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### Measures for Security in a Counterinsurgency

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# Measures for Security in a Counterinsurgency

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**ABSTRACT** Quantitative measures to gauge progress in a counterinsurgency in use today include the number of enemy, friendly, and civilian casualties, and the level of violence. While common, each of these has drawbacks. With this and the sparseness of the literature on this topic in mind, we argue for a series of improved measures. These include the ratio of who is initiating incidents, an historical analysis of incidents and related variables, and an analysis of insurgent target sets. These measures are presented using data for Al Anbar province, Iraq, along with a discussion of their advantages over more common metrics.

**KEY WORDS:** Metrics, Counterinsurgency, Anbar

In every endeavor, there is a desire to know whether progress is being made. This is especially true for endeavors involving conflict; military conflict being one example. In conventional military conflicts, efforts to determine progress abound. Tactical examples include a soldier following rounds put downrange with his eye to ensure they are striking the target, or battle damage assessments following air and artillery strikes to determine if the target was destroyed. Operational examples include friendly and enemy body counts, orders of battle, and terrain held. All are key measures for determining whether a conventional campaign is going well, and can be used to inform discussions of strategic adjustment.<sup>1</sup> These examples, while reliant on data that are not always easy to obtain, are at least straightforward and their connection to progress in a conventional campaign is typically apparent.<sup>2</sup>

Unconventional military conflicts can be more complex than conventional ones. In a counterinsurgency, for example, the contest is

<sup>1</sup>Scott S. Gartner, *Strategic Assessment in War* (Binghamton, NY: Vail-Ballou Press 1997), 163–77.

<sup>2</sup>Austin Long, *On 'Other War': Lessons from Five Decades of RAND Counterinsurgency Research* (Santa Monica, CA: RAND Corp. 2006), 39.

for people and ideas as opposed to terrain and physical conquest.<sup>3</sup> As Galula says, an insurgent holds no terrain and refuses to fight for it.<sup>4</sup> The US Army's field manual on counterinsurgency explains that in such a conflict, the tools of conventional campaigns, such as the ability to execute operational maneuver or employ overwhelming firepower, can be counterproductive and inhibit the accomplishment of campaign objectives.<sup>5</sup> Since the tactics, operational design, and strategy for a successful counterinsurgency campaign differ significantly from a conventional one, many of the measures used to gauge progress in a conventional campaign are of little utility in a counterinsurgency. Furthermore, because of its complex nature, devising measures that do gauge progress in a counterinsurgency can be difficult, though such efforts are as important for a counterinsurgency as for any military endeavor.

With this in mind, we will present here a discussion of measuring progress in a counterinsurgency, with an emphasis on several measures for security developed by the author and the advantages these have over some more common security metrics. Such a discussion is important for several reasons. First, while not a new topic, the literature is generally sparse in providing explicit details on how to measure progress in a counterinsurgency. Second, the most common metrics currently in use suffer from drawbacks, so it is worthwhile to extend the discussion beyond them. Finally, with the advent of effects-based planning and assessments in recent years, there is a growing demand by military commanders for more rigorous means of gauging progress in a campaign. The same can be said of the American people, as the integration of the tenets of scientific research into the public consciousness has created a demand for more quantitative assurances of progress.

The rest of this paper is divided into three sections. First, we present a critique of some common counterinsurgency metrics for security currently in use. Next, we present three analyses performed by the author while deployed to the Al Anbar Province of Iraq with Multi-National Force – West (MNF-W), from January to October 2007. Each of these analyses will address a particular question of relevance to a counterinsurgency, with associated measures, descriptions of how to calculate them, and concrete examples of the end products. Finally, we

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<sup>3</sup>Roger Trinquier, *Modern Warfare: A French View of Counterinsurgency* [1961] (Westport, CT: Praeger reprint 2006), 15, 27.

<sup>4</sup>David Galula, *Counterinsurgency Warfare: Theory and Practice* [1964] (Westport, CT: Praeger reprint 2006), 50.

<sup>5</sup>Lt. Gens. David Petraeus and James Amos, *FM 3-24: Counterinsurgency* (Washington DC: Dept. of the Army 2006), ix.

conclude by discussing the advantages of our measures over some common metrics currently in use.

## On Counterinsurgency Metrics

### *The Literature*

The difficulty of devising useful measures of progress for a counterinsurgency likely explains why the literature is sparse on this topic.<sup>6</sup> While there are publications that address the issue, their treatment is generally cursory. Most simply provide a laundry list of potential measures. Some take the next step, to at least discuss the theory behind why proposed measures might be of utility.<sup>7</sup> Some go further, to propose means of actually obtaining the data necessary to calculate the measures.<sup>8</sup> Others portend to be more descriptive, but in reality mainly provide a rehashing of the theory behind effects-based assessments.<sup>9</sup>

Some select works, such as Jeffrey Race's *War Comes to Long An* and Thomas Thayer's *War Without Fronts*, provide more detailed and analytical approaches.<sup>10</sup> However, such works are few in number, and even in Race's authoritative text he stipulates that the model presented is only intended as a heuristic one, and not as a means of actually calculating the variables involved.<sup>11</sup> As this list suggests, there are few

<sup>6</sup>James Clancy and Chuck Crossett, 'Measuring Effectiveness in Irregular Warfare', *Parameters* 37 (Summer 2007), 89.

<sup>7</sup>Long, *On 'Other War'*; Clancy and Crossett, 'Measuring Effectiveness in Irregular Warfare'; Andrew F. Krepinevich Jr, 'How to Win in Iraq', *Foreign Affairs* 84 (Sept./Oct. 2005), 1; 'Measuring Success in Counterinsurgency Warfare' *West Point Irregular Warfare Message of the Week*, available at <[www.usma.edu/dmi/IWmsgs/MeasuringSuccess.pdf](http://www.usma.edu/dmi/IWmsgs/MeasuringSuccess.pdf)>, accessed June 2008; Anthony Cordesman, 'The Uncertain "Metrics" of Afghanistan (and Iraq)', available at <[www.csis.org/media/csis/pubs/070521\\_uncertain\\_metrics\\_afghan.pdf](http://www.csis.org/media/csis/pubs/070521_uncertain_metrics_afghan.pdf)>, accessed June 2008; Richard L. Clutterbuck, *The Long, Long War: Counterinsurgency in Malaya and Vietnam* (New York: Frederick A. Praeger 1966); David Kilcullen, 'Twenty-Eight Articles: Fundamentals of Company-level Counterinsurgency', *Military Review*, special counterinsurgency edition (Oct. 2006), 1.

<sup>8</sup>Petraeus and Amos, *FM 3-24: Counterinsurgency*; Frederick W. Kagan, 'Measuring Success' *Armed Forces Journal* (Jan. 2006), available at <[www.afji.com/2006/01/1397777](http://www.afji.com/2006/01/1397777)>, accessed June 2008.

<sup>9</sup>Craig Cohen, 'Measuring Progress in Stabilization and Reconstruction', *United States Institute of Peace Stabilization and Reconstruction Series* 1 (March 2006), 1.

<sup>10</sup>Jeffrey Race, *War Comes to Long An: Revolutionary Conflict in a Vietnamese Province* (Berkeley and Los Angeles: Univ. of California Press 1972); Thomas C. Thayer, *War Without Fronts: The American Experience in Vietnam* (Boulder, CO: Westview Press 1985).

<sup>11</sup>Race, *War Comes to Long An*, 277.

publications on measuring progress in a counterinsurgency that actually contain an end-to-end discussion of the theory to the finished product. We will present such a discussion below, but first it is worth reviewing some of the more common measures currently in use.

### *Metrics in Common Use*

As of this writing, the military forces of the United States, its Coalition partners, and the North Atlantic Treaty Organization are heavily involved in fighting insurgencies in both Iraq and Afghanistan. In both campaigns, the most common means of determining progress in establishing security have been the number of friendly, enemy, and civilian casualties and the level of violence. These metrics for security have been used to varying degrees by the military, for example in the testimonies of General David H. Petraeus before Congress and in the US Department of Defense's periodic reports on Iraq.<sup>12</sup> Think tanks, public institutions, and the media have also used them.<sup>13</sup> In general, we commend the use of metrics to increase the rigorousness of the discussion on whether progress is being made in these campaigns, especially by General Petraeus in his testimonies. However, the fact that the metrics listed above are common does not imply that they are ideal, as each has inherent drawbacks.

Krepinevich rightly points out that the number of friendly casualties is important to consider, citing the current example that as the number rises it erodes support for the wars in Iraq and Afghanistan among the American public.<sup>14</sup> However, there is little correlation between the number of friendly casualties and whether progress is being made. A unit could be taking heavy casualties and yet be inflicting more against the enemy, and thus be making progress. Alternatively, a unit could be

<sup>12</sup>'Charts to Accompany the Testimony of Gen. David H. Petraeus: 10–11 Sept. 2007', available at <[www.defenselink.mil/pubs/pdfs/Petraeus-Testimony-Slides20070910.pdf](http://www.defenselink.mil/pubs/pdfs/Petraeus-Testimony-Slides20070910.pdf)>, accessed June 2008; 'Charts to Accompany the Testimony of Gen. David H. Petraeus: 8–9 April 2008', available at <[www.mnf-iraq.com/images/stories/Press\\_briefings/2008/april/080408\\_petraeus\\_handout.pdf](http://www.mnf-iraq.com/images/stories/Press_briefings/2008/april/080408_petraeus_handout.pdf)>, accessed June 2008; *Measuring Stability and Security in Iraq: March 2008* (Washington DC: US Dept. of Defense 2008) available at <[www.defenselink.mil/home/features/Iraq\\_Reports](http://www.defenselink.mil/home/features/Iraq_Reports)>, accessed June 2008.

<sup>13</sup>See for example: *Iraq Index: Tracking Variables of Reconstruction and Security in Post-Saddam Iraq* (Washington DC: The Brookings Institution 2008), available at <[www.brookings.edu/iraqindex](http://www.brookings.edu/iraqindex)>, accessed June 2008; 'Measuring the Surge' graphic, *Washington Post*, 9 Sept. 2007, available at <[http://media.washingtonpost.com/wp-srv/world/pdf/surge\\_090907.pdf?hpid=topnews](http://media.washingtonpost.com/wp-srv/world/pdf/surge_090907.pdf?hpid=topnews)>, accessed June 2008.

<sup>14</sup>Krepinevich, 'How to Win in Iraq', 8.

taking few casualties and still be providing effective security to the population. In a counterinsurgency, the number of friendly casualties indicates little to a military commander beyond potential deficiencies in tactics, training, leadership, or equipment. Furthermore, a fixation on the number of friendly casualties can lead to a predilection for force protection above other aspects of the campaign, which will inherently limit the ability of troops to engage and protect local populations and to advise and conduct combined military operations with local forces, both of which are essential elements of a successful counterinsurgency.<sup>15</sup>

The number of enemy casualties is also not a good metric for counterinsurgency, for at least three reasons. First, body counts of non-friendly forces will be inherently hard to determine accurately since insurgents typically do not wear uniforms or explicitly identify themselves as such. In Iraq, for example, many insurgents are neither full-time participants in the struggle, nor do they necessarily believe in the fundamentalist Islam or Ba'athist causes.<sup>16</sup> Some are simply opportunists (or common criminals) who have used the chaotic situation to better their lot in life. Thus by definition it becomes impossible to construct an accurate 'enemy' body count.

Second, even if one could obtain an accurate enemy body count, using it to gauge progress in a counterinsurgency can be misguided, as there will typically not be an established insurgent order of battle against which to compare the body count and judge the attrition of enemy forces.

Finally, the extensive citation of enemy body counts by the US in the Vietnam War highlighted its dubiousness as a metric both in general and in the eyes of the American public.<sup>17</sup>

Civilian casualties are currently a popular measure, both with the military and the media. In his testimonies to Congress, General Petraeus cited both the number of Iraqi civilian deaths and the number of ethno-sectarian deaths over time as metrics to indicate progress generated by the US troop surge in Iraq.<sup>18</sup> The use of these metrics is likely related to the focus of the US Army's field manual on a secure population as a key objective for a counterinsurgency.<sup>19</sup> In principle, the number of civilian casualties and its trend over time speaks to whether this objective is being accomplished. However, in practice there are inherent drawbacks to using this as a standalone metric.

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<sup>15</sup>Petraeus and Amos, *FM 3-24: Counterinsurgency*, 1–29.

<sup>16</sup>Krepinevich, 'How to Win in Iraq', 7.

<sup>17</sup>'Measuring Success in Counterinsurgency Warfare', *West Point Irregular Warfare Message of the Week*.

<sup>18</sup>'Charts to Accompany the Testimony of Gen. David H. Petraeus: 10–11 Sept. 2007'; 'Charts to Accompany the Testimony of Gen. David H. Petraeus: 8–9 April 2008'.

<sup>19</sup>Petraeus and Amos, *FM 3-24: Counterinsurgency*, 1–29.

In general, any compilation of the number of civilian casualties will suffer from the same inaccuracies described above for enemy body counts, as it is nearly impossible to consistently distinguish who amongst the local population is an insurgent and who is not. As Galula says, the insurgent is everywhere and he is nowhere.<sup>20</sup>

Furthermore, even if we could consistently separate civilians from insurgents, the actual number of such casualties still may not be easily determined with any degree of accuracy. As an example, consider the case of civilian deaths in the current conflict in Iraq. With the toppling of the Iraqi government in the initial 2003 invasion and the ensuing period of instability, there were no Iraqi institutions to accurately track civilian casualties. Those agencies that did issue death certificates were subject to corruption, and given the dangerous situation in many areas, there is no guarantee that such agencies even observed every casualty.<sup>21</sup> As such, the number of civilian casualties must be estimated, and there have been several disparate attempts to do so. One effort, called the 'Iraq Body Count', has compiled a running tally via open-source reporting that currently stands around 90,000.<sup>22</sup> A second effort by The Brookings Institution relied on a combination of data sources, and gave a total closer to 104,000.<sup>23</sup> A third effort, by researchers at the Johns Hopkins Bloomberg Institute of Public Health, generated a substantially different count of over a half-million.<sup>24</sup>

The major reasons for these discrepancies are the data sources and methodologies involved. The Iraq Body Count uses media reports of violent events supplemented with hospital, morgue, non-governmental organization, and official figures to compile its tally.<sup>25</sup> The Hopkins studies instead used polling of Iraqi civilians in conjunction with statistical sampling methods to derive their totals.<sup>26</sup> These polling

<sup>20</sup>Galula, *Counterinsurgency Warfare*, 50.

<sup>21</sup>Neil Munro, 'Counting Corpses', *National Journal*, 5 Jan. 2008, available at <<http://news.nationaljournal.com/articles/databomb/sidebar.htm>>, accessed June 2008.

<sup>22</sup>See <[www.iraqbodycount.org](http://www.iraqbodycount.org)>. Number cited as of June 2008.

<sup>23</sup>*Iraq Index: Tracking Variables of Reconstruction and Security in Post-Saddam Iraq*, 4.

<sup>24</sup>L. Roberts, R. Lafta, R. Garfield, J. Khudhairi, and G. Burnham, 'Mortality Before and After the 2003 Invasion of Iraq: Cluster Sample Survey', *Lancet* 364, 20 Nov. 2004, 9448; G. Burnham, R. Lafta, S. Doocy, and L. Roberts, 'Mortality after the 2003 Invasion of Iraq: A Cross-Sectional Cluster Sample Survey' *Lancet* 368, 21 Oct. 2006, 9545.

<sup>25</sup><[www.iraqbodycount.org](http://www.iraqbodycount.org)>, accessed June 2008.

<sup>26</sup>Roberts, *et al.*, 'Mortality Before and After the 2003 Invasion of Iraq: Cluster Sample Survey', 9448; Burnham, *et al.*, 'Mortality after the 2003 Invasion of Iraq: A Cross-Sectional Cluster Sample Survey', 9545.

methods have since been the subject of some criticism.<sup>27</sup> Those criticisms aside, the three sources mentioned above and three other sources were compared in a report which showed that none of the six counts were in particular agreement.<sup>28</sup> Furthermore, besides General Petraeus's slide which depicted a count for the years 2006–08 and a Multi-National Corps – Iraq slide depicting estimates of rates of civilian casualties earlier in the war, we are unaware of any official US count of the number of civilian casualties for the entire Iraq campaign.<sup>29</sup> To our knowledge, there is also no official Iraqi total.

The fact that the US lacks an official number and a corresponding methodology for the entire war means it cannot refute the many other estimates for the same metric. So, in addition to the number of civilian casualties being inherently inaccurate, for the Iraq War the US has essentially lost control of the ability to use this metric effectively in its strategic communications, another critical aspect of a counterinsurgency.<sup>30</sup>

The level of violence is another commonly cited metric for counterinsurgency. For the current conflicts in Iraq and Afghanistan the level of violence has typically been expressed as the number of security incidents and its trend over time.<sup>31</sup> Indeed, a number of the charts shown in General Petraeus's testimonies contained graphs of these types of data.<sup>32</sup> While the level of violence may appear to be useful for gauging progress in a counterinsurgency, it has several complicating factors as a standalone metric. To illustrate these complexities, we present Figure 1.

This chart shows the number of security incidents per day in Al Anbar Province, Iraq, from November 2003 through August 2007. There are clearly fluctuations in the data, some of which appear periodic. But what does this graph, or for that matter security incidents alone, really tell us? If incidents are on the rise, it might be indicative of a surge in enemy operations or a shift by insurgents toward more effective tactics. It could also be related to the arrival of an inexperienced combat unit into theater

<sup>27</sup>Munro, 'Counting Corpses', <[www.iraqbodycount.org](http://www.iraqbodycount.org)>, accessed June 2008.

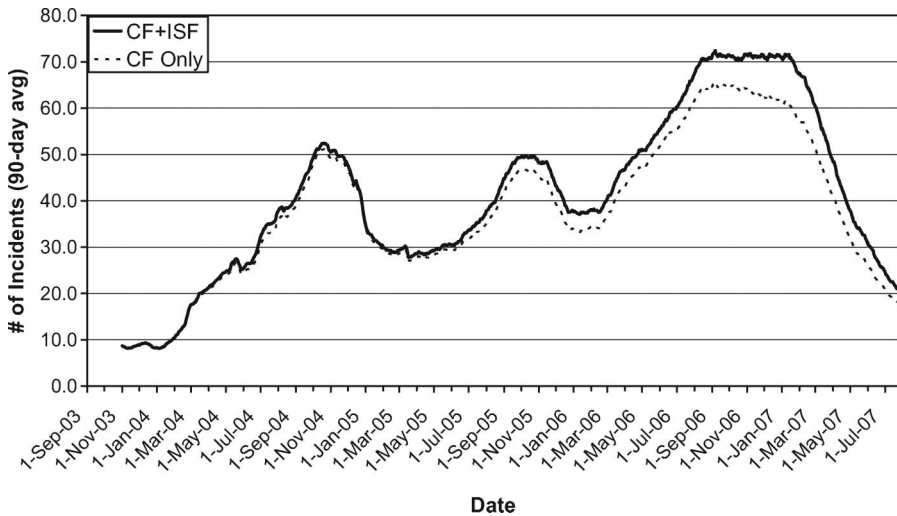
<sup>28</sup>Hannah Fischer, 'Iraqi Civilian Deaths Estimates' *Congressional Research Service Report RS22537*, 22 Nov. 2006, 1.

<sup>29</sup>'Charts to Accompany the Testimony of Gen. David H. Petraeus: 8–9 April 2008'; *Measuring Stability and Security in Iraq: August 2006* (Washington DC: US Dept. of Defense 2006), 32.

<sup>30</sup>Galula, *Counterinsurgency Warfare*, 75–94.

<sup>31</sup>While a formal definition of the term 'incident' is lacking, in this context it typically refers to enemy actions. These actions include attacks (direct fire, indirect fire, improvised explosive devices (IEDs), mines) and also IED and mine finds (i.e. prior to explosion). We will use the term 'incident' in this context as well.

<sup>32</sup>'Charts to Accompany the Testimony of Gen. David H. Petraeus: 10–11 Sept. 2007'; 'Charts to Accompany the Testimony of Gen. David H. Petraeus: 8–9 April 2008'.



**Figure 1.** Number of Security Incidents in Al Anbar Province against Coalition Forces (CF) and Iraqi Security Forces (ISF) (solid line) and against CF alone (dotted line), from November 2003 through August 2007. Data have been smoothed by averaging over 90 days.

or a shift by friendly forces toward less effective tactics. Any of these explanations could indicate a worsening security situation. Alternatively, the rise might be related to a particular Coalition Force (CF) operation, a general increase in CF operational tempo, or a surge in the number of Coalition Forces. These actions, which can cause a short-term rise in the number of incidents, may eventually lead to an improved security situation. Conversely, if incidents are declining, this might indicate that the insurgency is waning in strength, or that the local populace has turned against the insurgents. It could also be related to a shift toward less effective tactics on the part of insurgents, or more effective ones on the part of Coalition Forces. Any of these explanations could indicate an improving security situation. Alternatively, a decline in incidents might be related to an increased emphasis on force protection at the expense of securing the population. Holing up in CF bases may reduce the number of incidents, but at great cost to security.

In looking again at Figure 1, it becomes clear that there is no contextual information inherent to a plot of incidents over time to tell us the cause of a specific increase or decrease. Additionally, with this graph alone we cannot discern whether a specific change in the number of incidents has the same or different cause as any previous change. While such contextual information can be included via an oral or written explanation, the acceptance of that explanation requires faith on the part

of the audience in the integrity and rigorousness of the explainer. For a military commander getting an update from his staff, this may not be an issue. For a public audience rife with skeptics, this lack of inherent context can lead to wide debate as to what the data really mean. In either case, the inherent inclusion of additional contextual information would lead to greater understanding and clarity of the metric.

Thus far, we have focused on several metrics that have been widely used for gauging progress in a counterinsurgency. We believe that better means exist. As such, the next section will describe several measures developed by the author while deployed as an operations analyst to the Al Anbar Province of Iraq. More specifically, the measures presented will focus on gauging progress in providing security. While there are other important components of a counterinsurgency, such as governance and economic development, the provision of security is by necessity the first step.<sup>33</sup> Additionally, while metrics such as the ‘benchmarks’ used by the US General Accounting Office to gauge political progress in Iraq are focused at the strategic level, we will focus on the operational and to some extent tactical levels.<sup>34</sup> In particular, we will seek to answer three questions of importance to a counterinsurgency:

- Can we measure progress in achieving advantages of initiative?
- Can we measure progress in gaining the support of the population?
- Can we measure progress in rendering the insurgency ineffective?

The next section will answer these questions in turn. Note that while the data presented are specific to Al Anbar Province and the war in Iraq, we believe the analyses described could be generalized to any counterinsurgency.

## Answering the Questions

### *Can We Measure Progress in Achieving Advantages of Initiative?*

Often when examining the drawbacks of potential metrics, it becomes apparent that where a single calculated value fails, the *ratio* of several

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<sup>33</sup>Galula, *Counterinsurgency Warfare*, 75.

<sup>34</sup>Government Accounting Office, *Iraqi Government Has Not Met Most Legislative, Security, and Economic Benchmarks* (GAO-07-1195) (Washington DC: Government Accounting Office 2007); David M. Walker, ‘Securing, Stabilizing, and Rebuilding Iraq: Iraqi Government Has Not Met Most Legislative, Security, and Economic Benchmarks (GAO-07-1220T)’ (4 Sept. 2007), Testimony to Congress available at <[www.gao.gov/new.items/d071220t.pdf](http://www.gao.gov/new.items/d071220t.pdf)>, accessed June 2008.

values may succeed. An example might be to look again at the number of security incidents over time. We discussed above the lack of contextual information inherent in incident data as a standalone metric. Another metric that is frequently tracked is the number of troops conducting operations.<sup>35</sup> Thus, a simple first step to providing more inherent context to incident data might be to divide the number of daily incidents by the number of troops that were actively patrolling that day. This ratio, which effectively becomes a concentration when expressed as the number of incidents per 1,000 troops, gives additional insight as to whether friendly forces are having some effect.

The use of ratios with regards to counterinsurgency is not new. In *War Comes to Long An*, Race describes in detail the concept of the balance of forces. In particular, he states that the 'balance of forces is a compound of two distinct and independent concepts: a *force ratio*, or roughly the number of people on each side; and a *power ratio*, or the ratio of effectiveness of each side's operatives after taking into account the impact of power-augmenting factors'.<sup>36</sup> Our discussion above highlights the difficulties of determining the number of people on the side of the insurgency, especially in the current Iraqi conflict. However, the latter concept, that of the effectiveness of each side's operatives, is a quantity that we can address directly. Race provides several such ratios, for example the ratio of enemy killed in action (KIA) to friendly KIA, or the ratio of enemy KIA and captured to the number of friendly troops.<sup>37</sup> Again, given the difficulties in establishing who is an 'enemy' fighter and who is not, we prefer not to use these ratios. We will instead focus on the ratio of incidents initiated by friendly forces to those initiated by insurgents.

In attempting to calculate this ratio using data gathered by MNF-W, two things quickly became apparent. First, we realized it was necessary to have a clear understanding of what it meant to 'initiate' an incident. A simple definition might be to say that if friendly forces shot at insurgents first, then the incident was initiated by friendly forces (and vice versa). However, in Iraq the situation is not always this clear. For example, consider the case of improvised explosive devices (IEDs). Sometimes these devices are actively detonated by insurgents against friendly forces and these cases would clearly count as being insurgent-initiated. However, sometimes insurgents place IEDs by the side of the road with a passive trigger, such that when a vehicle trips the trigger, the IED explodes. It could be argued that the friendly troops driving the

<sup>35</sup>See for example 'Measuring the Surge', *Washington Post*, 9 Sept. 2007.

<sup>36</sup>Race, *War Comes to Long An*, 144.

<sup>37</sup>*Ibid.*, 231.

vehicle ‘initiated’ the explosion by tripping the trigger. Alternatively, one could argue that by setting the trigger, the insurgent ‘initiated’ the incident by putting the sequence of events into motion. Thus, a more rigorous definition was needed for what it meant to initiate an incident.

Our second realization was that there were too many incidents for a single analyst to read through and individually assign them, based on some definition, as being initiated by one side or the other. To remedy both of these issues, we established a categorization scheme for the types of incidents we saw in Al Anbar. We did this as follows:<sup>38</sup>

- Incidents considered to be initiated by friendly forces:
  - Air strikes
  - Engagement of enemy forces (by various means)
  - Cordon and knock/searches (usually in which detainees were taken)
  - Raids
  - Discovery of unexploded ordnance
  - Discovery of weapons caches
- Incidents considered to be initiated by insurgents:
  - Assassinations
  - Attacks against friendly forces, to include:
    - Complex attacks (more than one weapon system involved)
    - Direct fire attacks (to include small arms fire, rocket-propelled grenades, and grenades)
    - IED attacks
    - Indirect fire attacks
    - Rocket attacks
    - Mine attacks
    - Sniper attacks
    - Suicide bombers
    - Vehicle-borne IEDs (VBIEDs)
  - Discovery of weapons systems in a state ready to inflict harm, to include:
    - Emplaced IEDs and mines
    - Emplaced rockets and launchers

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<sup>38</sup>These categories correspond to the types of incidents in the MNF-W Significant Events database, which was the repository for reporting on security incidents. For clarity, we have included surface-to-air fire incidents under the direct fire or rocket categories, depending on the event. Entries in the database such as defensive actions in which no shots were fired, escalation of force incidents, accidents, and unexplained explosions were considered to be initiated by neither side (i.e. effectively ignored).

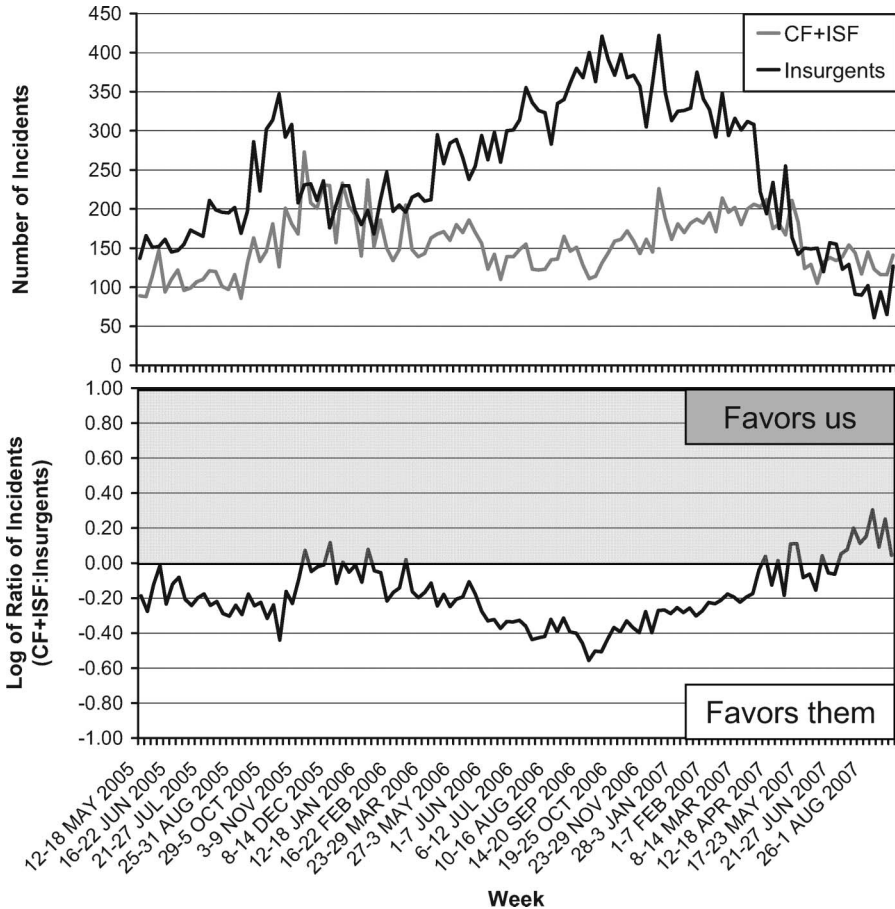
Using this scheme, we could calculate the number of incidents initiated by each side along with the incident ratio at various levels of fidelity. As an example, Figure 2 shows the results for all of Al Anbar Province. The top graph shows the number of incidents initiated by insurgents against both Coalition Forces (CF) and Iraqi Security Forces (ISF) (black line) and the number of incidents initiated by CF+ISF against the insurgents (gray line), from May 2005 through August 2007. The bottom graph shows the ratio of incidents initiated by CF+ISF to those initiated by insurgents (i.e. the gray line in the top graph divided by the black line). In order to even the scale on the graph between the two sides, we plotted the logarithm of the actual incident ratio. As such, if the calculated value is positive (in the gray shaded area), it indicates that the ratio favors friendly forces. Conversely, if the value is negative, the ratio favors the insurgents.

A key takeaway from Figure 2 is that the worsening trend in the incident ratio for Al Anbar that was present in early 2006 reversed itself in late September 2007, and generally increased in the following months. This turning point was nearly coincident with the rise of the *Sahawa al-Anbar* (Al Anbar Awakening) movement, in which the local populace began to turn against the insurgency.<sup>39</sup> As Figure 2 shows, in the last few months for which we calculated the ratio, it was consistently favoring friendly forces. More specifically, CF and ISF initiated 61 per cent of the total number of incidents in Al Anbar in August 2007, which was the highest calculated fraction since the beginning of our data set in May 2005.<sup>40</sup> Since insurgents rely on initiative to compensate for being overmatched in personnel, technology, and firepower, the shift of the incident ratio to favor friendly forces was a clear and quantitative indication that significant progress was being made against the insurgency in Al Anbar.

Given the fidelity of MNF-W's incident data, we could also calculate the ratio of incidents for various geographic regions, such as unit areas of operation and various cities. For the sake of brevity we will not show those graphs here, but they were part of a regular update provided to MNF-W leaders and were important in discerning nuanced aspects of the situation in Al Anbar. As Cordesman points out, the 'rolling-up' of metrics into higher and higher composites tends to blur the tribal and

<sup>39</sup>Niel Smith and Sean MacFarland, 'Anbar Awakens: The Tipping Point', *Military Review* (March–April 2008), 41.

<sup>40</sup>Our data set extends only to August because that is as far as the author could calculate during his time in Iraq. A later calculation for the month of November 2007 showed that the fraction of incidents initiated by friendly forces had continued to increase, up to 75 percent of the total.



**Figure 2.** Number of Incidents initiated by Coalition and Iraqi Security Forces (CF+ISF; gray line) and by Insurgents (black line), from May 2005 through August 2007 (top). Ratio of incidents initiated by CF+ISF to those initiated by insurgents over the same time period (bottom). The gray shaded area indicates the ratio favors friendly forces (note that for fairness of presentation, we have plotted the logarithm of the actual ratio).

regional differences that are so important in countries like Iraq and Afghanistan.<sup>41</sup>

It was also possible to break out the data by force type. For example, Figure 3 shows the incident ratios for the three varieties of friendly forces in Al Anbar. From top to bottom, the graphs show the incident ratios for Coalition Forces (CF), the Iraqi Army (IA), and the Iraqi Police (IP). Each graph is the rollup for the entire province (again, further

<sup>41</sup>Cordesman, "The Uncertain "Metrics" of Afghanistan (and Iraq)".

fidelity could be obtained). In comparing these graphs, there are several interesting observations. First, the graph for the IA largely traced that for CF, until May 2007. After May, the incident ratio for the IA increased more rapidly than that for CF. Given how closely Coalition Forces paired with the Iraqi Army, it is perhaps not surprising that the incident ratio for the IA would parallel that for CF. However, the increase in the incident ratio for the IA above that for CF in the latter months of our data set was an indicator that IA forces were beginning to act more independently of Coalition Forces.

A second point of note is that the incident ratio for the Iraqi Police rose dramatically over the last year or so of our data set. Prior to mid-2006, there were essentially no effective IP in Al Anbar. As such, the incident ratio was incalculable prior to that time. As the 'Awakening' gained steam, the tribes began to volunteer their young men to join the IP in ever-increasing numbers, which led to a dramatic increase in the incident ratio for the IP. Additionally, while the ratio for the IP was similar to that for the Iraqi Army as of August 2007, the number of incidents initiated by the IP was twice the number initiated by the IA, despite the fact that there were similar numbers of IA and IP in the province at that time. As Figure 3 shows, both the IP and the IA had an incident ratio significantly larger than that for CF.

These observations are largely a result of the composition of each force. The Iraqi Police in Al Anbar were predominantly local Sunnis, and therefore they were viewed favorably by the local populace (Anbar being almost entirely Sunni). This allowed them to generate a much greater amount of actionable intelligence, which is key to maintaining the initiative against insurgents.<sup>42</sup> The Iraqi Army, which was composed largely of Shia from outside the province, was viewed with suspicion and was therefore not as effective a counter-insurgency force as the IP in Al Anbar.<sup>43</sup> Coalition Forces had the lowest ratio of the three, which is not surprising given that we were viewed as an occupying force in much of Iraq.<sup>44</sup>

At this point, it is useful to discuss the advantages and disadvantages of the incident ratio as a metric for counterinsurgency. Krepinevich very nicely summarizes the advantages:

This measurement can gauge progress in the intelligence war, which is a surrogate for popular support in Iraq. A positive trend

<sup>42</sup>Clutterbuck, *The Long, Long War*, 95–131.

<sup>43</sup>Carter Malkasian, 'A Thin Blue Line in the Sand', *Democracy: A Journal of Ideas* 5 (Summer 2007), 48.

<sup>44</sup>*Iraq Index: Tracking Variables of Reconstruction and Security in Post-Saddam Iraq*, 50.

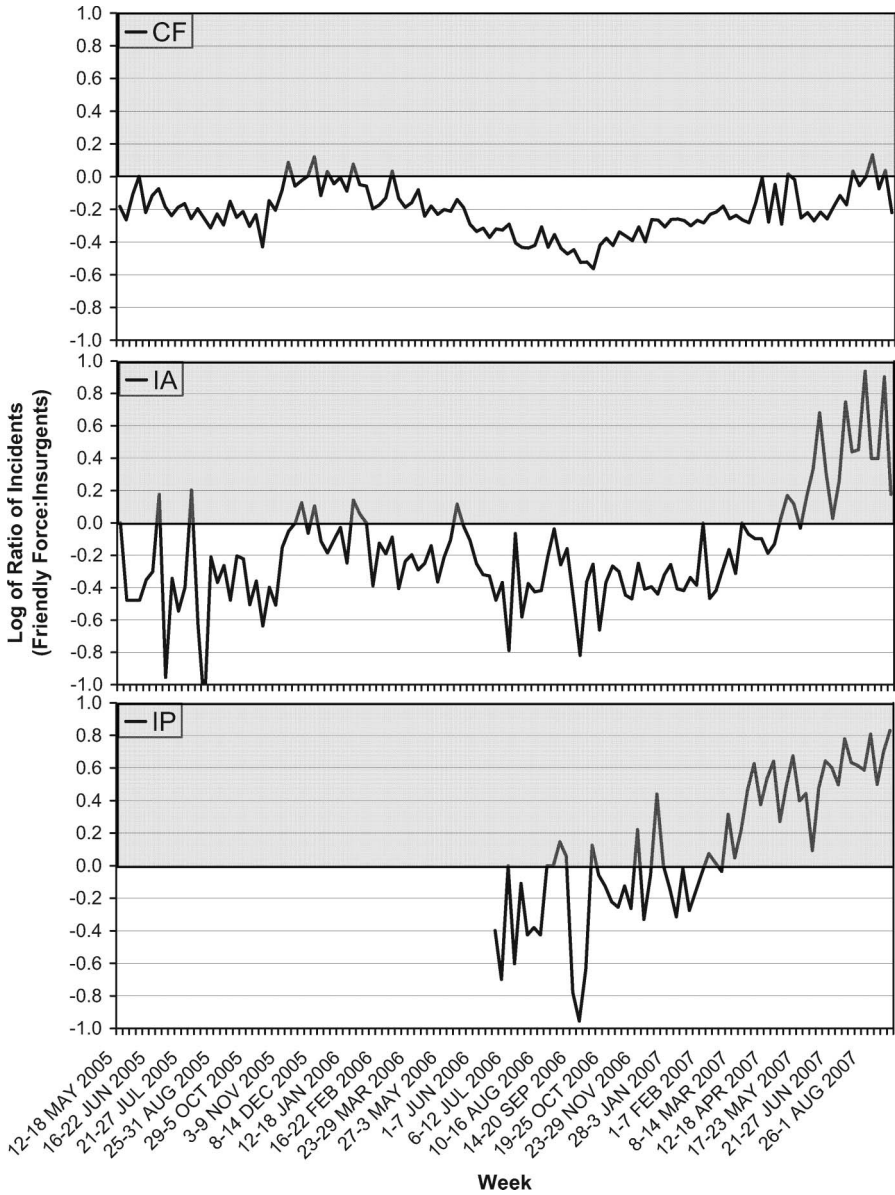


Figure 3. Ratio of incidents initiated by Coalition Forces (CF) to those initiated by insurgents (top), from May 2005 through August 2007. The same plots, but for the Iraqi Army (IA) (middle) and the Iraqi Police (IP) (bottom). Gray shaded areas indicate the ratio favors the friendly force.

in this metric would indicate that the population was providing ‘actionable’ intelligence and that the initiative was passing from the insurgent to the counterinsurgent forces. A subset of this metric, the percentage of contacts with the enemy initiated by Iraqi forces, is far superior to counting Iraqi troops in determining the Iraqi security forces’ effectiveness. If the percentage of contacts with the enemy that are initiated by Iraqi forces were to increase, and if their share relative to that of other coalition forces were to grow, this would indicate that Iraqi forces are assuming more of the burden for Iraq’s security and also winning the people’s support. Positive trends in this metric could also encourage greater US popular support, since it would also enable reductions in the number of the US troops in Iraq.<sup>45</sup>

We cannot overstate our agreement with the utility of this metric for evaluating progress in the development of the ISF. Indeed, the usual metrics for doing so, for example unit readiness reports or manpower levels, have been widely criticized as poor measures for whether the ISF are ready to take over the mission in Iraq.<sup>46</sup> In General Petraeus’s testimonies, he attempted to go further by presenting a slide on the assessed effectiveness of the ISF. However, this slide simply divided the number of Iraqi Army, National Police, and Special Operating Force battalions into their Operational Readiness Assessment (ORA) categories (these roughly correspond to: unit forming; fighting side by side with CF; Iraqi lead with Coalition support; and fully independent).<sup>47</sup>

These four categories, while seemingly important in thinking through whether the ISF are ready to take over, do not definitively answer the critical question of whether the ISF can actually fight. Race points out that in Vietnam, ‘the revolutionary movement did not need to be “good” or “effective” by any absolute standard; it needed only to be better than the government’.<sup>48</sup> The same can be said, but in the converse sense, for the ISF. Looking at the ratio of incidents initiated by the IA and IP in Al Anbar showed that by late 2007 they were

<sup>45</sup>Krepinevich, ‘How to Win in Iraq’, 8.

<sup>46</sup>Ibid., 8; Cordesman, ‘The Uncertain ‘Metrics’ of Afghanistan (and Iraq)’; Kagan, ‘Measuring Success’; Michael P. Noonan, ‘Iraq and the ‘Metrics’ System’, *Foreign Policy Research Institute E-Note* (Sept. 2007), available at <[www.fpri.org/enotes/200709.noonan.iraqmetricssystem.html](http://www.fpri.org/enotes/200709.noonan.iraqmetricssystem.html)>, accessed June 2008.

<sup>47</sup>Charts to Accompany the Testimony of Gen. David H. Petraeus: 10–11 Sept. 2007; ‘Charts to Accompany the Testimony of Gen. David H. Petraeus: 8–9 April 2008’. The ORA is an assessment tool used by Multi-National Corps-Iraq (MNC-I) and Multi-National Force-Iraq (MNF-I) to gauge the development progress of Iraqi Security Forces.

<sup>48</sup>Race, *War Comes to Long An*, xv.

consistently initiating more incidents against insurgents than were being initiated against them, which showed directly that they could actually fight. With this knowledge, Coalition Forces could place increasingly more responsibility on the ISF confident that they could handle it, and as Noonan points out, they could also focus more heavily on improving areas such as the ISF's logistics system.<sup>49</sup>

Of course, no metric is perfect and the incident ratio is no exception. One of the drawbacks of this metric as we have described it is that the methodology for assigning incidents to either friendly forces or insurgents is not as straightforward as it may have been in the past. For example, disagreements have arisen as to whether the discovery of an IED before it explodes should count as an incident initiated by insurgents or one initiated by friendly forces.<sup>50</sup> A second example would be whether all raids and detainments should be counted as positive events, as these can sometimes create ill-will among the populace, especially if they are viewed as unjustified.

Another admitted drawback is that we have counted all incidents equally, so for example a suicide bomber who kills 100 people in a single explosion is counted the same as a single bullet from a sniper. However, thus far we have been unable to identify a weighting scheme that is both clear and non-ad hoc.<sup>51</sup> These drawbacks aside, we maintain that the incident ratio is a better measure of progress for a counterinsurgency than many others in common use.

### *Can We Show Progress in Gaining the Support of the Population?*

Gaining the support of the local population is generally taken to be a key objective of a successful counterinsurgency.<sup>52</sup> Thus a key

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<sup>49</sup>Noonan, 'Iraq and the "Metrics" System'.

<sup>50</sup>Our contention is that although an IED find is a more positive result than an IED attack, it is analogous to an errant shot fired at friendly forces. The fact that the shot missed does not remove the hostile intent behind it. The same is true for IEDs found before they could explode. Therefore, we assigned IED finds as incidents initiated by insurgents, as long as the IED had been emplaced. IEDs found before emplacement were treated as weapons caches. As a check on the plausibility of these assignments, we performed additional calculations in which IED finds were counted as incidents initiated by friendly forces. The results of these calculations were entirely inconsistent with intelligence assessments of the security situation in Al Anbar.

<sup>51</sup>A common suggestion has been to use casualties as a weighting criterion. However, since the vast majority of incidents do not cause any casualties, the net effects of casualty-weighted counting schemes turn out to be minor and not worth the additional complication of the metric.

<sup>52</sup>Trinquier, *Modern Warfare*; Galula, *Counterinsurgency Warfare*; Petraeus and Amos, *FM 3-24: Counterinsurgency*; Clutterbuck, *The Long, Long War*.

question is whether progress is being made in achieving this objective. To answer this question, we focused on analyzing seasonal trends in total incidents in Al Anbar. The top chart in Figure 4 shows total daily incidents initiated by insurgents from November 2003 through August 2007. The solid line corresponds to incidents against both Coalition Forces and Iraqi Security Forces, while the dotted line represents incidents against CF only.

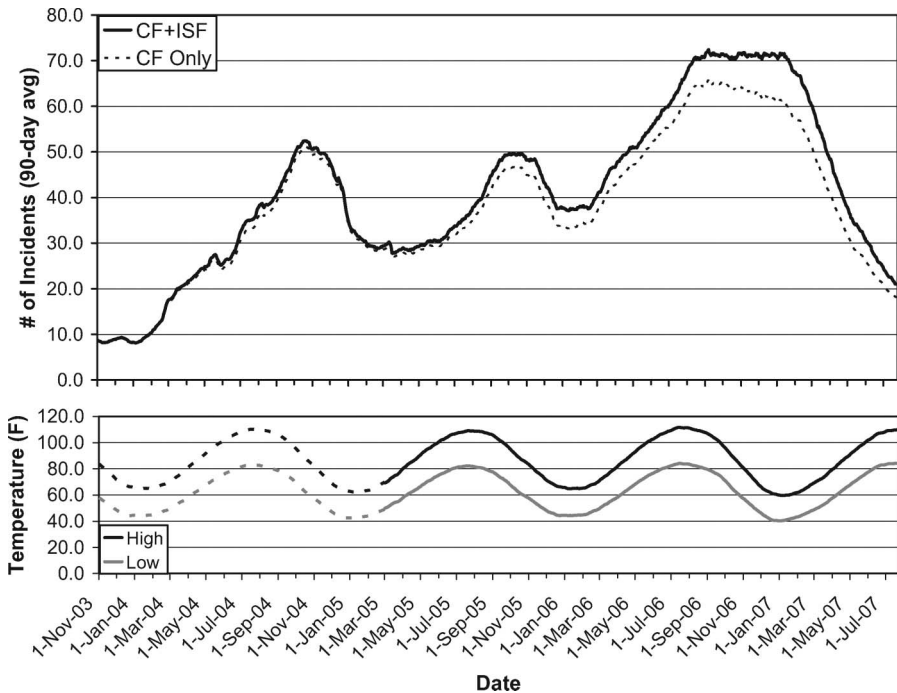
The bottom chart in Figure 4 shows high and low temperatures in Al Anbar, as measured at Camp Fallujah.<sup>53</sup> Comparing the temperature profile in the lower graph to the incident data in the upper graph, seasonal variations are immediately apparent. In particular, we see that incidents traditionally rose from a low point in mid-January, when temperatures were at their lowest. The rise in incidents typically continued during the summer, and peaked during the month of October (note Ramadan occurred in this timeframe). Of significance is that this seasonal cycle, which had been fairly consistent from 2004 through 2006, appears to have been broken in 2007. Instead of seeing a rapid decline following a peak in October 2006, we instead saw a sustained rate of incidents extending into January 2007, when we should have expected to see a minimum. Following January, we saw a steady decline in incidents, during a period of historic increase. This represented a dramatic development in the security situation in Al Anbar province, and was indicative that something significant had changed.

In looking more closely at the data for specific types of incidents, we noticed an interesting correlation. The top chart in Figure 5 shows total IED incidents plotted as the black curve, and total weapons cache finds as the gray curve. It is immediately obvious that there was a seasonal peak in IED incidents in the October/November timeframe, coinciding with a minimum in weapons caches found. Conversely, there was traditionally a minimum of IED incidents in January, with a coinciding peak in weapons caches found. This can be seen more clearly in the bottom graph of Figure 5, which depicts the ratio of weapons cache finds to IED incidents (i.e. the gray line in the top graph divided by the black line in the top graph).

Operationally, we can rationalize the peak in IED incidents in October of each year as being related to the seasons, as discussed above. The cycle of weapons cache finds was likely related to the fighting season as well. During the increase in incidents through the summer months, it is likely insurgents were smuggling weapons into Al

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<sup>53</sup>Temperature data were only available back to early 2005, but given the regularity of the data we projected them backwards to match the data set for incidents (dotted lines).

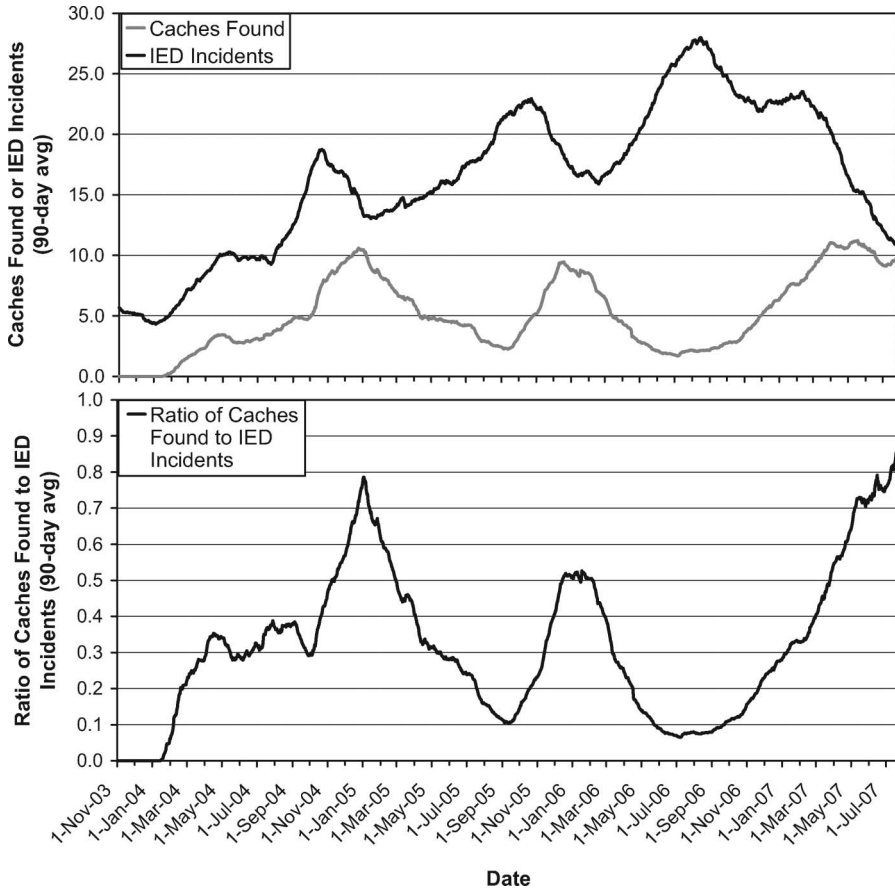


**Figure 4.** Number of incidents against Coalition Forces and Iraqi Security Forces (solid; top) and against Coalition Forces only (dotted; top), from November 2003 through July 2007. Data have been smoothed by averaging over 90 days. High (black) and low (gray) temperatures in degrees Fahrenheit as measured at Camp Fallujah (bottom). The decline in incidents following January 2007 occurred during a period of historic increase.

Anbar and/or moving weapons already in the province to more tactically expeditious locations.

Following an insurgent peak in operations in October, it is likely that there were weapons remaining that were not used in the summer campaign. As the situation quieted down each winter these caches were likely more stagnant than during the summer months, and friendly forces were likely more active due to lower temperatures. These were likely contributors to the peak in cache finds during the winter months.

A significant finding was that these trends appeared to have been broken in late 2006/early 2007. Instead of seeing a peak in IED incidents in October 2006, we saw a primary peak in August, followed by a secondary peak in February 2007. This seemed to indicate a prolonged campaign by insurgents, extending into the traditionally quieter winter months. After February, we saw a steady decline in the number of IED incidents, during a period of historic increase. As usual,



**Figure 5.** Number of Improvised Explosive Device (IED) Incidents (black line; top) and Weapons Caches found (gray line; top), from November 2003 through July 2007. Ratio of caches found to IED incidents (bottom). The increase in the ratio following January 2007 occurred during a period of historic decline.

we saw an increase in cache finds following a minimum in October, but instead of peaking in January, cache finds continued to rise. In fact, the ratio of cache finds to IED incidents, which typically peaked in January, instead continued to rise sharply, and at the end of our data set was at its highest level ever. These trends again represented a significant departure from historic norms.

Given the above results, a natural question was: what changed in the province to cause these departures from historic trends? It became clear in anecdotal discussions with units on the ground that they believed what had changed was the mindset of the Anbari populace. In order to

address this more quantitatively, we tallied the number of reports that referenced civilian tips for IEDs and weapons caches. As an example, Figure 6 depicts the number of civilian tips reported for cache finds (gray bars), along with the total number of cache finds by month (black line), from January 2006 through August 2007. While the numbers of monthly civilian tips shown in Figure 6 should not be taken as absolute, we can still conclude that the increasing trend in civilian tips for weapons caches was a key factor for why the number of cache finds stayed elevated during a period when they historically declined.<sup>54</sup> This was strong support for what units on the ground were saying: that what had changed in Al Anbar from previous years was the mindset of the Anbari populace.

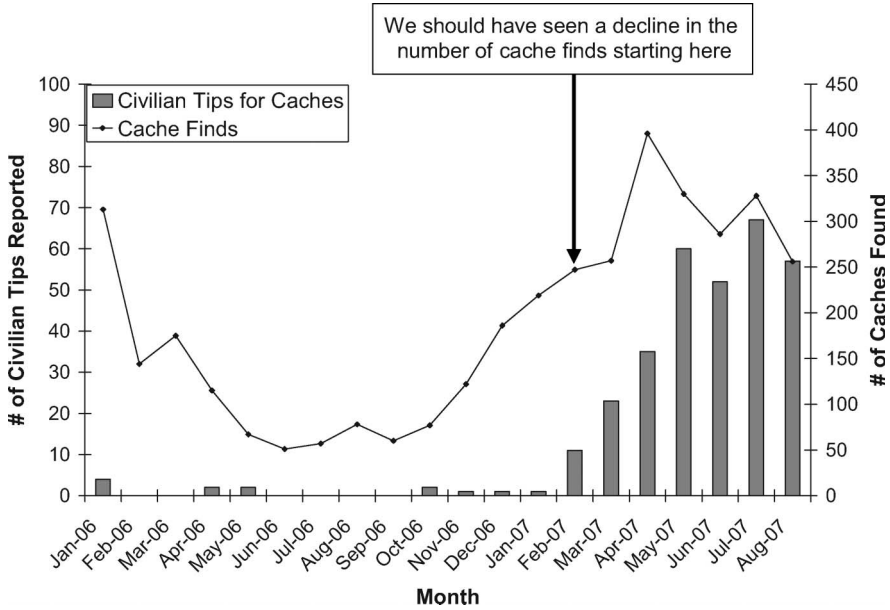
An advantage of analyzing incident data in this way instead of presenting them as a standalone metric is that the graphs we have shown not only identified that something had changed with regards to the security situation in the province; they also provided context as to what was driving that change. This was accomplished by including seasonal data in the discussion, as well as drilling down to specific types of incidents and showing how their trends were related. By showing the data this way, we were able to clearly depict a change from the past, which naturally led to further efforts to determine and quantify what that change meant and what caused it. The identification of a shift in the local mindset away from insurgents is a key moment in a counterinsurgency. While Long discusses several branches of thought on the nuances of public support,<sup>55</sup> in general the literature on counterinsurgency simply stresses the importance of getting the people on the side of the counterinsurgent. Galula, for example, essentially states this as the 'First Law' of counterinsurgency warfare.<sup>56</sup> Race shows in a very analytical way how 'increasing the sympathetic population by one person adds more to security than recruiting, training, and supporting one more soldier or policeman'.<sup>57</sup> Thus, this

<sup>54</sup>In comparing the numbers of reports for cache finds that actually mentioned civilian tips to anecdotal reporting on the fraction of caches found via tips, it was clear that the tally of the former considerably underestimated the total number of civilian tips being received. As such, the numbers of tips shown in Figure 6 should be viewed as minimal, as it is almost certain that the actual numbers of civilian tips for cache finds were much greater. However, detailed analysis of the data we did have failed to discover any significant biases (e.g. with respect to geographic location or reporting by unit) that would account for the increase in reported tips in 2007. Therefore, while the numbers of civilian tips as shown in Figure 6 should not be taken as absolute, the overall increasing trend is valid, and was corroborated by anecdotal reporting.

<sup>55</sup>Long, *On 'Other War'*, 21–34.

<sup>56</sup>Galula, *Counterinsurgency Warfare*, 52.

<sup>57</sup>Race, *War Comes to Long An*, 280.



**Figure 6.** Number of Weapons Cache Finds (black line; right axis) and Number of Reported Civilian Tips for Weapons Caches (gray bars; left axis), from January 2006 through August 2007. Given historical trends, we expected to see a decline in cache finds starting in February 2007.

type of analysis was more useful in demonstrating what was happening in the province than simply viewing the trend in the number of incidents over time.

Admittedly, the mindset of the population can also be gauged via polling, but in many cases it will be difficult to reach an adequate portion of the population to achieve high levels of confidence in polling results. This may be because the security situation is too prohibitive to conduct the polls, or perhaps because the local communications infrastructure is inadequate. Both factors were impediments to the implementation of polls in Al Anbar. In these cases, the type of analysis presented here may be another way of assessing the mindset of the people.

One potential drawback of this approach is that it required several years' worth of data to complete the analysis. Equally important, it required that those data were compiled consistently and in a standardized manner. This will not always be the case, and it highlights the need to establish consistent reporting and databasing procedures early in a campaign, if it is anticipated that these types of metrics will be of interest.

*Can We Show If the Insurgency has been Rendered Ineffective?*

As discussed above, significant gains in the security situation in Al Anbar began to be apparent by early-to-mid 2007. Later in the year, several assessments were made by the intelligence community that discussed whether the insurgency was still an effective force in the province. Their conclusions remain classified, but we can say that their assessments were largely qualitative in nature, though based on traditional techniques of analyzing intelligence in a critical manner. As such, we endeavored to complement those assessments by addressing this question in a more quantitative manner. We did this by analyzing the evolution of insurgent target sets.

Figure 7 shows another way of looking at our incident data, this time as weekly sums from July 2006 through August 2007. The sums are broken out by target type. As the figure shows, the majority of incidents were consistently initiated against Coalition Forces. However, by comparing trends in incidents against each target we could paint a picture of a frustrated insurgency.

This can be seen more clearly in Figure 8, which illustrates how insurgent efforts shifted over several target types. The top chart shows the number of incidents initiated by insurgents against Coalition Forces.<sup>58</sup> Such incidents rose during 2006, and peaked in the November to December timeframe. Following that peak, incidents against CF generally declined. The second chart from the top highlights incidents against the Iraqi Army. Such incidents were also on the rise during 2006, and they peaked in the December to January timeframe. Note this peak was slightly delayed from the peak in incidents against CF. As with CF; incidents against the IA declined steadily following that peak.

The third chart from the top highlights incidents against the Iraqi Police. Such incidents generally rose during 2006, though there was a sharp rise in January 2007 that led to a peak in the late February to early April timeframe. This peak was slightly delayed from both the CF and IA peaks. Similar to incidents against CF and the IA, incidents against the IP generally declined following that peak.

<sup>58</sup>The data have been averaged over 90 days to smooth the curves. Also, to avoid confusion, numbers on the vertical axis in Figure 8 have been omitted. Instead, the data for each target type are plotted on a scale normalized to match the peak intensity of the curve for Coalition Forces. For the sake of this discussion, the overall trend is more important than the actual numbers. The actual scaling factors used were: Iraqi Army incidents (x6.1); Iraqi Police incidents (x14.2); civilian casualties (x4.3); civilian incidents (x27); infrastructure incidents (x55).

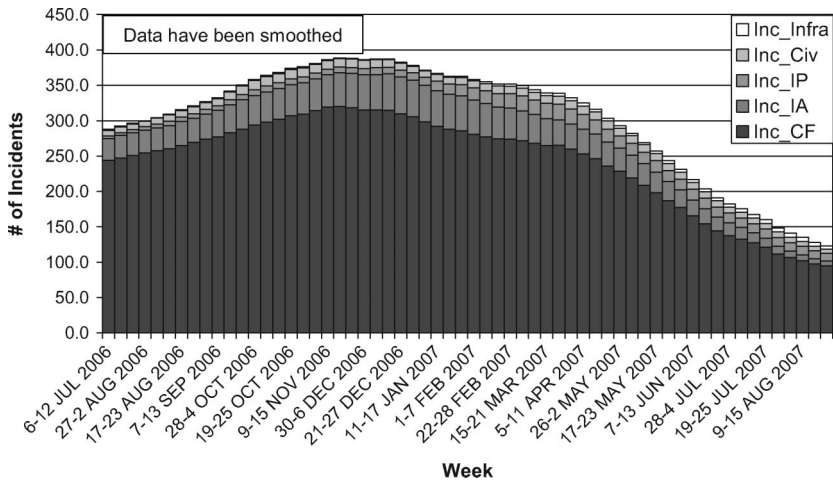
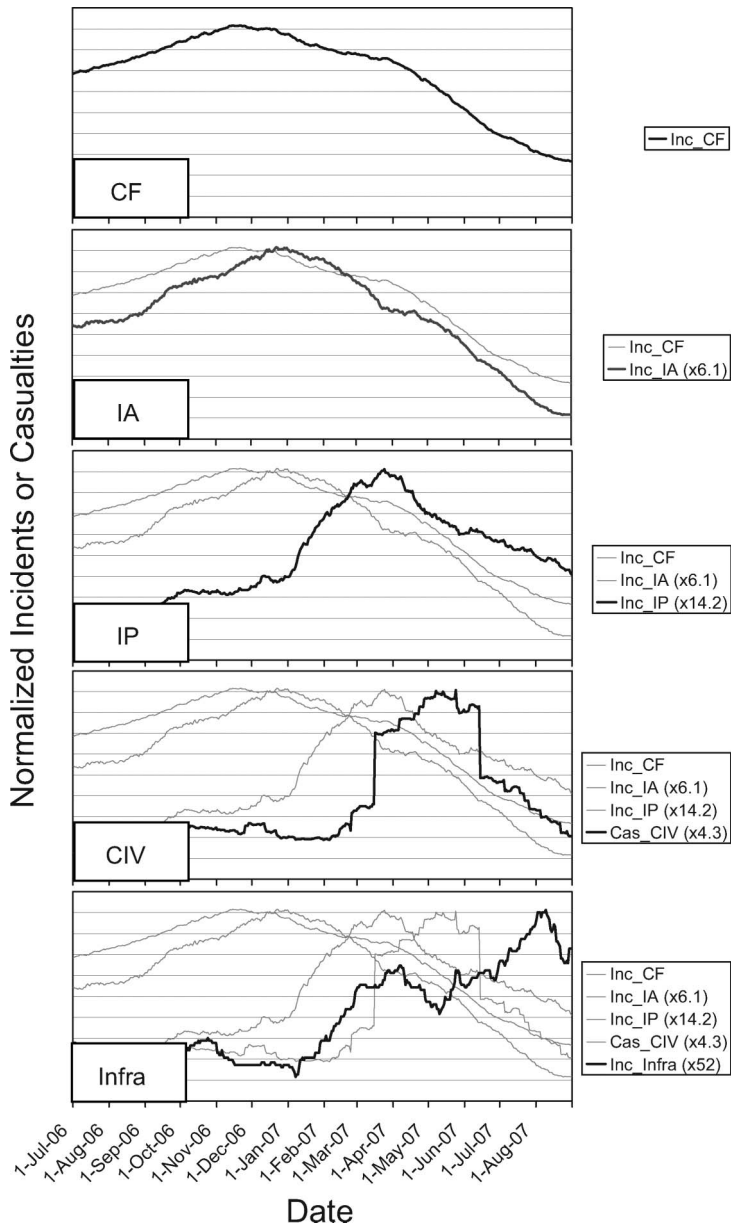


Figure 7. Incidents by Target Type from July 2006 through August 2007 (CF=Coalition Forces; IA=Iraqi Army; IP=Iraqi Police; Civ=civilians; Infra=infrastructure). Data have been smoothed to highlight the general trend.

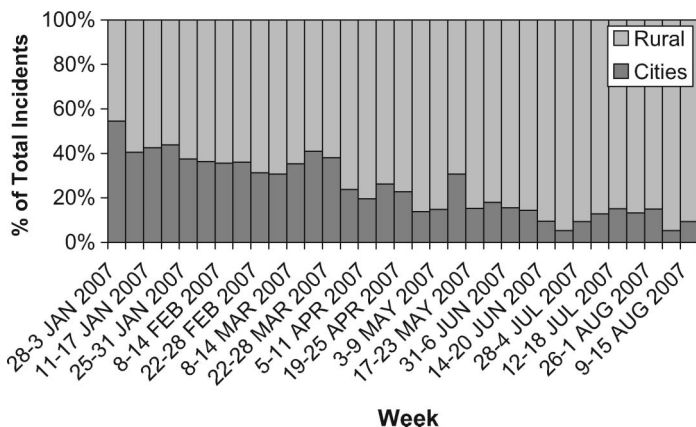
The fourth chart from the top highlights the number of civilian casualties caused by enemy attacks.<sup>59</sup> While civilian casualties were relatively constant through much of 2006, there was an abrupt increase in mid-March 2007, leading to a broad peak from mid-March to mid-June. This peak was again delayed somewhat from the peaks for CF, IA, and the IP. In keeping with the trends so far, civilian casualties declined following this peak. Finally, as the bottom chart shows, during the time in which incidents against CF, IA, and the IP, and civilian casualties were on the decline, attacks on infrastructure (mainly bridges) were increasing, though they remained at a fairly low level by comparison.

A key question to ask was whether these shifts in effort were effective for the insurgency. The answer was a resounding 'no'. There are some who argue that 'if one category of violence decreases while another

<sup>59</sup>We used civilian casualties here, vice incidents against civilians, to emphasize the fact that the attacks against civilians in the mid-March to mid-June timeframe were of the 'spectacular' variety, for example involving Suicide Vehicle-Borne Improvised Explosive Devices (SVBIEDs). We realize the use of civilian casualties has the inherent drawbacks discussed earlier in the paper, but given that we are more concerned here with where the peak due to the shift in insurgent tactics appeared in time than to absolute numbers of casualties, the drawbacks should not detract significantly from our conclusions.



**Figure 8.** Charts of Incidents or Casualties by Target Type, from July 2006 through August 2007 (90-day averages). From top to bottom, charts highlight (black lines) incidents against Coalition Forces (CF); incidents against the Iraqi Army (IA); incidents against the Iraqi Police (IP); civilian casualties (CIV); and incidents against Iraqi infrastructure (Infra). Plots have been scaled to match peak intensities, using scaling factors depicted in the graph legends.



**Figure 9.** Percentage of Total Incidents occurring inside Six Key Cities of Al Anbar Province (dark gray bars) and in the Rest of the Province (light gray bars), from January through August 2007.

goes up, it is hard to speak of much progress'.<sup>60</sup> We contend that the constant shifting of effort observed in Al Anbar was indicative of a frustrated and ineffective insurgency that was struggling to find an approach that worked. Furthermore, each of these shifts was to 'softer' targets, which implied a declining level of confidence among insurgents in their own capabilities. Even more importantly, each shift caused further alienation of the populace from the insurgency and its associated violence, especially once that violence was turned against the populace itself.

This can be seen even more clearly in Figure 9, which depicts the fraction of enemy incidents that occurred inside six key cities in Al Anbar. These are Ramadi, Fallujah, Hit, the Hadithah Triad, Al Qaim, and Rutbah, which combined account for roughly 80–90 per cent of the provincial population, according to recent estimates.<sup>61</sup> There was a clear decline in incidents within these cities, from 40–50 per cent of the provincial total in January, to 10–15 per cent of the total in August. This trend was the direct result of several factors. As discussed above, one factor was the populace turning away from the insurgency and denying insurgents the popular support they required to be effective. A related factor was the increased willingness of the young men of

<sup>60</sup>Jason Campbell and Michael E. O'Hanlon, 'Measuring Progress in Iraq', *Wall Street Journal*, 13 July 2007.

<sup>61</sup>The last official Iraqi census was conducted in 1997, and population movements since the invasion dramatically altered the number of people in some areas. These numbers represented the best estimates of those we spoke with in Al Anbar.

Al Anbar to join the Iraqi Security Forces, which allowed for a significant increase in the ISF density in the major population centers. These factors combined to deny insurgents access to the Anbari population centers, thereby rendering them largely ineffective.

As with our historical analysis, our analysis of the evolution of insurgent targeting provides much greater context than simply viewing trends in incident data alone. In this case, the added context is directly related to what insurgents were specifically doing and thinking, which is of obvious benefit. Additionally, the analysis provided a more convincing argument that the overall decline in incidents was actually related to an improvement in the security situation, instead of some other explanation. As with our historical analysis, the increase in context was achieved by drilling down to additional layers of data, though in this case the additional layers were the types of targets against which incidents were conducted and the geographical locations in which they occurred.

## **Conclusion**

The means of measuring progress in a counterinsurgency campaign described here have several general advantages over many common metrics in use today. First and foremost is that they have a direct relation to several key aspects of counterinsurgency operations: removing the insurgent's advantage of initiative; developing local forces to fight and generate intelligence; and gaining the support of and securing the local population. The same cannot be said about many other metrics currently in use.

Second, our measures rely on a common and generally reliable source of data. Each of the analyses presented in this paper used the MNF-W Significant Events database as the primary source. There was no need for gathering data like the number of troops or the number of patrols, or for sending data collectors out to ask polling questions. Each of our measures was derived strictly from combat reports that got filed as a matter of course anyway. This helped to reduce the overall level of effort required, but more importantly it provided a high level of consistency in the data used to calculate the measures, which is not the case for some common metrics, an example being civilian casualties as discussed earlier. Admittedly, the same can be said of incident levels alone as a metric, since these also come directly from combat reports.

However, a third advantage of our measures is that they facilitate a much greater level of understanding than can be obtained by looking at the number of incidents alone. This is due to two factors. The first is that our measures fuse information on the actions of all three actors in this type of campaign: insurgents, counterinsurgents, and the local

populace. The second is that our measures contain additional layers of information beyond just the number of incidents. As such, they paint a more comprehensive picture of the security situation and what may be causing changes in it.

For these reasons, and the many others we have articulated in this paper, we feel that the measures presented here represent an improved framework for gauging progress in a counterinsurgency. In addition, they have the added benefit of being useful from a strategic communications perspective. During our time in Al Anbar, for example, there were a large number of VIPs, press, and others who were briefed at various times on the security situation and how it was evolving. While some of these people were satisfied with qualitative assessments from our intelligence and operations officers, many others were skeptics who demanded quantitative evidence that those assessments were valid. In our experience, the types of measures presented here can help placate such skeptics by providing more rigor to the discussion than might otherwise be present. With all that said, it is our sincere hope that at the very least this work will stimulate a more detailed discussion, replete with data and examples, of other useful metrics or means of gauging progress in a counterinsurgency. It is not an understatement to say that such an informed discussion might in the future save the lives of warriors and civilians alike.

### Acknowledgements

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