground to make decisive inroads into Afghanistan. Airpower was almost single-handedly responsible for some of the initial victories particularly in places where the Taliban significantly outnumbered other forces.[18] Yet, as the war progressed and 'precision bombings' became the order of the day, debate arose over the effectiveness of the aerial campaigns. Bombs were not able to select enemy combatants from crowded markets, but were able to scatter them. They were not able to earn decisive victories, but were able to offer critical aerial support to ground forces.[19]

Theoretical and doctrinal efforts that analyse the use of selective aerial violence in counter-insurgency operations remain few and far between. Scholars who have attempted to engage in the discourse have been roughly divided into two camps—those who believe that air power can have coercive effects on insurgent activity, and those who believe that air power might not have substantial consequences to counter such insurgencies. Practitioners, too, have been divided on the efficacy of air power, although their concerns arise largely from the lack of doctrine and from the reality of ongoing counter-insurgency operations in various conflict zones.

There are several theories on why targeted attacks can work in an irregular war setting:

1. Stathis Kalyvas theorizes that the single biggest problem in selective violence is getting good information. Although information can be collected from individuals who are willing to denounce the motivations to collaborate may vary. According to Kalyvas, control over territory is the most effective way to ensure protection of denouncers; in other words, denunciation leading to selective violence is possible when one actor has dominant (although perhaps incomplete) control over territory. In the case that two actors have equal levels of control in an irregular war, selective violence is unlikely.[20]

   Given these circumstances, according to him, selective violence is not necessarily counterproductive and can work as a deterrence mechanism if political actors are able to 'convince the targeted population that they are able to monitor and sanction their behaviour with reasonable accuracy'.[21] According to Kalyvas, this is possible even if selective violence leads to the killing of many innocent people.[22]
2. Johnston and Sarbahi, in a working paper titled 'The Impact of US Drone Strikes on Terrorism in Pakistan'[23], on the effectiveness of US use of UAVs as a counterterrorism instrument in the Federally Administered Tribal Areas (FATA) region of Pakistan, have argued (less abstractly) that despite high overall levels of violence, drone strikes can be associated with decreases in militant lethality and reduced numbers of improvised explosive devices (IEDs), and suicide attacks, that is, drone strikes are capable of coercing militants into giving up their technologies of rebellion by targeting key leaders in these organizations.[24]

   In addition to this, the creation of leadership vacuums through targeted killings result not only in weakening of group administration, but could also lead to the creation of rivalries over control, degrading group professionalism, diminishing success rates, and weakening morale, which could negatively affect insurgent violence.[25]
3. Military researchers have lauded the effectiveness of targeted aerial strikes in irregular warfare by claiming that it represents technologically superiority over a numerically superior enemy, it is a quick fix mechanism to disbanding armed groups, it prevents congregation of armed individuals, it discriminates in its selection of targets, it reduces an adversary's operations from

being strategic to being merely tactical, it serves as an extension of the ground forces by rapidly dealing with guerilla style attacks, it allows for deeper terrain penetration and surveillance, and also it is economically and politically inexpensive.[26]

Furthermore, according to some authors, in a counter-insurgency setting rebels tend to be discriminating in the application of their violence against target populations, having calculated the costs and benefits of their actions. This is done in an effort to discount other forms of authority as unjust. Such an 'organizational technique' needs to be matched only with discriminate forms of violence. In a war where it is difficult, almost impossible, to assign the right amount of 'weight' to a particular kind of violence, discriminate violence is the 'safe way' to play.[27]

There also exist several explanations for why targeted violence might not work in small wars, largely arising from an inability to convert military capabilities into a successful coercive mechanism.

1. Some scholars theorize that aerial bombings do not work in counter-insurgency settings because civilians are often victimized in such bombing campaigns, which ends up alienating the population for which actors are vying for control. In the classic discussion by Kalyvas, this point harps to his notion of the 'identification problem' where it is often very difficult to distinguish between civilian population and insurgents who tend to mix among civilians.[28]

   In the context of the use of aerial power, where there is no face-to-face contact with the enemy and where there is a large information gap, the problem of filtering combatants from non-combatants is exacerbated. Because militants are killed before they are questioned, a targeted aerial strike represents the end of the information or intelligence trail. This, in turn, feeds into the problem of applying selective punishment against perpetrators without necessarily harming civilians. This inevitably leads to increasing support for insurgents, thus negating any gains that might be made through the application of targeted violence.[29]
2. From a practical point of view, theorists also state that the use of aerial power in counter-insurgency operations has not been as effective as expected because of shortfalls in US military doctrine

> about how airpower should be used. Counter-insurgency manuals on the wars in Iraq and Afghanistan for example, focus on what can be considered *people's wars*—based largely on a notion that populations interact only with the government or rebel groups, and that cutting the link from one automatically means forming alliances with the other. This is outdated and the reality is that networks and relationships between civilians and armed groups are more complex and not so obvious.[30]
>
> Despite the tactical gains from the use of air power, the strategic losses are enormous. There is also the problem of renewing old grievances or creating new ones, acts of revenge and retribution, and 'perpetuating the cycle of violence' by mobilizing people to participate in violence.[31]

There are couple of problems with how scholars have argued for or against the use of targeted aerial violence in counter-insurgencies, largely evident in their inherent assumptions. Firstly, much of the literature is based around the military's failure to adapt to the changed battle circumstances, thus taking a very military-centric approach. Little work has been done on the ability of insurgents to adapt to ever-evolving conflict. By assuming that insurgents are incapable of innovating, much information on how selective violence may affect, how insurgents change tactics or strategies to suit the immediate circumstances. This leads into the second assumption (partly addressed by Kalyvas in his criticism of the US counter-insurgency doctrine manual) that insurgents are vying for population control, rather than acting independently. This notion assumes that insurgents are a monolithic and organized group, and will act as so. Inherent in this assumption is another assumption that every insurgent's calculation of cost or benefit of participating in violent activity is the same—that somehow by killing a certain threshold number of enemy combatants, all such insurgents will be motivated to change their individual preference for participating in violence.

The above arguments also assume that targeted attacks occur in 'test-tube environments', that is, they occur independently and isolated from other forms of violence. This is clearly not in line with the reality of most small wars where aerial attacks occur in close conjunction and coordination with ground forces. One final assumption also is that there are only two actors involved here in contestation for control of the population: the insurgents and state forces. In the context of Afghanistan, not only is it impossible to define one homogenous insurgency, it is also

difficult to classify all state forces into one group. The Afghan National Police (ANP), Afghan National Army (ANA), ISAF and NATO forces, although working in support of the Afghan government, operate with different rules and understandings of the conflict.

While it is impossible to address all of these assumptions in one article, my hypotheses draw on most of them.

H1: Targeted aerial violence will reduce the number of sophisticated insurgent attacks

This hypothesis attempts to nuance insurgency strategy, by differentiating between the methods or tactics of attacks employed. 'Frontline' insurgents serve as the operational arm of an insurgency. One would expect that as more and more of them are killed in targeted attacks or as their supply lines are disrupted, one would expect a decrease in the number of skilled or sophisticated attacks carried out.

H2: Targeted aerial violence will have no effect on the number of unsophisticated insurgent attacks

In an extension of the hypothesis above, it claims that there is a likelihood that as technical expertise is lost or simply out of sheer desperation among enemy combatants that one would expect the remaining insurgents to resort to crude forms of violence. In other words, there will likely be a shift from sophisticated to unsophisticated attacks, and no change in the number of unsophisticated attacks.

H3: Civilian deaths will have no effect on intensity of insurgent activity

This hypothesis feeds into the classic counter-insurgency assumption that insurgents carry out selective or indiscriminate violence based on their calculations of whether or not they can win over the civilian populations. However, battlefields are messier than that, and not all insurgents are driven by this motivation. One cannot ignore the fact that many insurgents may participate simply to address personal grievances. Therefore, one could hypothesize that civilian deaths will have no effect on the intensity of an insurgency.

The Quantitative Evidence

For the purposes of this study, I used the *Wikileaks* dataset, labeled the *Afghan War Diary* and released in 2010. It is a compendium of almost

100,000 reports detailing all security incidents from the start of the US invasion of Afghanistan until 2010. It is significant because it contains detailed, disaggregated reportage—what has also been called a blow-by-blow account of the entire war. Most of the entries are reports filled out by soldiers or signal intelligence officers listening to information relayed by combat units directly from the battlefield. They follow a preset formatted structure, probably to make record keeping easier. There is a lot of breadth to this information, considering that information was being compiled on almost an hourly basis from across Afghanistan. They also have a lot of depth given the type of information that is compiled. The biggest initial challenge lay in parsing and coding the information. Here is an example of what one event report looked like:

> *19284567-E79E-C743-C3B52977A8F6294A 12/07/2008 09:07:00 Enemy Action Indirect Fire 20080712090742SWB3238524042 (ENEMY ACTION) INDIRECT FIRE RPT (Mortar) G/2/506 (TF WHITE CURRAHEE): 0 INJ/DAM Unit: G/2/506/ (TF White Currahee) Type: IDF Timeline: 0907z Margah COP reports receiving 3 Rds. Effective IDF within 300m of COP. VIS. POO 1 at Grid WB 340 250, VIS. POO 2 WB 3310 2320. In Response to IDF we are going to shoot 1 Rnd 120mm HEVT every minute at the first POO grid till DUDE is in the AO. Update: 1x120mm HEVT at 2nd POO site Grid WB 331 202 Update: 1x GBU-38 Air Burst at WB 340 250 Update: 1x GBU-38 Air Burst at Grid WB 33251 20160 Update: 5x120mm WP at first POO site Grid WB 340 250 ZEROK SIGINT: TOI-1114Z, GIST-ZAYNALLAH CALLED US TOLD US THE HELICOPTERS DROPPED BOMBS. ME AND MY FRIEND GOT SEPERATED. I AM OKAY BUT I CANT FIND MY FRIEND. I CANT REACH HIM ON THE RADIO. EOT ZEROK SIGINT:1126Z, GIST-UIM1 I AM ON TOP OF THE MOUNTAIN. I AM TAKING A PICTURE BEFORE I LEAVE. WE WERE ABOUT TO FIGHT TODAY BUT WE HAD A PROBLEM. UIM2- YOU SHOULDNT TAKE PICTURES. IT IS NOT GOOD. EOT Event: CLOSED RC EAST ENEMY TF Currahee SIGACT Manager S-3 G/2/506 (TF WHITE CURRAHEE) CF 0 0 0 0 0 0 0 0 0 42SWB3238524042 32.75375748 69.34571838 TF Currahee SIGACT Manager S-3 101 Bridge SIGACTS Manager ENEMY RED SECRET*

News sources online as well as *Wikileaks* own internal analysis of the dataset helped with the initial coding, which can be roughly divided into 34 different bits of qualitative and quantitative information. Hundreds of

sub-categories also exist. The primary variables are as follows along with a brief description of what each means or entails:

- Report key (used to find messages and also to reference them)
- Date occurred (provides the date and time of the event)
- Type (broad classification of the type of event, like friendly action, enemy action, non-combat event)
- Category (describes what kind of event the message is about)
- Tracking number, (internal tracking number)
- Title, (title of the message)
- Summary (actual description of the event)
- Region (broader region of the event)
- Attackon (information who was attacked during an event)
- Complex attack (a flag that signifies that an attack was a larger operation that required more planning, coordination and preparation)
- Reporting unit, unit name, type of unit (information on the military unit that authored the report)
- Friendly wia, friendly kia, host nation wia, host nation kia, civilians wia, civilians kia, enemy wia, Enemy kia (numeric values of each type, wia is wounded in action, kia is killed in action)
- Enemy detained (captured enemies)
- Mgrs, latitude, longitude (military grid reference system)
- Originator group, updated by group (information on overall military unit responsible for information)
- Ccir (commander's critical information requirements)
- Sigact (significant events)
- Affiliation (if event was of friendly or enemy nature)
- Dcolor (display colour of message related to activity, red for enemy, blue for friendly, green for friendly host)

The summaries offered the most details for qualitative studies, although very often they were terse and contained a lot of military jargon, which had to be deciphered using an online military acronyms handbook. This in itself was interesting because it gave me an idea of the conditions in which these reports were created—written up very often after a full day of combat operations as part of the daily cumbersome hassle of keeping a log of the day's events. Anything logged in the reports became part of the official 'memory' or book-keeping of the war. Very often however, soldiers simply chose to not fill out some information, as a result of

which there is missing information. Also, meaning or the significance of certain actions could have been lost as a result of some of this carelessness. Despite this drawback, the dataset is probably the closest one can get to a comprehensive account of the war.

The dataset, in its entirety, was too big to analyse for a single paper. I reduced my analysis to examining the eastern provinces of Afghanistan between the period of July 2008 and June 2009. The eastern provinces fall under the jurisdiction of RCEast or Regional Command East; this covers an area of 120,000 square kilometers, faces a 450 mile border with Pakistan, and includes fourteen provinces—Bamyan, Ghazni, Kapisa, Khost, Kunar, Laghman, Logar, Nangarhar, Nuristan, Paktika, Paktiya, Panjshir, Parwan, and Wardak. RCEast is roughly of division size and with the United States taking charge of force headquarters. The terrain in the region is largely mountainous due to the presence of the Hindu Kush range. Agriculture is the predominant source of income, and insurgents tend to be most active in this region as opposed to other regions. Among the enemy combatant groups operating in the area are the Haqqani network, the Hekmatyar network, fighters from Pakistani Islamist groups such as Lashkar-e-Toiba (LeT) and Tehreek-e Nafaz-e-Shariat-e-Mohammadi (TNSM), international terror groups linked to al Qaeda, local warlords, drug mafias, and criminal gangs.[32]

I used a quantitative count of bomb drops during each month as a measure of targeted aerial violence. Targeted bomb drops included hellfire missiles—GBU38, GBU31, GBU12 and the MK82—which were launched either from predator drones or from F15s that were being guided by drones. I selected these particular bombs/missiles for the measure because they have inbuilt guidance systems for a targeted air strike. I also tracked insurgent activity each month, and distinguished between two types of insurgent attacks—sophisticated and unsophisticated attacks. Sophisticated attacks would be those that require a high level of technical and logistics skill and are generally more difficult to carry out. My measure for the sophisticated attacks looked at the number of IED attacks and ambushes carried out each month. Unsophisticated attacks would be crude or more medieval forms of violence. I measured this with the number of regular small arms fire incidents each month.[33] Figures 1–3 below have been generated using the descriptive statistics.

Figures 1 and 2 suggest that despite the targeted aerial violence, IED attacks (or sophisticated attacks) actually increased over time, and possibly

exponentially. Unsophisticated or small arms fire incidents remained more or less the same over time, with little variation. The data disproves my first hypothesis and proves my second one. Targeted aerial violence is not having the kind of impact on insurgent activity that it was meant to have.

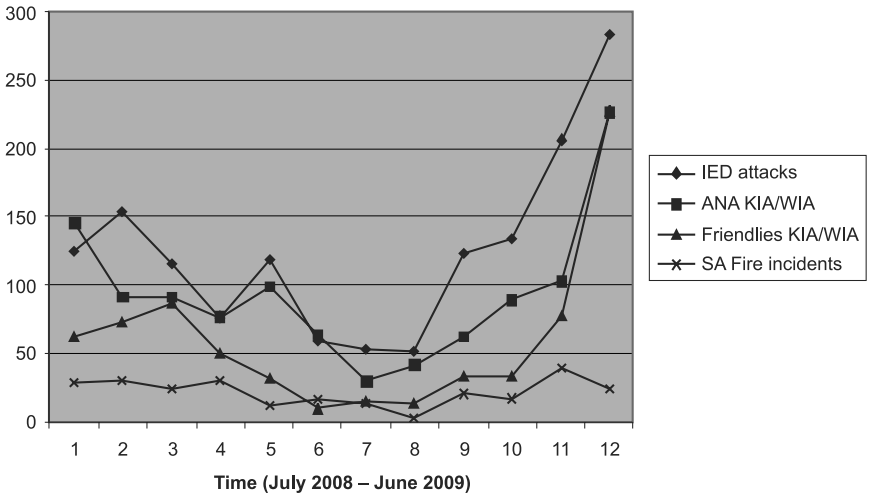

Figure 1 Trends in Insurgent Attacks

Source: Author.

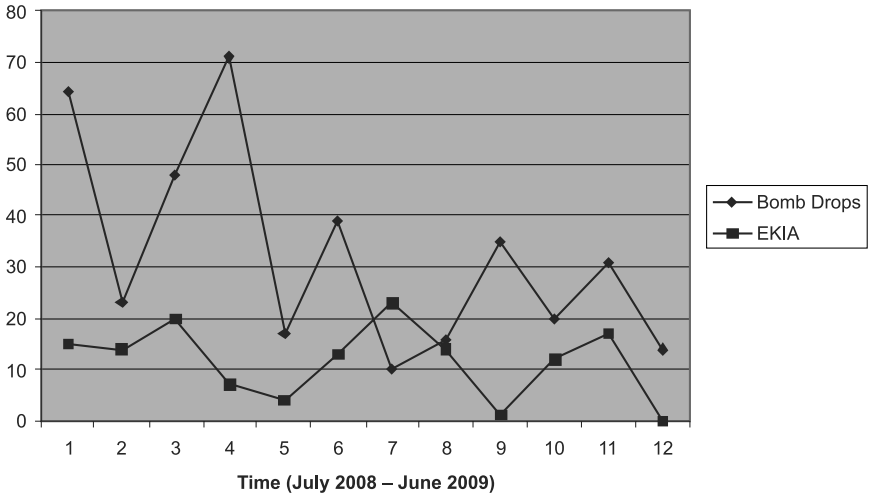

Figure 2 Bomb Drops and EKIA

Source: Author.

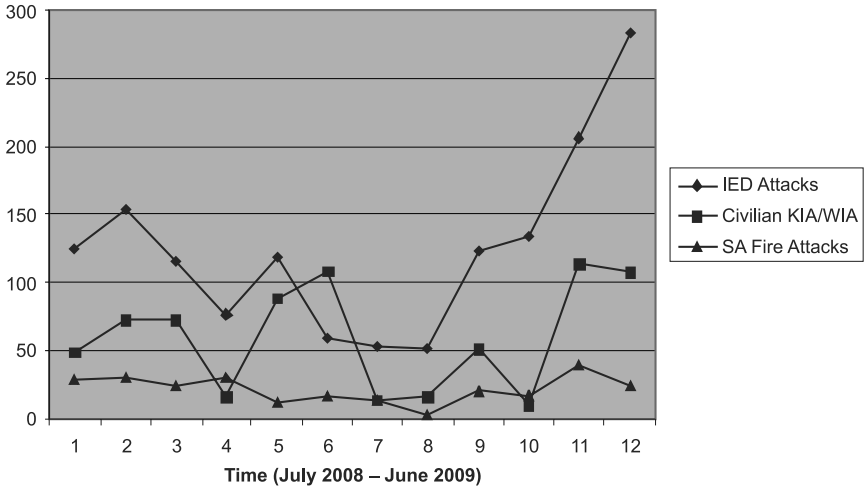

Figure 3 Civilian Toll Over Time

Source: Author.

If anything, we find that insurgent activity has increased, particularly in its sophistication. We also find that enemy combatants may have been more successful in their attacks than state or external forces. The number of ANA and ISAF troops killed or wounded in action follows a trend that seems very closely related to the trend in IED attacks, which might perhaps suggest that insurgents are relying on sophisticated attacks more and more over time. State and external forces, on the other hand, have not had much success in combating the insurgents. The number of insurgents killed each month is far smaller than the number of bombs dropped, which suggests that the bomb drops might not be as accurate or targeted as perceived. Figure 3 highlights civilian casualties and wounded over time. The rise and fall of this number does not seem to be correlated to the IED attacks and the small arms fire incidents, which suggests that insurgent attacks are most likely not being influenced by civilian deaths.

The Qualitative Evidence

For the qualitative analysis, which was meant to look at insurgent responses or changes in behaviour/technology/tactic to targeted attacks, I relied on the information presented in the summaries of every report. This contained a detailed account, from the soldier's perspective, of

what actually transpired on the ground. It contained various types of information including but not limited to details about combat activity, motivations for launching attacks, phone conversations among insurgents that were tapped into by signal intelligence officers, and battle assessments. Several accounts spoke of pilots giving chase to insurgents using targeted air strikes, which ground troops increasingly relied on for backup. There were several references to 'diggers' (slang for people seen digging the ground and hence suspected of planting IEDs) and 'squirters' (slang for people running away from covers that had just been targeted). A typical account of the use of the predator drone in an aerial strike is the following operation.

> *USAF ORDANCE DROP.*
>
> *TIMELINE: AT 0920HRS PREDATOR SPOTTED 2 PAX (persons) WITH 2 DONKEYS WITH AK-47 AND RPG near Qara Bagh VB 105 635.*
>
> *0935HRS PAX ARE MOVING SOUTH AND ENTERED VILLAGE AND IS CONTINUING SOUTH DUDE ON STATION TRACKING PAX.*
>
> *0948HRS PAX HAVE LEFT THE VILLAGE STILL MOVING SOUTH.*
>
> *0950HRS DUDE IS GOING TO DROP GBU-12 ON PAX, PAX ARE CURRENTLY 100m SOUTH OF VILLAGE. AND STILL MOVING.*
>
> *0954HRS AIRFORCE DROPS GBU-12 BOMB MISSED AND AAF RAN TO A TENT AND MET UP WITH 2 MORE PAX.*
>
> *REAPER7 HAS MOVED TO LOCATION AND IS CHECKING BDA.*
>
> *REAPER7 FOUND PIECES OF AK-47 AND RPG, ALSO FOUND POOLS OF BLOOD.*
>
> *FRIENDLY FOLLOW UP: F-15'S (DUDE)*

Several critical trends appeared from the summary reports:

Insurgent attack capabilities: Hundreds of accounts existed of the Taliban luring soldiers into traps or combat operations, or boldly conducting pre-emptive attacks in sniper operations, possibly suggesting an increased level of sophistication alongside the associated boldness of such tactics.[34] Despite the fact that insurgents did not have the kind of sophisticated technology or firepower like the ones

available to American soldiers, they were successful in bringing down several planes or having close misses using rockets or RPGs.[35] In at least one incident insurgents used shoulder-launched surface-to-air missiles to shoot down a Chinook helicopter, killing everyone on board.[36] This represents a leveling of the playing field, where aerial power did not seem to have much added advantage over insurgent capability.

Small arms and light weapons trafficking networks were abundant, and insurgents relied on informal networks as well as Pakistani and Iranian sympathizers to procure supplies.[37] There was anecdotal evidence of insurgent group dynamics that played a major role in procurement of arms and support, examples of which are listed here:

Example 1

lets get breakfast, we can start again later. we have more rounds.

sigint form zerok: toi-0531z, gist-the meal is good. everything is fne. there is a helicopter flying around.

Update: zerok sigint: toi-0549z, uim1 is everyone ok?

uim2: we are all ok. Eot

update: zerok sigint: toi-0614z gist c/s sabaun-todays shooting was very good. eot

update: zerok sigint: toi-0630, gist-uim we sent somebody to bring 15 more rounds. eot believe there will be an attack within the next couple of hours at zerok cop

update: zerok sigint: toi:0816z gist: say allah akbar before you shoot.

Example 2

ui: if you want a pk magazine holder, i will send you one. they told me to send some guys, one with a long mustache and ajimal. they told me they have some work to do, i told them it would take some time, maybe 5-6 days.

Example 3

uim1-i am waiting for buddah. uim2-he is eating right now. go ahead and bring the rounds.

uim to khadam- i hear you, i am waiting for the others to call me. they are standing down there. lets do the thirteen.

uim 1i am coming down the mountain right now. going to get the 40 boxes of ammo. uim2 i need habun to contact zabuyn about the ammo. i need him to give them to me.

uim1 we need to get the 20 and 30 dishka boxes so we can use them. uim2 hes not here right now. he's at pashwar.

gist: malang and hajigul took some guys to set up ambush, they're on the way right now

Insurgent organizational capacity, which the targeted air strikes were meant to disrupt, remained unaffected. If anything, there was evidence of evolutionary behaviour and prior preparedness among insurgents, wherein they were learning from and adapting to an ever changing war environment. Several such cases exist in the Wiki files:

the first one was good but i could not see where it hit. the weather is bad. it hit three hundrend meters to the left. --eot--

0757z:go hundrend meters to the right. kochal is in charge. hundrend more meters to the right. hundrend fifty to the right.--eot--

0806z:gist: hundrend meters foward and a hundrend to the right

and it would be perfect/.--eot--

0811z: gist: you hit the right target, hundrend meters to the right

fifteen or sixteen landed inside the compound.

uim1: how was that?.was it good?. did you like it?.one landed outside and the other inside.

um1: the bombs landed a little bit far from us.

um1: hurry up, go get in your places.

makhmadi told me lets go, we have a plan for tonight. um2: dont worry i am close to them.

1603z:gist: um1: at 9 or 10 oclock we will all get together.

uim1- we have everything ready, but there planes overhead. uim2- just wait, they cannot fly all night.

: ui: i will start in the afternoon, ui2: thats too late, start it at 4 oclock,

- llvi: mal, freq: 149.800, lob: 53, s/s: 21, time: 1445/1446, gist: ui: anytime you want us to start it we will, we are already in the trees

There was also evidence of a sense of fearlessness among insurgents, backed by religious fervour, to not be easily deterred by targeted air strikes, despite losing comrades:

> *i am on my way to do my jihad. good bye my friends good bye (singing). they got lots of guns with them. this will be our last attack. we got al the guns. all the friends bring them all. we are about 11 people here. tell everyone to come.*
>
> *gist: lob 257/7 everyone is fine. i hope you become a martyr.*
>
> *we are ready to attack. i am the enemy of your enemy. god willing you will kill a lot of americans.*

Finally, the dataset also revealed that there were almost 15 instances in one year in one region alone, of friendly fire accidents, when US forces got embroiled in fire fights with the ANA or the ANP due to accidents, deliberate attacks, feuds and horseplay.[38] Antagonism among soldiers was a common phenomenon, and affected the efficacy of aerial operations as a result as well.

New Forms of Theorizing about Targeted Violence

The data suggests that selective air strikes targeting insurgent personnel do not necessarily affect insurgent violence. If anything, we find that insurgent groups increase their level of sophistication and also the lethality of their attacks. The debilitating or coercive effect that targeted air strikes are meant to have do not work in the Afghanistan context. There are two ways of explaining this. One way of theorizing about these observations is by looking at what one could call an evolutionary model of insurgency, where we account for complexity in insurgent organizations and adaptation among insurgents depending on changing battle circumstances.

Given the complex nature of insurgent organizations, traditional command-and-control models of behaviour likely do not apply. Scholars have long commented on the complex, amorphous and faceless nature of insurgent organizations that involve complex relationships among multiple armed organizations[39] that is prone to using indiscriminate violence[40], and have informal chains of command that tend to change over time.[41] The use of targeted air strikes against foot soldiers infantry results in tactical micro level gains, but does not affect the overall web of insurgent activity given the complex organizational structure of insurgent groups.

Occasionally, we find that some insurgents either fail to keep up with the others in terms of successful attacks, or because they are killed or

wounded in attacks. Such individuals are quickly ejected from the system, and replaced with smarter people, or people who have learned from their failures and adapted. It is a Darwinian model of insurgency in that sense, where the weaker (or more stupid) insurgents are killed off first, and the smarter or adaptable ones survive, thrive, learn, and adapt. Indeed, we find this trend not only from the descriptive statistics with the increase in the sophistication and success of attacks, but also in some of the qualitative data that reflect the complexity in organizational behaviour. This is enhanced further by the non-linear interactions among insurgents, decentralized control in insurgent groups, and self-organization, and adaptation among insurgents.

The second way to understand this phenomenon is by looking at it as a return to barbarianism, what one analyst calls a phenomenon where the Jetsons meet the Flintstones[42]—the Jetsons being a reference to high-tech US combat troops versus the Flintstones, which is a reference to people living in underdeveloped societies like the one in Afghanistan. 'The archetype of the new warrior class', says Ralph Peters, a former US Army Lieutenant Colonel and author, 'is a male who has no stake in peace, a loser with little education, no legal earning power, no abiding attractiveness to women and no future. With gun in hand and the spittle of nationalist ideology dripping from his mouth, today's warrior murders those who once slighted him, seizes the women who avoided him, and plunders that which he would never otherwise have possessed.'[43] This is a development which feeds on itself. 'The longer the fighting continues, the more irredeemable this warrior becomes. And as society's preparatory structures such as schools, formal worship systems, communities and families are disrupted, young males who might otherwise have led productive lives are drawn into the warrior milieu. These form a second pool. For these boys and young men, deprived of education and orientation, the company of warriors provides a powerful behavioural framework.'[44]

Research Challenges

There were several limitations to this study, which any further or future research would have to account for. Firstly, despite the disaggregation, the dataset was not entirely accurate. Numerous accounts exist in the dataset where, immediately after an aerial strike, troops would not do a ground survey or battle death assessment of the area. This was not feasible

either because of the volatility of the situation or because other security issues came up which demanded attention. So the numeric values for enemy combatants and civilians killed and wounded during combat might not be entirely accurate. This might also lead into questioning the causal effect between the targeted air strikes and the deterrence mechanism posed.

Second, my analysis from the eastern regions and for the period of 2008–09 offers only a snapshot view of the conflict. A study that examines the data set in its entirety would be more useful in terms of testability and prediction for long-term trends. It would be difficult to extrapolate from these findings and be entirely dismissive of the efficacy of aerial targeting. Third, given time constraints, the measures for sophisticated and unsophisticated attacks are somewhat simplified. I did not include other measures such as suicide bombings, assassinations, threats of attacks, etc., which would have nuanced these ideas further. Finally, it is also important to account for the proximity of the eastern provinces to the Afghanistan-Pakistan border, which I did not account for. Closeness to the border is critical for this analysis because the tribal belt serves as a haven and conduit for many of the insurgents in Afghanistan, as well as a recruiting ground for new combatants. The fact that the border is porous exacerbates this effect.

Conclusion

The article set out to discover whether or not targeted aerial attacks are effective in ebbing insurgent activity, and made several discoveries, some of which fall within the customary way of thinking about the Afghan conflict, while others lend themselves to newer ways of thinking about counter-insurgency. Drawing on the disaggregated data from the *Wikileaks* dataset, I found that targeted air strikes do not affect small arms fire incidents, and contrary to what I hypothesized, IED attacks increase over time. These findings raise questions about how the use of selective violence might affect insurgent goals, organization, and tactics. The study is context-specific—it applies to Afghanistan. One cannot use this as an example for how effective aerial strikes might be in other battle scenarios. Despite the case-led approach, however, I have attempted to nuance current understanding on the use of targeted violence, which should open up new channels for thinking in this field of research.

Notes

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2. Drew, Christopher, 'Drones are playing a growing role in Afghanistan', *The New York Times*, 19 February 2010.
3. Corum, James and Wray Johnson, *Airpower in Small Wars*. Lawrence, USA: University Press of Kansas, 2003, p. 1.
4. Hoffman, Bruce, 'British Airpower in Peripheral Conflict 1919-1976', RAND Report, Santa Monica: RAND, 1989, p. v.
5. Corum, James and Wray Johnson, 'Airpower in Small Wars', p. 1. US use of airpower dates back to failed operations against Pancho Villa, more of which can be found in the book.
6. Ibid.
7. Horowitz, Michael and Dan Reiter, 'When does Aerial Bombing Work? Quantitative Empirical Tests, 1917-1999', *Journal of Conflict Resolution*, Vol. 45, No. 2, April 2001, pp. 147–73.
8. Pape, Robert, *Bombing to Win: Airpower and Coercion in War*, New York: Cornell University Press, 1996, p. 314.
9. Their findings suggest that regime types in countries and demands influence the success of air raids.
10. Drew, Dennis, 'US Airpower Theory and the Insurgent Challenge: A Short Journey to Confusion', *Journal of Military History,* Vol. 62, No. 4, 1998, pp. 809–32.
11. Ibid., p. 832
12. Ibid.
13. See New America Foundation, 'The Year of the Drone: An Analysis of U.S. Drone Strikes in Pakistan, 2004–2012', available at http://counterterrorism.newamerica.net/drones, accessed October 2011.
14. Bergen, Peter and Katherine Tiedemann, 'The Year of the Drone', Counterterrorism Strategy Initiative Policy Paper, The New America Foundation, 24 February 2010.
15. Singer, P. W., *Wired for War*, New York: Penguin Press, 2009, p. 35.
16. Ibid.
17. Bearden, Milton, 'Afghanistan, Graveyard of Empires', *Foreign Affairs,* Vol. 80, No. 6, 2001, pp. 17–30.
18. Chipman, Don, 'Air Power and the Battle for Mazar-e-Sharif', *Air Power History*, Vol. 50, No. 1, 2003, pp. 34–45.

19. Wills, Craig, 'Airpower, Afghanistan and the Future of Warfare', CADRE Paper 25, Maxwell Airforce Base, Alabama: Air University Press, 2006.
20. Kalyvas, Stathis, *Logic of Violence in Civil War*. New York: Cambridge University Press, 2006, pp. 173–34.
21. Ibid., p. 190.
22. Ibid. Kalyvas' theory rests on the assumption that the two actors do not have equal control over territory for there to have selective violence, and also that fear of punishment can help deter the target population from supporting an insurgency.
23. Johnston, Patrick and Anoop Sarbahi, 'The Impact of US Drone Strikes on Terrorism in Pakistan', Working Paper, 2011, available at patrickjohnston.info/materials/drones.pdf, accessed on 3 January 2012.
24. Johnston and Sarbahi inherently assume in their selection of data that targeted aerial violence is used only against leaders, and not necessarily against foot soldiers. In other words, their model probably does not apply to Afghanistan, where drones are used for targeted violence largely against insurgents and not leadership structures.
25. Wilner, Alex, 'Targeted Killings in Afghanistan: Measuring Coercion and Deterrence in Counterterrorism and Counterinsurgency', *Studies in Conflict and Terrorism*, Vol. 33, No. 4, 2010, pp. 307–29.
26. Wills, 'Airpower, Afghanistan and the Future of Warfare', n. 20; also see Alan Vick, Adam Grissom, William Rosenau, Beth Grill, and Karl Mueller, 'Airpower in the New Counterinsurgency Era', Santa Monica: RAND, 2006.
27. Leites, Nathan Constantin and Charles Wolf Jr., 'Rebellion and Authority', Santa Monica: RAND, 1970.
28. Kalyvas, n. 21, p. 89; see also Thomas BarberThomas, 'Airpower in Counterinsurgency: The Search for the Missing Doctrine', Monterey: Naval War College, Department of Joint Military Operations, 2007.
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31. Ahmad, Irfan, 'Role of Airpower for Counterinsurgency in Afghanistan and FATA', Master's Thesis, Monterey: Naval Postgraduate School, 2009; Luke

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32. See http://www.understandingwar.org/region/regional-command-east.
33. It is important to note here that some analysts might perceive IEDs as unsophisticated attacks because insurgents carry risk only when laying the mines or triggering them from within the line of sight. While coordinated, bold attacks on military bases, even if done using only small arms, might represent sophisticated attacks because of the coordination expertise required. These analytical approaches are worthy of debate, but harder to study because one would need to track a different set of operationalizable variables such as (i) failed and successful attempts with IED placement and explosions, and (ii) direct attacks on foreign military units. I remark further on this dynamic in my qualitative analytical section.
34. Wikileaks Report ID# 080e0000011c6fabcf30160d6650bcca; Wikileaks Report ID# C4609CD0-A10B-8E32-D4C9A8D365326C47.
35. Wikileaks Report ID# 4F87C7EE-C25F-4BC9-A9DB-2693A31DE34B; Wikileaks Report ID# 69A2B77C-DA77-2D60-108F8BB5D856CA5B.
36. Wikileaks Report ID# 2A34FD1C-F601-40C8-8483-C8A6A64F818D.
37. Tisdall, Simon, 'Iran's Covert Operations in Afghanistan', *The Guardian*, 25 July 2010;Declan Walsh, 'White House Attacks Pakistan Over Taliban Aid', *The Guardian*, 25 July 2010.
38. Wikileaks Event ID# 080e0000011e6706624d160d2d8b903f; Wikileaks Event ID# 080e0000011c453fb302160d7e5e96a0; Wikileaks Event ID# 9B53E34A-FD80-63FD-299C70F90AF90341.
39. Metz, Steven, 'Rethinking Insurgency', Carlisle: Strategic Studies Institute, US Army War College, 2007, available at http://www.strategicstudiesinstitute.army.mil/pdffiles/pub790.pdf, accessed on ; Mark Duffield, *Global Governance and the New Wars,* London and New York: Zed Books, 2001; Mary Kaldor, *New and Old Wars,* Cambridge: Polity Press, 1999.
40. Snow, Donald, *Uncivil Wars*, Boulder: Lynne Rienner Publishers, 1996.
41. Arquilla, John and David Ronfeldt, *'Networks and Netwars',* Santa Monica: RAND, 2001, available at http://www.rand.org/pubs/monograph_reports/MR1382.html, accessed October 2011; Bruce Hoffman, 'Insurgency and Counterinsurgency in Iraq', Santa Monica: RAND, 2005, available at http://www.rand.org/pubs/occasional_papers/2005/RAND_OP127.pdf, accessed October 2011; Frank Hoffman, 'Neo-classical Counterinsurgency', *Parameters*, 2007, available at

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42. Singer, *Wired for War*, n. 16, p. 279.
43. As quoted in Ibid., p. 281.
44. Ibid.