A PARADIGM FOR SECURITY METRICS IN COUNTERINSURGENCY

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Current Army doctrine lacks a security metrics paradigm similar to the infrastructure paradigm SWEAT-MSO. Because of this, commanders, staff, subordinates, other government leaders, and the media lack a simple and common set of terms to use when communicating an assessment of security in a counterinsurgency environment. This thesis examines the history of the use of counterinsurgency metrics for security. It examines one successful counterinsurgency, United Kingdom in Malaya, 1948-1960; one unsuccessful counterinsurgency, France in Algeria, 1954-1962; and one ongoing counterinsurgency, Allied Elements in Iraq, 2003-Present. This research examines each of these regarding two lenses: systems analysis and tipping points. The successful metrics used in these counterinsurgencies are summarized in the security incident chronology acronym SLTWCT –slitwick-tee" (Security Incidents, Local Security Force Organization, Tips and Reports, Warrants, Captures and Sensitive Site Exploitation, and Trials).

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ABSTRACT

A PARADIGM FOR SECURITY METRICS IN COUNTERINSURGENCY, by Major Charles L. Assadourian, 126 pages.

Current Army doctrine lacks a security metrics paradigm similar to the infrastructure paradigm SWEAT-MSO. Because of this, commanders, staff, subordinates, other government leaders, and the media lack a simple and common set of terms to use when communicating an assessment of security in a counterinsurgency environment. This thesis examines the history of the use of counterinsurgency metrics for security. It examines one successful counterinsurgency, United Kingdom in Malaya, 1948-1960; one unsuccessful counterinsurgency, France in Algeria, 1954-1962; and one ongoing counterinsurgency, Allied Elements in Iraq, 2003-Present. This research examines each of these regarding two lenses: systems analysis and tipping points. The successful metrics used in these counterinsurgencies are summarized in the security incident chronology acronym SLTWCT –slitwick-tee" (Security Incidents, Local Security Force Organization, Tips and Reports, Warrants, Captures and Sensitive Site Exploitation, and Trials).

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ABBREVIATIONS AND ACRONYMS

AQI	Al Qaeda in Iraq
ASCOPE	Areas, Structures, Capabilities, Organizations, People, Events
CARVER	Criticality, Accessibility, Recuperability, Vulnerability, Effect, Recognizability
CCCI	Central Criminal Court of Iraq
CEPS	Combined Emergency Planning Staff
CPATT	Civilian Police Assistance Training Team
COIN	Counterinsurgency
D3A	Decide, Detect, Deliver, Assess
FLN	National Liberation Front (Algeria)
IED	Improvised Explosive Device
ISF	Iraqi Security Forces
JAM	Jaysh Al Mahdi (Mahdi Army – Iraq)
KLE	Key Leader Engagement
LEP	Law Enforcement Professional
LOE	Line of Effort
METT-TC	Mission, Enemy, Terrain and Weather, Troops and Support Available, Time Available, Civil Considerations
MNA	National Algerian Movement
MNLA	Malayan National Liberation Army (Malaya)
MPICE	Measuring Progress in Conflict Environments
MTFRIC	Military, Terrorism, Finance, Recruitment, Information, Communication
OAKOC	Observation and Fields of Fire, Avenues of Approach, Cover and Concealment, Obstacles, Key Terrain

ORSA	Operational Research and Systems Analysis
PMESII-PT	Political, Military, Economic, Social, Information, Infrastructure, Physical Environment, Time
POLICE	Police and Prison Structures, Organized Crime, Legal System, Investigations and Interviews, Crime-conducive Conditions, Enforcement Mechanisms and Gaps
SIGACT	Significant Activity [i.e. an attack or attempt to attack security forces, infrastructure, or civilians; no formal definition exists and the precise definition remains contentious]
SLTWC2	SIGACTs, Local Security Force Networking, Tips and Reports, Warrants, Capture and Sensitive Site Exploitation (SSE), Convictions
SLTWCT	Security Incidents, Local Security Force Organization, Tips and Reports, Warrants, Capture and Sensitive Site Exploitation (SSE), Trials
SWEAT-MSO	Sewage, Water, Electricity, Academics, Trash, Medical, Safety, Other
TCAPF	Tactical Conflict Assessment and Planning Framework
THINK	Treat all detainees with the same standard, Humane treatment is that standard, Interrogators interrogate, Need to report abuses, Know the approved interrogation technique and approved authority
TTPs	Techniques, Tactics, and Procedures

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CHAPTER 1

INTRODUCTION AND OVERVIEW

> I often say that when you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot express it in numbers, your knowledge is of a meagre and unsatisfactory kind; it may be the beginning of knowledge, but you have scarcely, in your thoughts, advanced to the stage of Science, whatever the matter may be.
>
> — William Thomson,
> 1st Baron Kelvin

In January 2010, Major General Michael T. Flynn, the senior U.S. Army intelligence officer in Afghanistan, published "Fixing Intel: A Blueprint for Making Intelligence Relevant in Afghanistan" in which he offered an assessment of the United States intelligence community in the Afghan counterinsurgency as overly threat focused, isolated, and not organized to filter and disseminate information adequately.[1] The isolation he describes results in some part from a need for adequate security metrics in counterinsurgency doctrine for the intelligence community. This thesis argues that current doctrine has not developed adequately in terms of established counterinsurgency metrics and proposes a paradigm to fill the gap. Unfortunately, the use of numerical security metrics at the tactical and operational levels as well as in the national media remains as contentious today as it has for decades.

A common item in news reports in the United States during the late 1960s was the number of both U.S. and Vietnamese casualties. The use of body count in the Vietnam War as a measure of effectiveness soured much of the American public and military

[1]Michael T. Flynn, Matthew Pottinger, and Paul D. Batchelor, *Fixing Intel: A Blueprint for Making Intelligence Relevant in Afghanistan* (Washington, DC: New American Century, 2010), 2-3.

regarding a purely quantitative approach. This souring occurred in part because of the absence of a logical link between the effect and the desired end state. The change in approach in the latter years of the war corresponded with a need for more robust measures. As a result, the buildup of Vietnamese forces under the concept of Vietnamization included the number of security forces recruited and retained within the Vietnamese forces.[2] Even prior to that, the Hamlet Evaluation System had measured effectiveness through public opinion polls.[3]

In August 2003, discussion of this issue continued as *New York Times* columnist Maureen Dowd criticized the Bush administration for providing ―a spun up document" on ―100 ways things were going great." in Iraq.[4] This criticism has also come from COIN experts such as David Kilcullen who described the divergent assessments offered by optimistic and quantitative American as compared to the pessimistic and qualitative Iraqi briefers following the Samarra Mosque bombing of 22 February 2006. He described how over four months elapsed before the formal coalition briefings caught up with the Iraqis despite the fact that the bombing represented a dramatic turning point.[5]

Ten years after U.S. intervention in Afghanistan, the debate continues regarding indicators of success. For example, in September 2010, noted author and sociologist

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[2]Historical Branch, Military Assistance Command - Vietnam, *Command History, United States Military Assistance Command, Vietnam, 1969 Vol. 1* (Washington, DC: Headquarters, Department of the Army, 1975), 13.

[3]Historical Branch, 1971 Vol II, H-11.

[4]Maureen Dowd, ―Magnet for Evil" *New York Times*, 20 August 2003, Op Ed Page.

[5]David Kilcullen, *The Accidental Guerilla* (Oxford: Oxford University Press, 2009), 121-122.

Amitai Etzioni critiqued General David Petraeus' five metrics, also known as measures of performance (MOP) or effectiveness (MOE), by questioning the extent to which the measures correlate with the desired objectives in Afghanistan.[6] Etzioni went so far as to compare the metrics to the body count used in Vietnam. In this criticism, however, he did not offer solutions on how to measure progress towards the desired objectives.

The topic of metrics has risen to the level of national prominence. On a visit to General Petraeus in Afghanistan, Bob Woodward described President Obama addressing the issue of indicators. "The president asked how they would measure success. He said he wanted sustainable progress and was still thinking about the transfer. 'Be careful we don't start something for which we don't have resources to enable completion. Keep thinking about how we'll know if we're succeeding,' the president said, 'and when we'll know.'"[7]

Defining and measuring security in an insurgent situation is no small challenge. Current doctrine defines security for all conflicts as "A condition that results from the establishment and maintenance of protective measures that ensure a state of inviolability from hostile acts or influences."[8] This definition implies interaction between three different entities: the hostile actor or influence, those who establish the protective measures, and that which is protected.

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[6]Amitai Etzioni, "Beware of Generals Carrying Metrics," *Huffington Post*, 30 September 2010, http://www.huffingtonpost.com/amitai-etzioni/beware-of-generals-carryi_b_745343.html (accessed 18 October 2010).

[7]Bob Woodward, *Obama's Wars* (New York: Simon and Schuster, 2010), 351.

[8]US Department of Defense, Joint Publication (JP) 1-02, *Department of Defense Dictionary of Military and Associated Terms* (Washington, DC: US Government Printing Office, with Updates as of 13 June 2007), 381.

For the purposes of this thesis, security in COIN is more than just the absence of violence. It actually has three major elements related to each of the three entities. The first is security incidents. This research defines security incidents as the level of insurgent related violence in a society including the violence against that which is protected. This violence involves elements of the civilian population, host nation government institutions, civil infrastructure, and elements of both host nation and foreign security forces. A second closely related element is security force functionality in establishing protective measures. This includes the degree of organization of the host nation's security forces and its judicial system in countering an insurgent threat. The third element of security is the confidence or lack of it that the civilian populace, that which is protected, has in its own security situation and in the security forces. This thesis proposes to identify for commanders as well as operations and intelligence staffs a tool to measure and assess all three elements of security in a counterinsurgency.

For the purposes of this research, a paradigm consists of a conceptual framework that permits the explanation and investigation of phenomena or the objects of study in a field of inquiry. Existing paradigms for counterinsurgency do not explicitly and directly address security. For example, Field Manual 3-34.170, *Engineer Reconnaissance*, provides the acronym SWEAT-MSO (Sewage, Water, Electricity, Academics, Trash, Medical, Safety, and Other Considerations), which allows engineer or civil affairs officers to concisely assess the infrastructure portion of the counterinsurgency (COIN) environment.[9] This infrastructure paradigm addresses the last three of five LLO (Logical

[9]Department of the Army, Field Manual (FM) 3-34.170, *Engineer Reconnaissance* (Washington, DC: Government Printing Office, March 2008), C-2.

Lines of Operations) of restoring essential services, support to governance, and support to economic development as outlined in FM 3-24, *Counterinsurgency*.[10] It must be noted that since publication of this manual LLO are now referred to as LOE (Lines of Effort). These tasks contribute to COIN operations with measurable results but indicate security indirectly rather than directly.

A lesser known doctrinal paradigm for security metrics in counterinsurgency specifically addresses the assessment of police forces and the policing environment. The acronym POLICE (Police and prison structures, Organized crime, Legal system, Investigations and interviews, Crime-conducive conditions, and Enforcement mechanisms and gaps) provides a paradigm to assess the police and criminal elements within an operating environment.[11] This paradigm addresses the first two of the five COIN LOOs, civil security operations and host nation security forces.

The problem is that commanders and their operations and intelligence staff lack such a security paradigm and do not have a tool for a common and concise description of the COIN security environment. Describing the security environment presents a challenge when units conduct a relief in place and hold alternate views regarding valid metrics. This challenge also exists when explaining numerical data on the security situation to the media. Even journalists have acknowledged the possibility of reasoned

[10]Department of the Army, Field Manual (FM) 3-24, *Counterinsurgency* (Washington, DC: Government Printing Office, December 2006), 5-3.

[11]Department of the Army, Field Manual (FM) 3-19.50, *Police Intelligence Operations* (Washington, DC: Government Printing Office, July 2010), 6-8.

responses which put numbers in proper context.[12] A security paradigm, similar to SWEAT-MSO and POLICE, may serve as a common tool to rapidly communicate understanding.

The absence of a doctrinal security metrics paradigm may permit continued friction regarding force application and civil-military definitions of security successes, as well as a continued gap in the intelligence community's ability to clearly and concisely articulate the level of security in a given area. Force application refers to the counterinsurgent's decisions regarding the density of friendly forces in a given area. The civil-military definitions of success in security vary from media to political leaders to military leaders as indicated by the continuing debate. This research supports these assertions regarding friction and definitions in relation to the absence of a security metrics paradigm.

This research serves to identify a paradigm based on the authors experience as a brigade intelligence officer using the security metrics acronym SLTWC2 (SIGACTs, Local Security Force Networking, Warrants, Capture and SSE, and Convictions) during most of 2009 in Kirkuk, Iraq.[13] In that paradigm conviction served as the final element instead of trial. The fact that a conviction is an outcome rather than a metric warrants modification to the paradigm as proposed in this thesis. This change occurred early in the conduct of this research and the analysis of this research explains the rationale. This research also draws on the author's experience during two other deployments in Baghdad

[12]James Lacey, "Who's Responsible for Losing the Media War in Iraq?" *Naval Institute Proceedings* (October 2004): 2.

[13]Charles Assadourian, "Security Metrics in COIN: Effects Based Analysis," *Military Intelligence Professional Bulletin* (April-June 2010): 37-40.

from March 2004 to March 2005 and October 2006 to January 2008. All three of these deployments involved the author in the assessment process, to include the defining of metrics.

The primary question answered in this research is "What security paradigm best captures meaningful security metrics in a counterinsurgency?" This question assumes a level of violence aimed at the government or its supporters. A lack of such violence makes the movement indistinguishable from more typical political movements seeking policy changes. The ideal paradigm contains a focus on the link between actions taken by the COIN force and a reduction in violence.

This research examines current and past methods and proposes a security metrics paradigm based on successful practices. In doing so, this research answered five subordinate questions to aid the difficult transition from description to prescriptive concepts. First, what is the relationship between the qualitative and quantitative aspects of security metrics? Second, how have past and current counterinsurgencies characterized desired security effects? Third, how has a systems approach contributed to the use of security metrics? Fourth, how has the concept of a tipping point contributed to the use of security metrics? Finally, what security metrics have been used in past successful and unsuccessful counterinsurgencies as well as ongoing counterinsurgencies? The first three questions address assumptions while the final two address evaluative criteria. All five questions address the three components of security: security incidents, functionality, and confidence.

Agreement on a spectrum of security effects counterinsurgents seek to achieve constitutes the first of two primary assumptions for this research. These serve as themes

throughout the research. Effects for the purpose of this research consist of ―1. The physical or behavioral state of a system that results from an action, a set of actions, or another effect. 2. The result, outcome, or consequence of an action. 3. A change to a condition, behavior, or degree of freedom."[14] Without agreement on a set of effects on a system, a set of measures cannot serve as a paradigm. This includes both the population and threat-centered approaches to COIN. While the use of the term ―system" in this definition addresses the third subordinate question, this research seeks to consolidate the most effective elements of all available measurement systems.

For this research, a measure of effectiveness (MOE) consists of ―a criterion used to assess changes in system behavior, capability, or operational environment that is tied to measuring the attainment of an end state, achievement of an objective, or creation of an effect" as opposed to a measure of performance (MOP) which is ―a criterion used to assess friendly actions that is tied to measuring task accomplishment."[15] In layman terms MOE answer the question _Are we doing the right things?' while MOP answer the question _Are we doing things right?' While JP 1-02, *Department of Defense Dictionary of Military and Associated Terms*, does not define the term metric, it may be considered an umbrella term for both MOE and MOP.

This research primarily but not exclusively seeks security MOE rather than MOP, for the purpose of focusing on what is arguably a subject which engenders greater disagreement. If agreement on MOE did exist to the same extent, the U.S. Army would

[14]US Department of Defense, Joint Publication (JP) 3-0 Change 2, *Joint Operations* (Washington, DC: US Government Printing Office, 22 March 2010), GL-13.

[15]Ibid., GL-20.

likely already have a doctrinal standard as it does for infrastructure. Too often MOP fill the gap when the development of adequate MOE proves difficult.[16] Defining security MOE should logically precede a clear definition of MOP. Success at performing a task does not always drive the achievement of a desired effect.

Part of the assumption regarding effects includes the concept that clearly defined and focused external force MOE may at times equate with host nation MOP.[17] In such cases the nationality of the individual or individuals taking action serves as the distinguishing feature between the two types of metrics. For example, if the host nation conducts the action, a metric may pertain to the effectiveness of the external force. While this research seeks MOE, other factors may require some combination of the two types of metrics to provide an ideal set of measures.

The concept of a tipping point refers to the point at which a system shifts from instability to another form of instability or equilibrium or shifts in the opposite direction. It may also be a shift from one form of instability to another. Malcolm Gladwell, noted author and staff writer for *The New Yorker*, characterizes tipping points as having ―the law of the few," the stickiness factor, and the power of context.[18] The law of the few refers to three key types of individuals called mavens, connectors, and salesmen. Mavens

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[16]William S. Murray, ―A Will to Measure," *Parameters*: *US Army War College Quarterly* 31, no. 3 (Autumn 2001): 147.

[17]US Department of Defense, Joint Publication (JP) 3-22, *Foreign Internal Defense* (Washington, DC: US Government Printing Office, 12 July 2010), IV-12.

[18]Malcolm Gladwell, *The Tipping Point: How Little Things Can Make a Big Difference* (Boston: Back Bay Books, 2002), 19.

introduce new concepts to a community, salesmen propagate them, and connectors bring people together in support of the message.

For example, when T.E. Lawrence searched for an appropriate shaykh to lead an insurgency against the Ottoman Empire, essentially he sought an ideal Arab maven while also serving himself as a maven within the British Army. Conversely, the example of allied politicians at Versailles in 1918 rejecting Ho Chi Min's input for the future of Indochina, combined with the outcome of the Vietnam War provides an indicator of the potential results of ignoring a maven.[19] In both cases the role of a maven played a critical role.

Those who host meetings serve as connectors. Salesmen propagate concepts through a wide network of people. Someone who serves as the primary speaker at a meeting serves as a salesmen. The stickiness factor involves the inherent appeal of a narrative. For example, the narrative of the American Revolution contained a worldwide appeal and has served as a model for other revolutions. The power of context involves the receptivity of the environment into which emerging concepts arrive. For example, the 1940 U.S. Marine Corps Small Wars Manual arrived at the beginning of World War II and thus did not gain the utility it might have at a different time.

Colonel Sean McFarland and Major Neil Smith, former commander and operations officer for the First Brigade of the First Armored Division, have used tipping point theory to explain the security improvements they achieved in Anbar, Iraq in 2006.[20]

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[19]Sophie Quinn-Judge, *Hồ Chí Minh: The Missing Years* (Berkeley: University of California Press, 2002), 11-12.

[20]Neil Smith and Sean MacFarland, "The Tipping Point: Anbar Awakens," *Military Review* 88, no. 2 (March-April 2008): 41.

This thesis applies the overarching concept of Tipping Point theory for three counterinsurgencies but opportunities remain to further apply the details of the concept. The methodology portion of this research expands on this topic.

The use of both qualitative and quantitative measures constitutes the second primary assumption and theme of this research. While Baron Thompson argued for greater use of numerical measurements in science, each count of a phenomenon requires a qualitative assessment as to whether each instance of a phenomenon met a set of criteria. For example, counting insurgents killed by COIN forces begs the question as to whether each individual killed actually met the definition of an insurgent. Nor does the number of killed indicate that the opposition is necessarily becoming weaker, particularly if recruitment rates exceed the number killed. Further clarification of the significance of both primary assumptions occurs in the methodology chapter. The question remains as to the relationship between qualitative and quantitative aspects of measurement.

A review of existing metrics literature reveals much in terms of practice and research; however, no analysis has combined the existing research and codified a security metrics paradigm in doctrine.[21] Past and current counterinsurgencies provide examples of several proposed security metrics used separately, but never as a whole. A systems approach and the concept of a tipping point have also proved useful in examining counterinsurgencies yet these concepts remain isolated across the spectrum of existing research. For example, Thomas Thayer, Director of the Southeast Asia Office of the

[21]James Clancy and Chuck Crossett, "Measuring Effectiveness in Irregular Warfare," *Parameters* 37, no. 2 (Summer 2007): 88.

Assistant Secretary of Defense, conducted a systems analysis of the Vietnam War from 1965-1972.[22] This research uses the term systems and networks interchangeably.

Despite the existing body of research, the phrase "measures of effectiveness" does not appear in the interim U.S. Army field manual on tactics, techniques, and procedures (TTP) for intelligence preparation of the battlefield.[23] While the phrase does appear in operations manuals, a security metrics paradigm does not. Inclusion of this term and associated concepts in the final version may assist intelligence and operational personnel in the conduct of assessments. As stated, current Army doctrine already provides the infrastructure paradigm SWEAT-MSO which does not directly relate to security. A gap remains in the security arena.

Based on this research, the Army should consider the security metric acronym SLTWCT (Security Incidents, Local Security Force Organization, Tips and Reports, Warrants, Capture and Sensitive Site Exploitation, and Trials) as a candidate for addition to doctrine. This security metrics paradigm will allow commanders, staff, subordinates, other government leaders, soldiers, and the media to use a common set of terms when communicating the status of the security environment in a counterinsurgency. Select sub-categories of each of these overarching criteria would provide the necessary flexibility to address requirements for a particular COIN environment. These are included in Appendix D. A survey of CGSC students assessed the receptiveness of SLTWCT as a metrics

[22]Thomas C. Thayer, *A Systems Analysis View of the Vietnam War 1965-1972*, Volumes 1-10 (Washington, DC: Assistant Secretary of Defense (Systems Analysis), February1975).

[23]US Department of the Army, Field Manual Interim 2-01.301, *Specific Tactics, Techniques, and Procedures and Applications for Intelligence Preparation of the Battlefield* (Washington, DC: Government Printing Office, March 2009).

paradigm and indicates that a majority of students would consider using such a paradigm if given a handbook explaining the methodology.

This paradigm provides the framework for a logical, integrated feedback mechanism based on the central event in an insurgency, a security incident, and all the associated activities and entities prior to and after the event. These events and activities provide additional opportunity for tailorable sub-categories. Since the security incident distinguishes insurgency from a political movement, it constitutes the event around which security metrics best concentrate.

The literature review explains the existing body of knowledge regarding security metrics as well as the current gaps in that knowledge. The methodology described includes a case study approach, with some elements of a meta study, of existing analyses of three the counterinsurgencies in Malaya, Algeria, and Iraq. A meta study consists of a study of studies to identify corroborating and conflicting conclusions in order to synthesize results.

The scope of this research therefore limits the applicability of this security metrics paradigm to Western nations, specifically the security forces of the nation, assisting host nation counterinsurgent forces in a non-Western nation. This research provides an analysis and interpretation of the existing body of knowledge on metrics for the three COIN operations. The analysis of the three cases indicates COIN forces have at times specified metrics and at other times implied metrics through their actions or statements. This paper concludes by elaborating on conclusions and recommendations for changes to current U.S. Army doctrine.

CHAPTER 2

REVIEW OF LITERATURE

> The general who wins the battle does many calculations in his temple before the battle is fought. The general who loses makes but few calculations.
>
> — Sun Tzu

> You get what you measure. Measure the wrong thing and you get the wrong behaviors.
>
> — John H. Lingle,
> Business Consultant

> The only man I know who behaves sensibly is my tailor; he takes my measurements anew each time he sees me. The rest go on with their old measurements and expect me to fit them.
>
> — George Bernard Shaw,
> Playwright

The history of COIN security metrics includes both successful and unsuccessful practices used in both successful and unsuccessful COIN operations. Ideally, successful counterinsurgencies should provide quality security metrics. Counter intuitively, unsuccessful counterinsurgencies may also demonstrate specific examples where a security metric clearly indicated undesired patterns or trends, regardless of whether those in key leadership positions acted upon the indicators. The complexity of modern data collection capabilities offers even greater opportunities.

This chapter discusses qualitative and quantitative COIN dimensions, characterizations of effects, the schools of thought regarding systems as well as tipping points, and the past use of security metrics. Potential metrics paradigms include the doctrinal paradigms of SWEAT-MSO, PMESII-PT (Political, Military, Economic, Social, Information, Infrastructure, Physical Environment, and Time), ASCOPE (Areas,

Structures, Capabilities, Organizations, People, and Events), METT-TC (Mission, Enemy, Terrain and Weather, Troops and Support Available, Time Available, Civil Considerations), OAKOC (Observation and Fields of Fire, Avenues of Approach, Key Terrain, Obstacles, Cover and Concealment), CARVER (Criticality, Accessibility, Recuperability, Vulnerability, Effect, and Recognizability), POLICE, the non doctrinal paradigms of MTFRIC (Military, Terrorism, Finance, Recruitment, Information, and Communication), and SLTWC2. After examining these, this chapter then discusses the counterinsurgencies in Malaya (present day Malaysia), Algeria, and Iraq with respect to the systems and metrics concepts. Finally the chapter summarizes the gaps in existing literature regarding these two lenses as applied to the three counterinsurgencies.

Chapter 6 of Field Manual 5-0, *The Operations Process*, describes the assessment process as monitoring, evaluating, and recommending.[24] Of the doctrinal literature, this chapter provides the greatest detail on the use of metrics. The dual use of qualitative and quantitative aspects of measures finds its roots in this chapter. Quantitative assessment occurs to the extent that little human judgment occurs while qualitative requires some level of human judgment. For example, the Tet Offensive in Vietnam demonstrated a pessimistic COIN assessment from outside the country which contrasted with a more positive host nation assessment. Numerically the casualties favored the counterinsurgent but perceptions favoring the insurgents carried the day. These two components of measurement exist in a systems environment.

[24]US Department of the Army, Field Manual (FM) 5-0 Change 1, *The Operations Process* (Washington, DC: Government Printing Office, 18 March 2011), 6-1 - 6-10.

The existing literature on security effects indicates two broad schools of thought – those who embrace the use of business terminology and those who consider it an unhealthy form of micromanagement.[25] Both sides can cite examples to support their positions however a balanced position might incorporate considerations of both positions to avoid extremes in either direction. A premise of this research is that effective security metrics can avoid a level of complexity which deters regular use or drives data unrelated to actual security and control. In both schools of thought effects may vary according to ideology but the cessation of violence remains common to both.

Several individuals have contributed greatly to the modern understanding of effects. In 1964, French author and soldier David Galula outlined four principles and eight steps in a population-centered approach.[26] All four principles and five of the eight steps relate directly to security or control effects. These principles and steps include the following: support of the population, most of the population remains neutral and COIN forces need an active friendly minority, protection of supporters against retribution to prevent loss of support, gaining support area by area, concentrating forces, maintaining contact with and controlling the populace, destroying the insurgent political organization, testing and replacing local authorities and forces as needed, and winning over or suppressing insurgent remnants. Galula gained his counterinsurgency experience

[25]*Small Wars Journal* Blog, ~~–G~~reat Idea on a Measure of Effectiveness," 4 April 2007, http://council.smallwarsjournal.com/showthread.php?t=2529 (accessed 25 September 2010).

[26]David Galula, *Counterinsurgency Warfare: Theory and Practice* (Westport, CT: Praeger Security International, 1964), 54-56.

primarily in the Algerian War from 1956 to 1958, but also with the Chinese, French Indochinese, and Greek communists.

In 1966, the British officer Sir Robert Thompson described five principles of counterinsurgency.[27] Of these, three weigh on the topic of security metrics. These include the government functioning within the law, defeating the political subversion rather than the guerillas, and securing base areas first. Thompson gained much of his experience in counterinsurgency in the Malayan Emergency.

In 2006, noted author and Australian soldier David Kilcullen defined 28 articles, or fundamentals, of counterinsurgency.[28] Of these, five articles directly relate to security or control effects. These include building trusted networks, engaging women but beware of children, taking stock regularly, maintaining a single narrative, and having local forces mirror the enemy and not the external force. Taking stock regularly refers to the establishment of metrics and conduct of assessments. This article indicates the significant role metrics play in counterinsurgency. Kilcullen's formative counterinsurgency experience occurred in East Timor however he has spent considerable time working for the US government on the counterinsurgency in Iraq.

In a review of a spectrum of terrorist groups, the RAND Corporation identified two central outcomes in successful situations for the counter-terrorists. In *How Terrorist Groups End,* Seth Jones and Martin Libicki note that failed terror organizations end with either the key leaders reintegrated into the political system or captured or killed by

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[27]Robert Thompson, *Defeating Communist Insurgency* (Saint Petersburg, FL: Hailer Publishing, 1966), 50-57.

[28]David Kilcullen, "28 Articles: Fundamentals of a Company Level Counterinsurgency" (Washington, DC, 2006), 5-8.

police.[29] Given the similarities between counter-terror and counterinsurgent efforts, it is reasonable for COIN practitioners to pursue effects which lead to one or both of these two end states.

A second RAND study on how insurgencies end indicates that police actions, as opposed to military actions, prove more effective and include processing captured individuals in the judicial system.[30] Despite this fact, the word ―trial" is not in the IPB TTP, IPB, or Intelligence Synchronization, and Reconnaissance (ISR) manuals. The word ―court" only appears once. Field Manual 3-24, Counterinsurgency, does use the word court in multiple instances and includes the word trial once. These terms facilitate understanding of the rule-of-law, which is the idea that no one person is above the law. The limited use of these terms indicate rule-of-law in intelligence doctrine lags behind that of counterinsurgency doctrine and both warrant additions on this topic. A recent example from Afghanistan illustrates the link between intelligence and rule-of-law. On 14 September 2010, in an interview on National Public Radio, Former Afghan intelligence chief Amrullah Saleh stated that collectors and investigators lose confidence in rule-of-law without trials.[31] Enhancing rule-of-law concepts in intelligence doctrine can address the isolation of intelligence analysts from this important aspect of COIN described by General Flynn.

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[29]Seth Jones and Martin C. Libicki, *How Terrorist Groups End: Lessons for Countering Al Qai'da* (Santa Monica, CA: Rand, 2008), xiii.

[30]Ben Connable and Martin C. Libicki, *How Insurgencies End* (Santa Monica, CA: Rand, 2010), 92.

[31]Amrullah Saleh, ―Former Afghan Intelligence Service Chief: Taliban are Our Killers," Interview, Morning Edition (NPR), 14 September 2010, Transcript.

Two schools of thought exist regarding the use of systems analysis in COIN.[32] One is threat system centered and the other is population system centered. The threat-centered approach harkens back to the body count of the early Vietnam era. This approach aims at achieving success by direct attacks on and destruction of insurgent forces.

In the population-centered approach counterinsurgent forces undermine the influence of insurgent elements by first securing and then gaining the support of the population who then deny support to the insurgents. This resembles the ―hearts and minds" campaign phrase first used in modern times in Malaya in 1951. This approach aims to defeat insurgents indirectly as well as directly. Some argue that neither approach by itself adequately addresses all situations.[33] Current U.S. Army doctrine predominantly utilizes the population-centered approach but includes elements of the threat-centered approach.

In the population-centered approach COIN forces focus on the metrics related to the degree of security and the opinions of the population. In the threat-centered approach security metrics focus on the capabilities of the threat elements. The security MOE and MOP used in each of the two systems school of thought do find common ground. The overlap occurs particularly with respect to security incidents and the population views regarding insurgent elements, whether expressed through writing, oral communication, or behavior. In all cases these metrics fit in the context of systems.

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[32]David Kilcullen, SWJ Blog, 27 January 2007, http://smallwarsjournal.com/blog/2007/01/two-schools-of-classical-count/ (accessed 3 August 2010).

[33]Ibid.

Formal systems theory began in 1954 through the work of biologist Ludwig von Bertalanffy and anthropologist Margaret Meade, cofounders with three other individuals of the Society for the Advancement of General Systems Theory, which pioneered research in living organisms as complex, open systems, which include feedback mechanisms akin to measurements of success.[34] An open system includes relationships with many interacting variables that lack linear or simple formulaic relationships. Researchers in other disciplines, such as economics, have also adopted this process of describing the interaction of various components of a system in order to understand the functions within the system.

A critical component of systems theory, feedback, relates directly to MOE. The modern understanding of this concept originated with Scottish physicist James Clerk Maxwell who wrote *On Governors* in 1868.[35] Maxwell described how the centrifugal governor on a steam engine regulates the speed of the engine to maintain stability and account for changing loads on the engine. The anatomy of the governor in relation to the drive mechanism in the engine provides a model for metrics in COIN. The metaphor of a steam engine governor bears a striking similarity to the elements of assessment mentioned previously in chapter 6 of Field Manual 5-0, *The Operations Process*. Knowledge of the history of systems permits a greater sense of the complexity faced by the counterinsurgent.

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[34]Stephen Haines, ―Systems Thinking Research Rediscovered, Abstract" (San Diego: Haines Centre for Strategic Management. 18 July 2010), 2.

[35]James Clerk Maxwell, ―On Governors," *Proceedings of the Royal Society* 16, no. 100 (1867–1868): 270–283.

Based on a similar thought pattern, Secretary of Defense Robert McNamara formally introduced systems theory in the military through the creation of the Department of Defense Office of Systems Analysis, headed by Alain Enthoven, who drew on his experience in economics.[36] Intentional or not, this methodology helped set the stage for the focus on body count in Vietnam and later on more holistic measures. The methodology continues as a component skill set in the U.S. Army through Operations Research and System Analysis (ORSA).

The systems of human interaction offer a greater degree of complexity than the steam engine. Some, like sociologist Duncan Watts, suggest that a tipping point in complex systems cannot readily be predicted or caused.[37] Research and application by McFarland and Smith, however, supports the idea that counterinsurgent forces can both facilitate as well as measure tipping points in an insurgency.[38] While the term "tipping point" in counterinsurgency literature exists in a number of vignettes and analytic sources, the full use of the components of the theory have yet to be systematically compared to a set of circumstances in a COIN environment. This research further develops the concept of metrics used to drive tipping points through an examination of successful, failed, and ongoing counterinsurgencies.

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[36]Allan C. Enthoven, "Systems Analysis and Decision Making," *Military Review* 18, no. 1 (January 1963): 7.

[37]Kenneth Chang, "With e-mail, it's not easy to navigate 6 degrees of separation," *New York Times*, 12 August 2003, http://query.nytimes.com/gst/fullpage.html ?res=9802E3D91031F931A2575BC0A9659C8B63 (accessed 2 February 2011).

[38]Connable and Libiki, 2.

Tipping point theory as a social concept started with Morton Grodzins' comparison between a small, additional weight which upsets a balance scale to the exit of white families out of neighborhoods upon reaching a threshold of incoming black families.[39] Following this unfortunate example, subsequent researchers have applied the theory to ecology and other systems based disciplines. Thus tipping point theory must be considered as a component of systems theory.

Similarly, counterinsurgencies exist as systems subject to tipping points based on the application of military force; however the literature on this synthesis remains limited. In the example of the steam engine, a tipping point could occur when the pressure builds to overcome the starting friction, a desired outcome, or if the pressure builds enough to blow the seals, producing a negative outcome. This portion of the metaphor differs from counterinsurgency in that instead of causing tipping points the steam governor serves to prevent them by regulating the flow of steam pressure to stabilize motion. In both cases however, stability remains the goal. In COIN stability ideally favors COIN forces. The measurement of success permits stabilizing feedback.

J. Eli Margolis, a former MA candidate at Georgetown University, School of Foreign Service's Security Studies, reviewed a number of existing documents and offers five common traits regarding measuring success. He states that there are no magic numbers, a framework must attach meaning to each metric, numbers must be important and not just convenient, outputs are more important than inputs, and strategy must

[39]Morton Grodzins, *The Metropolitan Area: As a Racial Problem* (Pittsburgh: University of Pittsburgh Press, 1958).

determine metrics.[40] The traditional metrics of attacks and actionable intelligence information meet these criteria. COIN forces have historically found these two metrics useful.[41] For the purpose of this research, actionable intelligence information includes population assessments and surveys.

Past research on MOE has addressed the attitudes and beliefs of the population in which the counterinsurgency operates. Two significant authors on this include Raymond Lee Simonsen and Slavko Bjelajac. Simonsen focused primarily on survey data using psychological techniques.[42] He wrote his thesis shortly after the Hamlet Evaluation System began in Vietnam. He also considered the views of the population most important however he presented a more balanced perspective by included a diverse and thorough set of other variables, to include control of the legal and economic systems.[43] Bjelajac wrote *Guidelines for Measuring Success in Counterinsurgency* to influence the conduct of population surveys. The use of surveys, while valuable, adds the risk of bias, misunderstanding, dishonesty, or some combination of the three factors on the part of the respondents to that of the individuals conducting the assessment. Despite these risks,

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[40]J. Eli Margolis, *How to Measure Insurgencies*, Small Wars Journal Posting, 12 September 2007, (http://smallwarsjournal.com/blog/2007/09/how-to-measure-insurgencies/ (accessed 20 February 2011).

[41]Connable and Libicki, xv, 18.

[42]Raymond Lee Simonsen, *A Proposed Measure of Effectiveness for Counterinsurgency Operations* (Monterey, CA: United States Naval Postgraduate School, 1967), 10.

[43]S. N. Bjelajac, *Guidelines for Measuring Success in Counterinsurgency* (Washington, DC: Special Operations, DSC OPS, 1967), 8.

perceptions held by the population regarding the security status equal reality in COIN and thus surveys remain essential.

The Department of State also created a means of assessing a COIN environment in a product called the Tactical Conflict Assessment and Planning Framework (TCAPF). This useful tool, recognized in Army doctrine, serves to describe data collection to establish a baseline from which COIN forces may measure success.[44] With this tool, stability forces and agencies also develop comprehensive assessments of a country or region. The framework includes a useful presentation of drivers of tipping points but does not use the framework offered by Gladwell. Additionally, the document discusses metrics in detail but does not provide a candidate metrics paradigm useful for both leaders and soldiers. While the framework is referenced in the manual on stability, it must be noted that not all stability operations include counterinsurgency.

The United States Institute for Peace offers the most comprehensive metrics proposal found in this research although it covers other topics as well as security. Measuring Progress in Conflict Environments (MPICE) provides metrics for five desired effects. These include political moderation and stable governance, safe and secure environment, rule-of-law, sustainable economy, and social well-being.[45] Within the effect of a safe and secure environment, the document lists 11 subordinate goals and 120 total metrics associated with these goals. This product is the most systematic approach to

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[44]Department of the Army, Field Manual (FM) 3-07, *Stability Operations* (Washington, DC: Government Printing Office, October 2008), D-7.

[45]John Agoglia, Michael Dziedzic, and Barabara Soterin, *Measuring Progress in Conflict Environments (MPICE): A Metrics Framework for Assessing Conflict Transformation and Stabilization Version 1.0* (Washington, DC: United States Institute for Peace, 2010), Table of Contents.

metrics found in the conduct of this research. While both comprehensive and valuable, this product does not provide a paradigm for commanders as well as operational and intelligence analysts and collectors.

Such a security paradigm should account for the central element in defining security in an insurgency. Armed conflict distinguishes it from a peaceful political movement.[46] Security incidents indicate armed conflict and may be characterized in systems terminology as security incident chronology which is the chain of events from the ideation of an attack to the final consequences for the perpetrator and others involved, regardless of the stage to which the attack may have progressed. Security incident chronology exists as a thread of events which tie the relevant systems together.

Defining security incidents in COIN presents a challenge in that the counterinsurgent may succumb to the temptation to define away the security problem by raising the threshold for the definition. US forces currently use the term SIGACT (Significant Activity) down at the tactical level although the definition does not appear in doctrine. It may be considered as a broad subset of security incidents. The change in definition mentioned at the bottom of the chart in Appendix A illustrates the critical relationship between quantitative and qualitative measures. This change lowered the threshold of the definition, strengthening the assessment of a decline in security incidents.

The scope of this research does not include narrowing the definition of SIGACT beyond that of a security incident. Based on the previously mentioned definition of security and security incidents, ideal security effects in counterinsurgency relate to

[46]US Department of Defense, Joint Publication (JP) 1-02, *Department of Defense Dictionary of Military and Associated Terms* (Washington, DC: US Government Printing Office, with Updates as of 13 June 2007), 265.

security incidents and the responses to them. Just as all counterinsurgencies must address infrastructure to some degree and have SWEAT-MSO as a paradigm, so too the security environment would be well served with a metrics paradigm.

The U.S. Army Engineer community developed SWEAT-MSO as an infrastructure paradigm in order to fill an identified gap in reconnaissance, acknowledging that it does not provide the entire infrastructure solution and that further refinement will improve the concept.[47] The paradigm provides simplicity and flexibility while covering the essential elements of the infrastructure systems. The history of SWEAT-MSO as an infrastructure paradigm demonstrates the potential utility in adopting a paradigm to examine security aspects of the COIN environment. This research acknowledges the same three issues regarding security metrics.

In addition to SWEAT-MSO, eight other acronyms provide means of assessing a COIN environment. These eight include PMESII-PT, ASCOPE, METT-TC, OAKOC, CARVER, MTFRIC, POLICE, and SLTWC2. Although they overlay in many ways, all nine of these paradigms provide unique perspectives when used as assessment tools. The next few pages provide an overview of these perspectives and why they do or do not meet screening criteria as well as which serves as the most useful candidate for a security metrics paradigm.

The acronyms ASCOPE, METT-TC, and OAKOC provide a means of assessing the overall environment at different echelons.[48] Both CARVER and MTFRIC provide a

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[47]United States Army Engineer School, *The SWEAT/IR Book, Version 2.1* (Fort Leonard Wood, MO: United States Army Engineer School, 6 October 2005).

[48]Al Bazzinotti and Mike Thomas, ―Assessing the Criminal Dimensions of Complex Environments,‖ *Military Police*, PB 19-08-2 (Fall 2008): 6.

means of assessing lethal and non-lethal targeting. MTFRIC also provides a means of assessing the insurgent networks which threaten security as defined in the introduction. Similarly, POLICE provides a means of assessing the criminal and policing environment. SLTWC2 provides a means of assessing the security environment. Neither MTFRIC nor SLTWC2 are included in current doctrinal manuals. While all serve useful roles in assessing a COIN environment, table 1 indicates the viability of each as a security metrics paradigm.

In table 1, italicized entries indicate assessed disqualifiers as metric candidates. Question one of this research does not provide a distinction between paradigms as all offer opportunities for both qualitative and quantitative measures. This question remains valuable, however, as a tool for defining value added metrics. Question two provides some distinction as an ideal paradigm should address both the population and the threat. Question three regarding metrics also provides distinction as metrics must provide prescriptive value. Question four provides the critical distinction, although it lacks the simplicity of the other questions. It provides the distinction from POLICE that the other questions lack and leaves SLTWC2 as the ideal candidate paradigm. Like question one, question five does not evaluate but rather helps screen for suitable metrics.

Table 1. Candidate Metrics Paradigms Assessed According to Research Questions

ACRONYM	Question 1: Qualitative, Quantitative	Question 2: Effects	Question 3: Systems Use	Question 4: Tipping Point Elements	Question 5: Metrics
PMESII-PT	Both	Both	Broad and environmental	Yes	*Descriptive*
ASCOPE	Both	*Population*	Lacks rule-of-law and end state focus	Yes	*Descriptive*
METT-TC	Both	*Threat*	Broad and environmental	Yes	Prescriptive
OAKOC	Both	*Neither*	Not security focused	*No*	*Descriptive*
SWEAT-MSO	Both	*Population*	Not security focused	*No*	Prescriptive
CARVER	Both	Both	*Too narrow; focused on what but not how*	Yes	Prescriptive
MTFRIC	Both	*Threat*	Too narrow; focused on threat network	*No*	Prescriptive
POLICE	Both	Both	*Not tied to definition of an insurgency*	Yes	Prescriptive
SLTWC2	Both	Both	Combines systems with desired end state	Yes	Prescriptive

Source: Created by Author; items in italics serve as disqualifiers

Few diagrams summarize these paradigms as a whole for ease of comprehension. Bazzinotti and Thomas provide the most complete representation in figure 1 although the authors do not include OAKOC, CARVER, MTFRIC, or SLTWC2. The diagram indicates the criminal dimension as a gap in theory, later filled by the paradigm POLICE. Of course, SLTWC2 did not exist at the time.

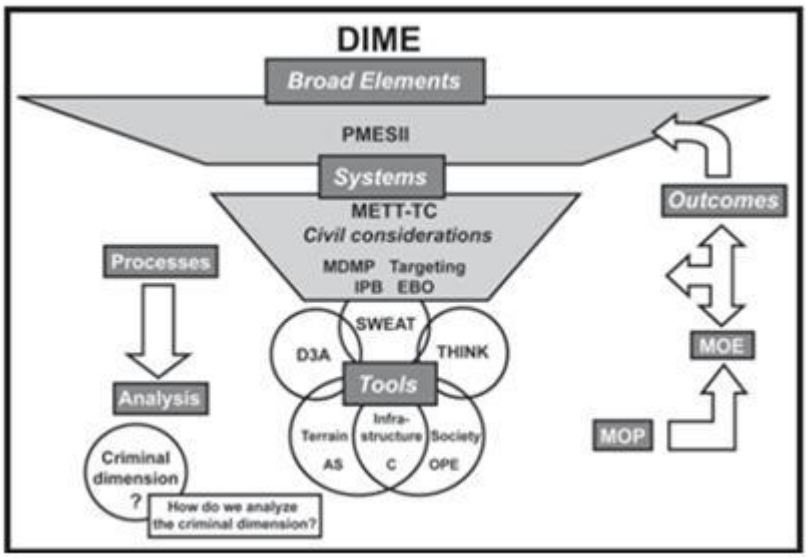

Figure 1. Overview of Existing Paradigms
Source: Al Bazzinotti and Mike Thomas, ―Assessing the Criminal Dimensions of Complex Environments,‖ *Military Police* (Fall 2008): 7.

The acronym PMESII-PT provides a means of assessing the overall operational environment and is therefore too broad in nature. The PMESII-PT paradigm contains a military component but they do not specify COIN elements nor facilitate a security assessment. The acronym ASCOPE does approach COIN from a systems perspective; however it lacks the focus on rule-of-law present in POLICE and SLTWC2. Moreover, it does not address desired end states like the SLTWC2 chronology. While it is systems based, it does not link cause and effect. While not a disqualifier, it does not exist in doctrine as a comprehensive metrics tool such as the SWEAT-MSO handbook.

The memory aide METT-TC does not serve as an MOE but as a paradigm for describing mission variables. Similarly, OAKOC provides a tactical level assessment tool primarily addressing the physical environment. The paradigm serves to support planning for tactical combat maneuver. Thus it does not directly address security MOE.

The acronym CARVER serves as a valuable tool for prioritizing targeting of specific threat nodes.[49] It specifically addresses desired effects sought by the COIN practitioner. This paradigm remains valuable as an assessment tool but does not enable the depiction of the overall security situation. Closely related to this paradigm, MTFRIC allows for the assessment of critical nodes within an insurgent network.[50] However, this represents only one system among those which influence a portion of the security situation and thus cannot serve as an overall metrics paradigm.

The acronym POLICE provides the benefit of including the rule-of-law measures which have proved successful in COIN operations. This paradigm comes closest to a security metrics paradigm however it does not include security incidents, an essential component of COIN. While it facilitates assessment of the systems which counter an insurgency, it does not directly aid in assessing the level of violence. Another minor drawback to the POLICE paradigm is that it does not lend itself to database query as it also exists as a word in the English language. For these reasons the author of SLTWC2 found it inadequate to address the problem of low SIGACTs combined with uncertainty as to the level of success achieved by COIN forces. As the SIGACT level decreased other unknown factors appeared to become greater in importance. The five elements of SLTWC2 which followed SIGACTs appeared to be these unknown factors. From a conceptual standpoint SLTWC2, added security incidents to the POLICE paradigm as

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[49]Department of the Army, Field Manual 34-36, *Special Operations Forces Intelligence and Electronic Warfare Operations* (Washington, DC: Government Printing Office, September 1991), D-1.

[50]Michael P. Sullivan, ―Understanding How to Win and Know it: An Effects Based Approach to Irregular Warfare" (Master's Thesis, Naval Postgraduate School, Monterey CA, 2005), 41.

well as placing measures in sequential order. Apart from the SIGACT, each element of SLTWC2 depended in part on the success achieved in the prior element.

Of these nine paradigms, only ASCOPE and SLTWC2 offer the level of analysis appropriate for security metrics. Having screened the paradigms, evaluation of the two remaining paradigms can determine the more ideal candidate. The lack of a focus on rule-of-law and desired end states make SLTWC2 the more ideal COIN security metrics paradigm when compared to ASCOPE. While measurement of rule-of-law and desired end states may occur using ASCOPE, these topics are not central to the paradigm.

Given the fact that SLTWC2 exists outside doctrine, a doctrinal gap remains with respect to security metrics. The author of this thesis developed SLTWC2 in response to the specific circumstances in Kirkuk, Iraq and the current lack of a paradigm; however the paradigm appears to offer utility in other COIN environments. The situation in Kirkuk involved a low level of security incidents combined with reports of latent insurgent capacity. The author‘s brigade commander, Colonel Ryan Gonsalves, wanted to know how the unit could identify success given these two conflicting sets of data. After reviewing the first eight paradigms described, the author then reviewed doctrine on the paradigm POLICE and found it compelling but insufficient because it did not include security incidents, the defining events of insurgency, as key data points or organize metrics sequentially. This prompted the development of SLTWC2.

Another problem which drove development of the paradigm during this deployment was the limited use of Iraqi forensic capabilities. The Iraqi tendency towards quickly sanitizing an attack site had the unintended yet adverse effect of compromising or destroying potential evidence. The paradigm served to help Iraqis visualize deliberate

steps which might follow a security incident. Emphasis on police primacy proved critical in encouraging forensic responses.

One difficulty found by the author in implementing SLTWC2 in Iraq was that available historical data did not translate cleanly into the six elements of the paradigm. Units had not populated existing databases in ways that enabled efficient extraction because the paradigm did not previously exist. Nevertheless, in March of 2009 the author began compiling weekly statistics published to the commander, subordinates, brigade affiliate enablers, and to the Division G2, condensing the new data points into a bi-weekly SLTWC2 assessment. The briefings combined numerical assessments with anecdotal highlights of the most relevant events tied to one or more of the six assessment areas. This served to provide both quantitative and qualitative assessments.

While most elements of SLTWC2 lend themselves to quantifiable metrics, Local Security Force Networking presented a greater challenge. To meet this challenge the author implemented two initiatives to address this issue. First, the author created an Iraqi chain of command board which represented the police, Iraqi Army, and Kurdish Army chains of command with the Prime Minister alone at the top of the board as depicted in Appendix B. The brigade published a fragmentary order with this board containing guidance to influence Iraqi security force counterparts to post the board in all headquarters and remove photos and images of political party leaders. Although this occurred near the end of the deployment, the intended metric in this case was the number of headquarters in which Iraqi leaders followed the recommendation.

The second initiative the author implemented was the hosting of a monthly all-inclusive intelligence meeting which later included the intent of transitioning to an Iraqi

intelligence fusion cell operating at an Iraqi facility. A symbol proved useful to enhancing a sense of unity to overcome divisions along sectarian and ethnic lines. The symbol in this case was a combined crest using the crests of all eight participating Iraqi organizations. Three lines of text translated into Arabic appear next to and below the combined crest, communicating intent. The first was –Kirkuk Fusion Cell." The second was –One Iraq" and the third was –United Kirkuk." As with the chain of command board, the author did not complete this symbol until the end of the deployment however the conversation when first presenting the symbol to the participants proved very encouraging. Participants who had previously resisted attendance and argued with others changed their rhetoric to the topic of unity and integration as an organization.

The graphic depiction of SLTWC2 and anecdotal evidence of the assessments served as a framework for discussions with the Iraqi leaders. The description of the paradigm to our Iraqi partners as a sequence of events served to instill the idea that a trial depended upon proper execution of a series of prior actions. The success of these meetings served as an indicator of the political will to prosecute insurgent networks. These meetings complemented those of the maneuver commanders held bi-weekly by the brigade.

During this deployment the modeling of appropriate behavior served as another important factor in enhancing Iraqi security networks. The BCT (Brigade Combat Team) staff integrated plans and operations with the appropriate counterparts in the PRT (Provincial Reconstruction Team) who represented the State Department in the province. The identification of common goals and balancing of competing priorities between the

two organizations and the subsequent resolution of friction served as an example regarding civil-military relations.

Prior to this during the author's second deployment the brigade he served in had developed a comprehensive set of metrics.[51] Of the six outlined objectives, one addresses security directly while the others did so indirectly. The governance objective included criteria on court capabilities. While thorough and meaningful, these metrics did not lend themselves to use in a paradigm for soldiers. The focus on rule-of-law in these metrics highlighted the increasing threshold of evidence as the Iraqi COIN environment matured.

During the author's first deployment to Iraq, town and neighborhood assessments were much more rudimentary. These consisted of green, amber, and red assessments, depicted graphically, for a number of systems in the environment to include crime and paramilitary activity. This assessment took place using largely anecdotal rather than numerical data. While the author had obtained meaningful results with a warrant during this deployment, rule-of-law proved a challenge as the high volume of security incidents made evidence collection vulnerable to additional attack. The two metrics formats from the author's first two deployments to Iraq provided a foundation for the development of SLTWC2.

As stated in the introduction, the author's review of SLTWC2 as a paradigm early in the conduct of this research assessed that the metric of conviction referred more to a specific set of outcomes rather than an inclusive category. As the author of that paradigm and this research, I concluded that trials better define this particular metric. Counting

[51]Peter Andrysiak, Randy Jimenez, Luke Calhoun, "IRONHORSE Security Metrics" Taji, Iraq (Standard Operating Procedures, December 2007).

only convictions leaves out other outcomes which also indicate effective rule-of-law. For the remainder of this research SLTWC2 will be referred to as SLTWCT unless referring specifically to past use. Each element of the paradigm measures the three elements of security described earlier as security incidents, COIN force functions, and population confidence in the COIN force.

The security incident, in its level and character, provides the clearest measure of security as it helps define an insurgency. Incidents may be measured in quality with respect to the severity of casualties or cost of damaged resources. Incidents can be measured in quantity by raw numbers, ratios, and by location.

Following a security incident, local security force organization refers to the functioning of critical nodes and links, both formal and informal, which define the host nation counterinsurgent groups. This organization represents the capability and extent to which security forces have established roots in the community from which they elicit information and draw resources. The elements of the tipping point concept provide the items to measure for this metric. This metric reflects security by measuring those systems which provide security. Without these systems, security tends to deteriorate and the population lacks entities to provide intelligence information. This organization combines with the last three elements of the paradigm to assess the functions of security forces.

This organizational activity serves to elicit tips and reports. Tips and reports include information provided to counterinsurgent organizations which contributes to the overall intelligence picture. This definition is much broader than a tips hotline and includes reporting from established sources as well as population surveys. Tips and reports indicate the security status as they reflect the views of the population regarding

the safety of providing information to COIN forces both at that time and in the immediate future. They include information on behaviors, such as school attendance, which indicate the population feels secure. While tip metrics do include the risk of unproductive large volumes, actionable reports from developed contacts often begin with an initial tip.

Tips and reports serve to justify the acquisition of a warrant. Warrants refer to legal documents issued by host nation courts which justify detention based on probable cause. The warrant serves to justify capture of the perpetrator. A warrant based on reasonable probable cause renders threat elements less credible and more vulnerable, reducing their effectiveness. As explained in the introduction, Capture and Sensitive Site Exploitation refers to the deliberate detention of threat elements or their resources. It also includes the defection and desertion of threat elements. Capture offers the opportunity for COIN forces to demonstrate both capacity and legitimacy. It provides an indicator to the population that COIN forces possess greater capacity that insurgent elements.

Capture permits the conduct of a trial. Trials refer to legal case reviews by a competent host national legal authority that passes judgment on the guilt or innocence of the accused insurgent or terrorist based on a logical presentation of evidence. The conduct of the trial permits COIN forces to further demonstrate legitimacy.

These three rule-of-law measures assess the functions of the systems which provide security, as opposed to the systems themselves. The three indicate the result of offensive protective measures. The warrant ensures the precise application of the force used to capture insurgents. The trial further validates the precision used, regardless of the outcome.

Without all three rule-of-law elements COIN forces lack legitimacy in the eyes of the population. These three measures indicate to the population that security forces will act on the risk taken to offer information on threat elements and the environment. Arrests without meaningful warrants prior to, or trials after, indicate arbitrary application of the rule-of-law and also reduce the confidence of the population in the capabilities of security forces. The population must remain confident that an impartial judge remained integral throughout the development of the warrant, review of the initial evidence, and the conduct of the trial. Like local security force organization, the absence of these functions corresponds with a reduced level in security. All of these measures can indicate trends.

A decrease in security incidents concurrent with an increase or sustained and reasonable level of the remaining five measures indicates a positive trend. An increase in security incidents associated with stagnation or a decline in the other five measures indicates a negative trend. A decrease in all six areas may indicate insurgents have achieved dominance in an area. An increase in all six may indicate a surge in activity by both opponents or qualitative problems in the five elements following a security incident.

The review of SLTWCT as a paradigm also includes defining each element as MOE or MOP based on the individual initiating action for each element. Table 2 provides this MOE and MOP assessment of SLTWCT. As stated earlier, a host nation MOP may at times serve as a valid external force MOE. In such a case the performance of the host nation forces may indicate the effectiveness of the external force.

Each of these metrics measures security according to traditional measures and techniques associated with what the author perceived to be successful COIN practices. Security incidents and actionable intelligence information (i.e. tips and reports) are

widely accepted measures of effectiveness. The enhancement of host nation forces, in addition to rule-of-law systems, is generally associated with successful COIN operations. The development of host nation forces corresponds to local security force organization with a focus on professional and social connectivity. The last three measures of warrants, capture/SSE, and trials measure rule-of-law capability. Overall, the paradigm measures security incidents, the systems designed to respond to or pre-empt security incidents, and perspective of the population. The tipping point metrics measure the response systems while tips and reports measure the population perspective.

Table 2. SLTWCT Elements Categorized as MOE and MOP for an External Force

Element	Acting Entity	Metric Type
Security Incidents	Threat	MOE
Local Security Force Organization	External or Host Nation Security Forces	MOE (host nation action) MOP (external force action)
Tips and Reports	Population	MOE
Warrants	External or Host Nation Judge	MOE (host nation action) MOP (external force action)
Capture and Sensitive Site Exploitation	External or Host Nation Security Forces	MOE (host nation action) MOP (external force action)
Trial	External or Host Nation Judge	MOE (host nation action) MOP (external force action)

Source: Created by Author.

In *Victory Has a Thousand Fathers,* a detailed examination of the causes of success in COIN, Paul, Clark, and Grill offer 15 good practices and 12 bad practices in

COIN which they recommend serve as guides for metrics.[52] A review of these 27 indicates 20 of them (12 good and eight bad) correspond positively with the elements of SLTWCT. The paradigm remains consistent with the bad practices in that it serves to prevent them. The remaining seven do not relate to or contradict the SLTWCT paradigm but tend to focus on issues indirectly affecting security. The paradigm supports the measurement of good results and practices in that it measures by areas the population perceptions, compliance with a legal framework, as well as the strength and competence of the COIN force. The paradigm serves to prevent the eight bad practices by measuring the extent to which COIN force operation within a legal framework and maintain unity of effort.

This review of existing paradigms indicates the SLTWCT combination of MOE and MOP provides commanders, operations and intelligence analysts, and various types of collectors the most useful paradigm for security metrics. Thus the paradigm SLTWCT answers the primary question of this research. The question remains as to whether the paradigm is useful in explaining the outcomes of the three insurgencies examined in this research. Given this fact, tipping point theory warrants further examination as any metrics paradigm must serve to drive or sustain a tipping point.

Having reviewed literature on systems and metrics related theory, this research now examines the three counterinsurgencies: one which succeeded, one which did not, and one which remains ongoing. These include the United Kingdom in Malaya, 1948-1960, France in Algeria, 1954-1962, and Allied Elements in Iraq, 2003-Present. This

[52]Christopher Paul, Collin P. Clark, and Beth Grill, *Victory has a Thousand Fathers: Sources of Success in Counterinsurgency* (Santa Monica, CA: Rand, 2010), 85-86, 96.

research examines each of these regarding the systems and tipping point lenses mentioned above. Common trends in these examples may inform the development of new doctrine regarding security metrics. Both statistical and anecdotal information on these counterinsurgencies provides both breadth and depth for this research. In addition to the criteria of success or failure, this research focuses on these three counterinsurgencies because they all involved at least a significant minority of Muslim population, whether secular or devout, they all involve a Western power taking military action in a non-Western nation, and they are all closely associated with a major COIN theorist.

The conflict between the United Kingdom and elements in Malaya from 1948 to 1960 occurred in the context of the Cold War and the end of the colonial era. Unlike Algeria, the Malayan Emergency, as it was known by the UK, ended with the failure of the insurgent forces to change the regime in power. The Japanese occupation of Malaya prior to the end of World War II had left the country in economic chaos. The Chinese communists had been fighting the Japanese occupation forces. At the time ethnic Chinese could not vote or own property, providing impetus for a political movement to achieve these goals. Both the British and elements of the Chinese Malay population sought to fill the vacuum left by the departure of the Japanese.

In 1948 Malaya consisted of approximately 2.4 million Malay, 1.9 million Chinese, 500 thousand Indians, and 64 thousand of other ethnicities, to include aborigines.[53] Among the Chinese population, approximately 500,000 were displaced during the fighting of World War II. COIN forces early in the emergency included 4,000

[53]C. C. Chin and Karl Hack, *Dialogues with Chin Peng* (Singapore: Singapore University Press, 2004), 380-81.

British, Gurkha, and Malay riflemen and 24,000 Malay constabulary and guard forces who opposed approximately 4,000 guerillas in the jungle.[54]

While the Communist Chinese Malayans lacked direct and robust support from China, the British active in the tin and rubber industry demanded support when first attacked in 1948. Leaders in these industries drove use of the term "emergency" to avoid insurance losses. With respect to individuals, Chin Peng, an ethnic Chinese, was the senior surviving member of the Malay Communist Party during World War II. Abdullah CD chaired the Communist Party of Malaya throughout the crisis. Sources reviewed for this research did not indicate either of these individuals managed to recruit prominent leaders among non-Chinese population groups in Malaya.

For the native counterinsurgents, Tuanku Abdul Rahman and Sultan Alam Shah led the political efforts against MNLA. C.C. Too, an ethnic Chinese with intimate knowledge of Communism, was recruited for and later served as the head of psychological operations for the counterinsurgency.[55] Both sides in the conflict had attempted to recruit him. The British agent Loi Tek, head of the Malayan Communist Party at the beginning of the conflict represented the clearest penetration of the communist force network by COIN forces.[56] The fact that COIN forces successfully recruited such prominent individuals highlights their ability to develop robust COIN organizations with meaningful contributions from competent host nation elements.

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[54]John A. Nagl, *Learning to Eat Soup with a Knife: Counterinsurgency Lessons from Malaya and Vietnam* (Chicago IL: The University of Chicago Press, 2002), 65.

[55]Barber, 117.

[56]Ibid., 35.

British Director of Operations Lieutenant General Harold Briggs and Secretary of Defense Robert Thompson recognized the need to concentrate authority in the civil government and police rather than the military.[57] Henry Gurney had assumed duties as high commissioner for Malaya three months after the initial attacks. Following Gurney's assassination by the MNLA in 1951, Gerald Templer became both the military commander and the high commissioner. Field Manual 3-24, *Counterinsurgency*, cites Malaya as an example of how an external force builds a network of indigenous counterinsurgents.[58]

Regarding the stickiness of the COIN message, the Chinese majority Malayan National Liberation Army (MNLA) initiated organized attacks against British civilians and their Malayan allies in 1948 based on a three phase strategy. These phases consisted of battle hardened guerillas driving the British from the countryside to the cities, declaring the controlled areas liberated to begin recruiting, and moving into the more urban areas to cripple the economy prior to beginning conventional warfare against British forces.[59]

The Briggs Plan included the establishment of war committees led by civilians and the police with the military in support as well as the relocation of large portions of the Chinese population.[60] Gerald Templer warrants credit for popularizing the phrase

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[57]Ibid., 98.

[58]Department of the Army, Field Manual (FM) 3-24, *Counterinsurgency* (Washington, DC: Government Printing Office, December 2006), 6-21 to 22.

[59]Barber, 33.

[60]Ibid., 93.

winning –Hearts and Minds" with respect to gaining the support of the population. The combined civilian and police efforts sent a clear message concerning the rule-of-law.[61] Shortly after his arrival, Templer further integrated COIN organizations by forcing racial integration at the Lake Club in Kuala Lampur.[62] For the insurgents, Chin Peng led the Masses Movement (Min Yuen) in a Maoist style insurgency but departed from Mao in two ways. First, the MNLA resorted to extreme violence. Additionally, the MNLA failed to recruit ethnic Malay or aborigines for key leadership positions.

Both sides in the Malay Emergency carefully selected the systems they targeted. Under the leadership of Gerald Templer, the Briggs Plan relocated significant portions of the populace into tightly controlled areas in order to deny the insurgency access to resources and potential recruits. Templar approached the insurgency from two perspectives. He developed an amnesty program while at times demanding to simply kill more insurgents. Briggs' focus on civil and policing efforts demonstrates a commitment to influencing and building host nation systems. The insurgent efforts attacking economic and military targets indicate their focus on these two systems.

In Malaya, the Combined Emergency Planning Staff (CEPS) consisted of an airman, police officer, and a civil servant who measured performance and effectiveness in Malaya for Templer through evaluations conducted in select areas.[63] Templer also had an Operational Research Team who examined statistics and patterns, and lessons to be

[61]Ibid., Authors Notes.

[62]Ibid., 149-150.

[63]Nagl, 95.

applied in future operations.[64] The level of security incidents represented the clearest metric in Malay, reduced from a total of 506 as of July 1951 to 101 in April 1954 with a reduction of major incidents from 33 to 0 in the same time period.[65]

Rule-of-law presented a challenge in the COIN operation in Malaya and demonstrates that the operation did not lack instances of failure despite the overall COIN success. For example, in 1948 a patrol near the village of Batang Kali executed prisoners without meaningful evidence in what is today known as the Batang Kali Massacre.[66] This incident provided a useful talking point to insurgent forces when addressing the population and strengthened the insurgency. In contrast to this, the later suspension of the emergency laws incorporated the use of warrants and trials as security improved.[67] This indicates COIN forces in Malaya associated the inclusion of rule-of-law concepts with progress in the COIN effort.

Malaya experienced a total of four tipping points favoring the two sides before the crisis ended with a counterinsurgent victory**.** On 16 June 1948, the murder of three European planters and a number of Chinese workers initiated the emergency, thus tipping the situation into an insurgency.[68] The Briggs Plan began in 1950 and quickly tipped the conflict in favor of COIN forces. Momentum shifted again when, on a routine ambush,

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[64]Ibid., 96.

[65]Ibid., 102.

[66]Barber, 79-81.

[67]R. W. Komer, *The Malayan Emergency in Retrospect: Organization of a Successful Counterinsurgency Effort* (Santa Monica, CA: Rand, 1972), 35-36.

[68]Nagl, 63.

Malay communist forces managed to assassinate Gurney.[69] Finally, in February 1952 the British began a campaign which led to the permanent loss of Communist initiative in 1953. Having discussed the Malayan Emergency, this research now turns to Algeria.

Like Malaya, the conflict between France and Algeria from 1954 to 1962 occurred in the context of the Cold War and the decline of colonialism in Africa following World War II. Following the failures in Indochina, the French government determined to avoid further failure in Algeria. The French had assumed authority from the Ottoman Empire in Algeria in 1830, with Marshal Thomas Bugeaud employing the mobile column counter guerilla tactic he adopted from the French occupation of Spain in the Napoleonic Era.[70] This history and contentious post World War II French domestic politics complicated policy in Algeria.

In 1954 Algeria consisted of approximately nine million Arab Berber residents. Just over one million non-Arab and non-Berber, largely Mediterranean with some Jewish, maintained a mostly European lifestyle. Native Algerians referred to these people as the black foot, or *pieds noir* in French. This group wielded disproportionate political power within Algeria and the French homeland. By 1956, France had committed over 400,000 soldiers to Algeria. There were also 236,000 Muslim Algerians in the French Army with 90,000 serving in Harki forces. Harki, or Harka, means ~~–m~~ovement" in Arabic and these forces represented the French supporting Muslims in Algeria. With respect to their opponents, the French in Algeria lacked a benefit the British had in that the hostile forces

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[69]Ibid., 75.

[70]Alistair Horne, *A Savage War of Peace: Algeria, 1954-1962* (Middlesex, England: Penguin Books, 1977), 30.

in Algeria were native to the country whereas the Chinese were not native to Malaya. By 1956, FLN (National Liberation Front) insurgent membership had grown to between 15,000 and 20,000.[71]

The most prominent individuals involved in the Algerian War are noteworthy for the groups they belonged to and the group to which most did not. Roger Trinquier, a great influence in French doctrine, served as the deputy to General Massu, the commander of the 10th Parachute Division in the capital of Algiers. Jacques Soustelle replaced Leonard as governor-general in 1955.[72] Colonel Goussalt headed the Psychological Operations efforts for General Salan in the capital of Algiers but did not attempt to recruit anyone who was in essence a native Algerian maven.[73] Pierre Gazagne served as secretary of the government headed by Yves Chataigneau.

The FLN was led by six Arab Berbers while the MNA was led by Messali Hadj.[74] Amirouch led the insurgent elements in northeast Algeria but was killed by French forces in 1959. Saadi Yacef served as the military leader for the FLN in the capital of Algiers. In his history of Algeria noted author Benjamin Stora does not indicate a national leader or committee for the pro-COIN Harka movement. Thus the COIN effort in Algeria remained a largely ethnic French endeavor.

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[71]Ibid., 141.

[72]Horne, 105.

[73]Galula, *Pacification in Algeria, 1956-1958* (Westport: Praeger Secuity International, 1964), (Santa Monica CA: RAND, 1963), 66-67.

[74]Benjamin Stora, *Algeria, 1830-2000: A Short History,* translated by Jane Marie Todd, with foreword by William B. Quandt (Ithaca, NY: Cornell University Press, 2004), 36.

The most well known Harki leader, (Bachaga) Benaissa Said Boualam, does not appear to have warranted significant space in the existing literature.[75] In contrast, the FLN easily penetrated "Force K," a Harki special forces element created to fight against the FLN.[76] Symbolic of their limited role in Algeria, Harki exiles in France remain isolated and segregated from the native French people. After the war their continued frustrations emerged in riots in the fall of 2005 in Paris and other French cities.

France considered Algeria legally part of France but this theme lacked the stickiness necessary to win over the majority of the population. While the French trained officers in the psychological operations necessary to implement the theme, a detailed description of the program includes study of native Algerian culture but no mention of native leadership in shaping the curriculum.[77] The French government did not follow through on the national unity theme as native Algerians did not gain the status of citizenship.[78] The conflict between these two policies on the part of the French sent a powerful and negative message to native Algerians. The disparity between the message and actions alienated the population from COIN forces. The use of torture, particularly in the Battle of Algiers, damaged attempts to win over the native Algerian population and

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[75]Horne, 418.

[76]Ibid., 256.

[77]Frederic Guelton, "The French Army Centre for Training and Preparation in Counter-Guerrilla Warfare' (CIPCG) at Arzew," in Martin S. Alexander and J. F. V. Keiger, *France and the Algerian War: Strategy, Operations, and Diplomacy* (London: Frank Cass, 2002), 36-39.

[78]Horne, 35.

also alienated the leadership back in Paris.[79] Compounding this, the French exerted little effort to "adapt the judicial machinery to the situation."[80]

The Challe Plan in 1959 consisted of recruiting additional Harki and maintaining a reserve to pursue insurgent elements while systematically clearing and holding from west to east, until local units could maintain stability.[81] Psychological operations for the French received minimal attention in Kabylia, a key support zone for insurgents.[82]

In terms of systems targeted, the French quadrillage tended towards the population while the later mobile columns tended towards insurgents. Quadrillage involved dividing the terrain among units in a grid pattern and establishing control over the population within each grid while systematically using a separate force to root out insurgent elements, moving from grid to grid.[83] Generally, the French limited investments in infrastructure, both physical and bureaucratic.

Regarding metrics, Galula described successes in Algeria as a reduction in the number of insurgent forces, insurgent contact with its higher elements, rates of insurgent attacks, rises in internal insurgent purges, surrender of insurgent leaders, recruitment of new native counterinsurgent forces, infiltration of borders, and defeat of remnant

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[79]Ibid., 203.

[80]Galula, *Pacification in Algeria,* 21.

[81]Horne, 330.

[82]Galula, *Pacification in Algeria*, 30-31.

[83]Martin S. Alexander and J. F. V. Keiger, *France and the Algerian War: Strategy, Operations, and Diplomacy* (London: Frank Cass, 2002), 9-11.

insurgent elements.[84] Surrender of insurgents may be considered a subset of capture. Recruitment of native forces equates with expanding COIN organizations. Horne attributed an increase in weapons and personnel captured to an increase in insurgent activity against the Morice Line, but acknowledged the overall success of the Line.[85]

In 1956 Algerian Governor Robert Lacoste admitted that Muslims held only eight of 864 higher administrative posts and 1959 marked the first appointed Muslim regimental commander.[86] The sources reviewed in this research do not indicate the use of warrants or trials as measures of success as a focus of French COIN efforts. Stora describes the Harki and self-defense force strength peaking at an estimated 263,000 in 1962.[87]

The book *Souvenirs de la Bataille d'Alger* written by Saadi Yacef in 1962 inspired the movie *Battle of Algiers*. Although biased, having been filmed by the Italian communist Guillo Pontecorvo, French forces in the movie describe an attack rate of 4.2 per week.[88] Also, the film includes a description of the cellular nature of classical insurgent organizations and the need to penetrate the pyramid or triangle formations with actionable intelligence information and interrogations. This indicates two measures used by the insurgents given Yacef's contribution to the film.

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[84]Galula, *Pacification in Algeria,* 244.

[85]Horne, 265.

[86]Ibid., 34.

[87]Stora, 101.

[88]Guillo Pontecorvo and Franco Solinas, prods., *Battle of Algiers*, 1966. Algiers: Casbah Films, http://www.imsdb.com/scripts/Battle-of-Algiers,-The.html (accessed 15 March 2011).

An example of COIN success in Algeria, the 584th led by Jean Pouget, demonstrated that successful operations include the maintenance of law and order which required intelligence information, contact with the population and political activity, and government administration.[89] COIN force organization occurs in the process of political contact and activity as well as government administration. This instance of emphasis on intelligence information also reinforces tips and reports as a metric.

The conflict in Algeria experienced three tipping points, one fewer than in Malaya. The FLN initiated attacks in 1954 and had achieved control of the cities by late 1956. The French achieved a tipping point in 1958 and 1959 as the French Army attained military control and killed Amirouch; however French domestic politics intervened in the form of the fall of the Fourth Republic and exposure of the use of torture. These tipping points correspond with those described by Galula.[90] Having discussed Malaya and Algeria, this literature review now turns to Iraq.

U.S. action in Iraq in 2003 occurred in the context of the Global War on Terror. It did not begin, however, as a counterinsurgency but as a traditional force-on-force conflict. In fact two years into the conflict Defense Secretary Rumsfeld downplayed the use of the term insurgency because he did not assess that the threat met the definition.[91] This fact addresses the importance of qualitative aspects of an insurgency in that

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[89]Alexander Zervoudakis, ―A Case of Successful Pacification: The 584th Bataillon du Train at Bordj de l'Agha (1956-57)," in Martin S. Alexander and J. F. V. Keiger, *France and the Algerian War: Strategy, Operations, and Diplomacy* (London: Frank Cass, 2002), 58.

[90]Galula, *Pacification in Algeria,* 1.

[91]Dana Milbank, ―Rumsfeld's War On ‗Insurgents,'" *Washington Post*, 30 November 2005, A18.

qualitative measurements shape what data security forces collect. The context of Iraq also included the history of artificial boundaries drawn by Western nations as well as the critical nature of oil exports in the region.

Regarding people, command of external forces in Iraq included Generals Franks, Sanches, Abizaid, Casey, Petraeus, Odierno, and Austin. General Petraeus and marine General Amos served as external mavens, having writting Field Manual 3-24, *Counterinsurgency*, in 2006. A number of leaders in Iraq introduced COIN concepts in areas previously hostile to COIN. Sattar Abu Risha in Al Anbar province in western Iraq served as the most decisive host nation maven in strengthening the COIN operation. He did this by begining a movement in western Iraq to defeat Al Qaeda and increase the political power of the Sunni population. Counterinsurgent salesmen in Iraq include the hundreds of Awakening leaders isolating insurgent elements and petitioning the government to better represent the people. Ayatollah Ali Sistani serves mostly as a connector, working largely behind the scenes but occasionally making public pronouncements.

Insurgent groups in Iraq generally fall into one of three groups: Al Qaeda, militia groups, and former regime elements. Prior to his death Abu Musab Al Zarqawi led Al Qaeda. Muqtada Al Sadr served as the figure head of the Mahdi Army, the most prominent militia. After the capture of Saddam Hussein and the death of his two sons, former vice-president Izzat Al Douri served as a prominent leader of former regime insurgent groups.

Regarding stickiness, Sunni acceptance of a return to civil society initially lacked appeal given their political isolation from essential services and economic resources that

was imposed by the Iraqi national government. The heavy-handedness of Al Qaeda combined with the coalition hiring of security volunteers opened the Sunni community to reconciliation. Paradoxically, the prior use of the term –awakening" by Osama Bin Laden paved the way for the people to better understand Abu Risha and his message. For the Shia insurgent elements, the legal case against Muqtada Al Sadr lacks appeal given the tenuous nature of his connection to the death of Ayatollah Al Khoi. The surge operation title *Fardh Al Qanoon,* which translates to _enforce the law' best indicates the use of the stickiness factor to support rule-of-law.

Unlike the previous two operations, COIN forces in Iraq benefited from having eight of the nine paradigms described earlier widely used to guide the influence of the various systems in the operational environment. In addition to the assessment paradigms, Operation Hammurabi, a coalition effort to re-establish facilities and mentor Iraqi court personnel, served to enhance rule-of-law through the judicial system. The LEP (Law Enforcement Professional) and CPATT (Civilian Police Assistance Training Team) programs address the need for forensic and general training requirements for the Iraqi police.

The LEP program included retired law enforcement professionals who provided training for and oversight of evidence collection for coalition elements. The CPATT program included individuals with similar backgrounds, but their duties included the mentoring of Iraqi Police. These programs served to improve the quality of information used to support trials.

Five prominent or relevant analyses include metrics regarding the security situation in Iraq. President Bush implemented 18 benchmarks for Iraq, 10 of which

measure effectiveness or performance. Jonathan J. Schroden used operations in Anbar, Iraq to argue for the measures of the ratio of who initiates contact, analysis of incidents, and insurgent target sets to the two common measures of casualty rates and level of violence.[92] The Iraq Index published by the Brookings Institute provides one of the more comprehensive data sets on Iraq.[93] Anthony Cordesman wrote ―Uncertain Security Situation in Iraq" for the Center for Strategic and International Studies, laying out the metrics of violence, casualties, and public perceptions.[94] Operation Hammurabi lent itself to metrics analysis as well with respect to judicial information systems and court cases per month.[95] The information systems measured in this operation included the computers and other hardware available to court clerks and judges. The use of these served as MOP for the host nation forces. Much like other projects in Iraq, construction and resource delivery required follow through to ensure proper use and maintenance. These actions served to drive tipping points.

In July 2003 the first tipping point occurred with the abolition of the Iraqi Army and the increase in IED attacks. Reinforcing the IED attacks, in April 2004 direct and indirect fire lethal engagements began in both Fallujah and Sadr City in response to the political environment. Based on the attack levels described in Appendix A, a turning

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[92]Jonathan J. Schroden, ―Measures for Security in Counterinsurgency," *The Journal of Strategic Studies* 32, no. 5 (October 2009): 715.

[93]Michael O'Hanlon and Ian Livingston, ―The Iraq Index: Tracking Variables of Reconstruction and Security in Iraq," Brookings Institute, 1 September 2010, 2.

[94]Anthony Cordesman, ―The Uncertain Metrics of Afghanistan (and Iraq)," Center for Strategic and International Studies, 2007, ii.

[95]William McQuade, ―Operation Hammurabi Information Technology Metrics Analysis Report for Baghdad," *The Army Lawyer* (October 2006): 18.

point appears to coincide with the October 2005 constitutional referendum. The earlier election in January for the legislature to develop the constitution and for governate legislatures set the conditions, and the subsequent national assembly elections reinforced this tipping point.

The next turning point occurred when AQI destroyed the Samarra Mosque in February 2006. The response to this included a dramatic increase in civil violence, an aspect not always included as an element in the counterinsurgency. The roots of the final turning point started with the death of Abu Musab Al Zarqawi, enabled by local tribesmen, in June of 2006. This event indicated a change of support among key leaders in the population from insurgents to counterinsurgents. Although it took several months to gain momentum, this event served as a precursor to the Awakening movement which began in the fall. The surge of troops in the spring of 2007 reinforced this tipping point which has not tipped back as of this writing.

Having discussed the three COIN operations, this literature review will now summarize the three according to systems concepts, tipping point elements, and metrics. From a systems perspective, all three external counterinsurgent forces adopted a similar approach of seeking to isolate the insurgents from the population. Galula makes a favorable comparison regarding the success of the Malay and Algeria COIN efforts, citing French political events as the driver of the tipping point in favor of the insurgents.[96] With respect to tipping point elements, American and British forces identified and supported key leaders representing the largest ethnic groups. French forces, however, did not do so to a meaningful degree. The lack of a prominent Harki leader or group of

[96]Galula, *Pacification in Algeria*, 244.

leaders indentified in the literature regarding the Algerian War best supports this assertion.

With respect to the stickiness factor of the message, British forces deliberate accommodation of Malay independence, characterized by cooperation, contrasts with the French effort to maintain Algeria as a part of France. While far from ideal in execution, the British approach clearly contrasts with that of the French. American efforts in Iraq initially focused on the removal of Saddam Hussein and so lacked a clear and compelling COIN message following the achievement of that goal. Over three years transpired before the surge combined with the principles in the new COIN manual communicated a level of support which virtually coincided with the Anbar shaykhs transforming the Awakening message.

Regarding metrics, police and court activities played a more significant role in Malaya than Algeria. This reflected the priorities and actions of the respective COIN forces. Similar to the stickiness factor in Iraq, metrics for police and court activities did not gain prominence until several years into the occupation. This reflected both deliberate actions by the COIN force as well as a response to feedback from the population.

In addition to this review of literature, a survey of Command and General Staff College students at Fort Leavenworth, Kansas, served to assess the receptivity of US Army officers to the paradigm SLTWCT. The survey outlines SLTWCT as a paradigm prior to asking questions about respondents COIN experience, views on MG Flynn‘s critique, metrics, tipping points, and their willingness to use SLTWCT. The author validated the survey questions through the thesis committee and the Quality Assurance Office at the college. Survey results are presented in Appendix C.

This review indicates two gaps in the current literature. First, uncertainty continues regarding the appropriate systems to measure. Second, tipping point literature remains limited in the depth of analysis regarding practical applications in a COIN environment. Elaboration of a transcendent systems based concept, such as security incident chronology, may adequately bridge the gap between the various systems, particularly the population and threat, in a COIN operation to provide meaningful security metrics. Similarly, identifying and influencing all elements of tipping point theory may provide meaningful security metrics.

These two gaps in the literature illustrate the lack of clarity regarding force application, civil-military definitions of security successes, as well as a continued gap in the intelligence community‘s ability to clearly and concisely articulate the level of security and control in a given counterinsurgency. The methodology chapter of this research attempts to provide a framework to close these gaps.

CHAPTER 3

METHODOLOGY

> Systems thinking is a discipline for seeing wholes. It is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static snapshots. It is a set of general principles- distilled over the course of the twentieth century, spanning fields as diverse as the physical and social sciences, engineering, and management. . . . During the last thirty years, these tools have been applied to understand a wide range of corporate, urban, regional, economic, political, ecological, and even psychological systems. And systems thinking is a sensibility- for the subtle interconnectedness that gives living systems their unique character.
>
> — Peter Senge

To find the most useful counterinsurgency measure of effectiveness, the methodology of this research has identified the security metrics used in three counterinsurgencies - one successful, one unsuccessful, and one current counterinsurgency. In order, these are Malaya, Algeria, and Iraq. This research remains focused on three in order to better elaborate on the elements of successful security metrics, acknowledging the resulting limits to the strength of the conclusions. This research then summarizes evaluative criteria based on the defining of security effects as well as the qualitative and quantitative dimensions. It then evaluates the criteria in the specific cases with respect to two overarching lenses: a systems approach and the concept of tipping points.

Both the two primary assumptions mentioned in the introduction and the two lenses may be better understood by the criteria used by School of Advanced Military Studies student MAJ Douglas D. Jones' "Understanding Measures of Effectiveness in Counterinsurgency Operations," which are that they are meaningful, are linked to a

strategic end state, have a strong relationship between cause and effect, are observable, are quantifiable, and are precise.[97] Other previous studies also contribute greatly towards understanding the past use of security MOE.

The definition of effects provided in the introduction, specifically with respect to actions and results, directly correlates with Jones' criteria of meaningfulness, link to a strategic end state, and cause and effect. This research does not question the existing concepts of security effects but only examines them with enough clarity to better define a useful set of security metrics. Research beyond the three COIN operations could further strengthen the case for a set of metrics common to all COIN operations.

The field artillery effects of destroy, neutralize, or suppress clearly remain valid for conventional warfare, but lack clarity, relevance, and utility when addressing many aspects of COIN. The SWEAT-MSO acronym measures effects on infrastructure which account for a significant portion of the population. Several principles of joint operations, particularly perseverance, legitimacy, and restraint,[98] combined with the concept of credibility, also serve as critical elements in desired effects on the indigenous security forces. Specifically these represent desired effects on local counterinsurgent governments and forces but this also includes the network of support among the population from which they derive their power.

Addition security effects include those sought with respect to threat elements. In order of significance, this research assumes these desired security effects on the threat

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[97]Douglas D. Jones, "Understanding Measures of Effectiveness in Counterinsurgency Operations" (Master's Thesis, Command and General Staff College, School of Advanced Military Studies, 2005), 27.

[98]JP 3-0, II-2.

include reconcile, capture, kill, marginalize, or exile those elements. ―Reconcile" describes turning threat elements into counterinsurgents or neutral elements. It may also consist of turning neutral elements into supporters of the counterinsurgency. As explained in the introduction, ―Capture" refers to the detention of threat elements or their resources. ―Kill" refers to the death of the threat element. ―Marginalize" refers to the social and political isolation of threat elements without physically isolating them. ―Exile" refers to the physical isolation of the threat element to areas outside an established boundary.

Security effects relate closely to objectives. For the purpose of this research, the specific objectives for a counterinsurgency do not weigh on the validity of a security metrics paradigm. While, as Jones asserts, each COIN operation will require a unique set of objectives, the research supports the assertion that successful COIN operations do have a common thread. By definition, any valid paradigm will apply across the spectrum of past, current, and future counterinsurgencies regardless of whether it is population or threat-centered. Additionally, an inclusive paradigm can be tailored within reason to adapt it to the specific circumstances, particularly a threat-centered focus or a population based focus. Such an assessment can occur separate from, but mutually supportive of the lines of effort just as SWEAT-MSO currently occurs separately.

The second assumption in this research is the essential nature of both qualitative and quantitative measurements in COIN. Qualitative criteria consist of characteristics which defy precise measure yet remain essential to measuring an event or process. For example, a security force may fill a number of key command positions yet the leadership competence of a number of the individuals may remain in question. Qualitative measures, such as biographical background, may capture facts like this better than raw numbers.

Qualitative measures meet the first four of Jones' six criteria for measures. In contrast, quantitative criteria consist of those characteristics which lend themselves to numerical measures. Security incidents remain a necessary, but not sufficient, measure of security. Security incidents inherently are essential to the definition of insurgency but measuring them is not sufficient in that a low level may not indicate long term success of the counterinsurgent. Quantitative measures directly correspond with all six of Jones' criteria of a measure of effectiveness.

The first evaluative criterion is the extent to which counterinsurgents have used a systems approach, whether knowingly or unknowingly. In *The Fifth Discipline*, Peter Senge, Director of the Center for Organizational Learning at the Massachusetts Institute of Technology's Sloan School of Management, described systems as ~~b~~ound by invisible fabrics of interrelated actions which often take years to fully play out their effect on each other."[99] Counterinsurgencies involve a number of interrelated actions to include insurgent attack and resupply processes, the formation of host nation security force, and the process of convicting a suspected insurgent. The question remains as to which of these processes provide greater opportunities to measure security successes. This approach proves best in this study because it allows for a demonstration of cause and effect, one of Jones' requirements for a measure of effectiveness. Systems which may provide ideal opportunities for security metrics include counterinsurgents, insurgents, organized crime, infrastructure, social, political, judicial, economic, and the common thread security incident chronology. These eight systems and the common thread overlap

[99]Peter Senge, *The Fifth Discipline: The Art and Practice of the Learning Organization* (New York: Doubleday, 1990), 7.

and interact with one another and offer examples of security metrics which can provide a balance of thoroughness and simplicity. Figure K-10 in the Intelligence Preparation of the Battlefield (IPB) Tactics, Techniques, and Procedures (TTP) Field Manual Interim illustrates a useful method for depicting the status of relationships between various elements of these systems.[100] This figure lists the same set of entities in both the column and row headings and describes the relationship as positive, neutral, hostile, or unknown. Each of these systems requires further elaboration.

The first, counterinsurgents, includes security forces and their leaders as well as all the subsystems which directly resource these forces financially, with respect to equipment and supplies, and with respect to information. Counterinsurgents are indigenous, externally based, or some combination of both. These forces require a network of support from throughout the population. It takes a network to defeat a network and nodal analysis is critical.[101] This nodal analysis must occur when examining both host nation forces and threat elements.

Insurgent systems include commanders, operations leaders, cell leaders, reconnaissance personnel, logisticians, technical experts, propagandists, and financiers. Intelligence personnel can describe these systems using a modified version of the traditional doctrinal and situational templates and order of battle used in major combat operations. Key components of the insurgent systems include capabilities and the will to achieve desired end states.

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[100]Field Manual Interim 2-01.301, K-17.

[101]John Arquilla and David Ronfeldt, *Networks and Netwars* (Santa Monica: RAND, 2001), 15.

Another threat system, organized crime networks, generally adheres to interests which diverge from those of the counterinsurgent. These networks may provide services demanded by elements of the population despite possible legal consequences. Organized crime elements further break down in terms of the level of the crimes committed. Generally major crimes such as murder have a greater significance in the context of an insurgency.

The infrastructure system of systems consists of the web of resources through which essential goods and services flow in the COIN environment. As stated, a paradigm currently exists for the assessment of infrastructure systems. The SWEAT-MSO paradigm provides adequate analytical focus for assessment while permitting flexibility for commanders and their staffs.

Social systems include the interaction of groups of people for common purposes other than insurgency, criminal purposes, or direct political action. These can be based on religion, tribe, economic activity, or other such topic. Social systems possess varying degrees of commonality. The social aspect of PMESII-PT directly addresses assessment of this system.

Political systems consist of the human and physical resources the government brings to bear to address problems of a public nature. Major General Flynn summarized the political nature of insurgency and the importance of detail in stating ~~"a~~ll counterinsurgency is local."[102] The violent overthrow of this system from within constitutes the objective of the insurgent although modification of the political system

[102]Flynn, 12.

may assuage key insurgent elements. The political aspect of PMESII-PT directly addresses assessment of this system.

The judicial system consists of the legal apparatus designed to process disputes through established courts based on the application and interpretation of a particular set of laws. This supports rule-of-law and find s the most systematic approach to inputs in the COMPSTAT (Computer Statistics) paradigm for the police profession.[103] This paradigm provides an organizational and technological approach to accountability in policing similar to what the author has experienced in a COIN environment. These policing actions feed the judicial system. In COIN operations judicial systems vary in complexity and efficiency. COIN forces benefit from an understanding of the judicial system in order to prosecute individual insurgents and their groups. COIN forces often face legitimacy challenges when relying on a judicial system which lacks the political will to prosecute insurgents. The POLICE acronym addresses the assessment of the judicial system.

Economic systems include the web of resources through which goods and services flow in the COIN environment. Economic actors tend to overlap or interact with political leaders. This system can provide a base of support for either insurgents or counterinsurgent forces. The economic aspect of PMESII-PT directly addresses assessment of this system. Each of these systems tends to overlap to some degree with one or more of the other systems. The question remains as to what concept best ties the systems together.

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[103]Vincent Henry, *The Compstat Paradigm* (Flushing, NY: Looseleaf, 2002), 187.

A possible answer to this is the common thread of security incident chronology. This systems based concept includes the sequence of events from the initial conception in the mind of the insurgent to the final outcome for potential perpetrators and victims. This process can end as early as capture of the perpetrator prior to an attack or as late as the sentencing of the perpetrator in court. Regardless of the stage or phase to which the incident proceeds, each step on the way has the potential for defining the most desired as well as the least desired outcomes. A trial following the other five elements in sequence represents a desired outcome for COIN forces and undesired outcome for the insurgents. The absence of the five elements following a SIGACT indicates an undesired outcome for COIN forces and a desired outcome for insurgent forces. Ideally, a searchable database serves as a repository for each of the six elements.

The second evaluative criterion is the extent to which counterinsurgents have used any elements of ~~"t~~ipping point" theory in their efforts, again whether knowingly or unknowingly. Security MOE which can identify a tipping point likely meets Jones' requirement of precision. In COIN operations, the law of the few regarding the role of key individuals in messaging exists within the host nation leadership at all levels of society. A maven may be said to exist both at the national level and in each region. Connectors and salesmen are more numerous. The stickiness factor manifests itself in information operations, or in past COIN efforts, psychological operations and the ability get COIN messages to stick. The power of context consists of all the factors which contribute to group receptiveness to a particular message. Similar to the Heisenberg Uncertainty Principle, an increase in precise measurement in armed conflict influences as

well as assesses the outcome.[104] The analysis portion of this research elaborates on the applicability of these elements in specific COIN environments.

The analysis of this research examines the three counterinsurgencies according to the two lenses described. To better understand how the two lenses inform understanding regarding the three insurgencies, table 3 provides a framework for analyzing how each of the relevant components of the two lenses appears from the perspective of both the insurgent and counterinsurgent forces. In the completed table each cell depicts the relevant aspect of the insurgency as well as an inferred assessment as to whether the aspect contributed, detracted, or had no effect on the outcome. Contributing elements support victory for that side while detracting elements support victory for the opponent. The bottom cells indicate strength of the predicted victory for that side. Predictions which match the final outcome indicate viability for the lenses as a methodology.

[104]Robert M. Clark, *Intelligence Analysis: A Target Centric Approach* (Washington, DC: CQ Press. 2004), 226.

Table 3. Tipping Point and System Components in the Three Insurgencies

Element	Malaya		Algeria		Iraq	
	Counter-insurgent	Insurgent	Counter-insurgent	Insurgent	Counter-insurgent	Insurgent
Mavens, Salesmen, Connectors	Groups Represented, Effect(+,0, or -)					
Stickiness Factor	Inherent Message Appeal Effect(+,0, or -)					
Power of Context	Receptivity of population Effect(+,0, or -)					
Systems Focus	What systems did this side target in the opponent? Effect(+,0, or -)					
Metrics	How did this side characterize performance and effectiveness? Effect(+,0, or -)					
Cumulative Effect for Each Side						
Net Effect						

Source: Created by author.

Table 4 depicted below outlines assessed tipping points experienced in the three COIN operations under study. In the completed table, the first tipping point mentioned in each cell refers to a change in direction while any subsequent points mentioned within the same cell refer to a change in degree. Ideally these tipping points correspond with changes made by either the COIN force, insurgent forces, or some combination of both. The final entry in the completed table indicates the side assessed as victorious.

Table 4. Tipping Points in the Three Insurgencies

Tipping Point	Malaya	Algeria	Iraq
Insurgent	Date and event triggered by this side		
Counterinsurgent			
Insurgent			
Counterinsurgent			
Insurgent			
Counterinsurgent			

Source: Created by author.

Table 3 explains the actions taken in context while table 4 indicates the actual tipping points as identified in hindsight. These two tables combine to provide input for table 5. Through table 5, shown below, the analysis portion of this research ties SLTWCT to elements of the COIN operations in each of the three cases. Identifying how each element was assessed or can be inferred to have been used in the same capacity, or how this did not occur, can demonstrate the utility of SLTWCT in driving tipping points in an insurgency. If the elements of SLTWCT appear to have been used in practice and the COIN forces achieved a tipping point, SLTWCT may be considered as a potential assessment tool.

The lack of SLTWCT elements associated with a lack of success also indicates potential for the paradigm but does not reinforce its utility. Conversely, use of the paradigm components associated with a lack of COIN success may indicate the paradigm lacks utility as an assessment tool. Table 5 serves to demonstrate correlation between the measure of effectiveness and the component of the two theories, as explained in the analysis chapter.

Table 5. SLTWCT Indicators in the Three Insurgencies

	Malaya	Algeria	Iraq
Security Incidents	The extent to which each element was assessed or can be inferred to have been used in the same capacity		
Local Security Force Organization			
Tips and Reports			
Warrants			
Capture and Sensitive Site Exploitation			
Trials			

Source: Created by author.

If these three examples demonstrate SLTWCT utility as a paradigm, this research must also address implementation. One challenge with the concept in Kirkuk was how to weigh relative importance. Table 6 provides a framework to compare COIN principles gleaned from the three theorists. Each rating is based on an inferred assessment of correlation with each element of theory, balancing fidelity and complexity. The analysis also provides justification for the relative weights of each element of theory. The relative weight of each element of SLTWCT merits a greater portion of time and effort.

In table 10 of the analysis, a "+" indicates the metric supports the principle of a prominent COIN theorist while an empty cell indicates a weaker or indirect relationship. The superscript a and b on four of the principles indicate duplicate concepts which are

each counted as .75 instead of one. This gives these two concepts added weight while avoiding redundancy.

Based on systems analysis and tipping point theory, security incident chronology appears to offer an opportunity to combine the most useful COIN security metrics. As a description of the security incident chronology, the acronym SLTWCT (Security Incidents, Local Security Force Organization, Tips and Reports, Warrants, Capture and Sensitive Site Exploitation, and Trials) may serve as the security counterpart to SWEAT-MSO. Pronounced –slitwick-tee," this acronym provides the Napoleon's Corporal perspective that would allow soldiers to quickly internalize the desired metrics.[105] The paradigm empowers leaders and soldiers to better visualize a way forward to desired end states following an incident of insurgent violence.

[105]David Alberts and Richard Hayes. *Power to the Edge: Command… Control… in the Information Age* (Washington, DC: Department of Defense Command and Control Research Program, April 2005), 64.

Table 6. SLTWCT Paradigm Weights Assessed by COIN Principles

Metric / Coin Concept		Security Incidents	Local Security Force Organization	Tips and Reports	Warrants	Capture and Sensitive Site Exploitation	Trials
Thompson (Malaya)	1. Government functions within the law	+ or blank					
	2. Defeat political subversion, not guerillas						
	3. Secure base areas first[a]						
Galula (Algeria)	1. Gain support of the population						
	2. Population is neutral, COIN forces sustain active friendly minority[b]						
	3. Protect supporters against retribution/prevent loss of support						
	4. Gain support area by area[a]						
	5. Concentrate forces						
	6. Maintain contact with and control the populace						
	7. Destroy the insurgent political organization						
	8. Test and replace local authorities and forces as needed						
	9. Win over or suppress insurgent remnants						
Kilcullen (Iraq)	1. Building trusted networks[b]						
	2. Engage women but beware of children						
	3. Take stock regularly						
	4. Maintain a single narrative						
	5. Local forces mirror the enemy and not the external force						
Total (Possible 15 for each)							
Weighted Total							

Source: Created by author.

As discussed earlier, in counterinsurgency security incidents refer to attacks or attempts to conduct an attack by a threat element or elements. An apparent exception to this occurs when the insurgents have achieved a victory in a particular area, however in such cases the counterinsurgent must transition to support to insurgency for which this research does not apply. This definition of security incident is narrower than the broader concept of contact with a threat element.

The next chapter analyzes the metrics which best support the evaluative criteria and have succeeded in measuring the effectiveness of counterinsurgencies in Algeria, Malaya, and Iraq. This requires the use of a traditional decision matrix including weighted criteria, units of measure, and benchmarks. An examination of other insurgencies would provide an opportunity to strengthen the conclusions reached in this research. The conclusion also recommends an associated security metrics paradigm based on the previously mentioned desired effects upon insurgents. The paradigm remains sufficiently comprehensive to cover the key elements yet simple enough that counterinsurgent forces can use them effectively and rapidly.

CHAPTER 4

ANALYSIS

> When the number of factors coming into play in a phenomenological complex is too large, scientific method in most cases fails us. One need only think of the weather, in which case prediction even for a few days ahead is impossible. Nevertheless no one doubts that we are confronted with a causal connection whose causal components are in the main known to us. Occurrences in this domain are beyond the reach of exact prediction because of the variety of factors in operation, not because of any lack of order in nature.
>
> — Albert Einstein

> Only by a careful analysis – by a painstaking investigation, will it be possible to select the line of action that will most efficiently and effectively accomplish our purpose . . . It is a study for the economist—the statistician—the technical expert—rather than for the soldier.
>
> — Muir S. Fairchild

This research suggests a caveat to Fairchild‘s assertion. Selecting a line of action may require the study of a technical expert, but it also requires data collection by the soldier. Unless the technical expert provides the soldier a means to collect data clearly and concisely, the expert cannot expect to receive data in a usable form. In COIN operations, data collection and analysis for both the soldier and the expert must relate logically to the nature and definition of counterinsurgency as well as the means to counter the insurgency. This is where the concept of the Napoleon‘s corporal becomes so crucial and the need for a paradigm apparent.

Thus far this research has established counterinsurgencies as efforts to end politically motivated violence. These violent incidents characterize all insurgencies; without violence the situation remains one of peaceful political opposition. Understanding and influencing complex situations such as counterinsurgencies requires systems theory. Systems theory includes feedback or measures of effectiveness. Systems

experience tipping points towards equilibrium or instability based in part on feedback mechanisms. In human systems such as a counterinsurgency, key individuals drive the feedback mechanisms and create tipping points.

These key individuals enable counterinsurgent elements to respond to or pre-empt acts of political violence. The response or pre-emption may vary in effectiveness and level of burden placed on the system. To restate General Flynn‘s assessment, the intelligence community in Afghanistan lacks effective feedback mechanisms and at the same time the ones that do exist create a net burden on counterinsurgent forces. This chapter applies these systems concepts to the three counterinsurgencies as outlined in this research in order to validate a security metrics paradigm which serves as an effective feedback mechanism. Effective metrics should assess not just the level of violence but the effectiveness of the response of key systems to that violence.

While the literature review of this research indicates the logic of SLTWCT as the most useful available paradigm, the application of the paradigm through analysis may demonstrate the utility of the paradigm in practice. Table 9 links tables 7 and 8 by correlating actions with outcomes and inferring causation. The narrative following each chart explains the meaning of the actions, outcomes, and inferred causal links. Table 9 reinforces the answer to the primary research question in relation to the literature review.

Table 7. Tipping Point and System Components in the Three Insurgencies Complete

Element	Malaya		Algeria		Iraq	
	Counter-insurgent	Insurgent	Counter-insurgent	Insurgent	Counter-insurgent	Insurgent
Mavens, Salesmen, Connectors	Diverse +	Largely Chinese -	European Led -	Arab, French Left, Force K +	Diverse +	Majority Sunni -
Stickiness Factor	"Hearts and Minds" +	Communism o	Algeria is French -	Algerian Independence +	Redefined Awakening +	Original Awakening o
Power of Context	East Asian Islam, Colonialism -	Cold War o	Unrest in France -	Colonialism, Arab Berber Identification +	War on Terror o	Restore Caliphate +
Systems Focus	Population, Insurgents, Judicial/ Police +	Economic, Political -	Insurgents, Host nation military, Population -	Terrain, Population o	Population, Infrastructure, Insurgent +	COIN Units, Population, Essential Services -
Metrics	Civil Admin, Policing, Intel +	Terrain o	Pacification, Terrain +	Attack Rate, Political Support +	Attack Rates, Rule-of-law +	Sharia Compliance -
Cumulative Effect for each side	+3	-2	-3	+4	+4	-2
Net Effect	Counterinsurgent +5		Insurgent +7		Counterinsurgent +6	

Sources: Author compilation and assessment of Martin S. Alexander and J. F. V. Keiger, *France and the Algerian War: Strategy, Operations, and Diplomacy* (London: Frank Cass, 2002), 9-11; Noel Barber, *The War of the Running Dogs* (New York: Weybright and Talley, 1972), 14-15, 35, 93, 117, 154, 210, 214, 227; Anthony Cordesman, "The Uncertain Metrics of Afghanistan (and Iraq)," Center for Strategic and International Studies, 2007, ii; David Galula, *Pacification in Algeria, 1956-1958* (Westport, CT: Praeger Security International, 1964; Santa Monica CA: RAND, 1963), 36-39, 63-64, 66-67, 243; Alistair Horne, *A Savage War of Peace: Algeria, 1954-1962* (Middlesex, England: Penguin Books, 1977), 30, 35, 105,114, 203, 256; Stephen Miller and Keith Johnson, "Nurtured in Ease, Destined for Infamy" *Wall Street Journal*, 3 May 2011, A8; John A. Nagl, *Learning to Eat Soup with a Knife: Counterinsurgency Lessons from Malaya and Vietnam* (Chicago IL: The University of Chicago Press, 2002), 60, 95, 102; Neil Smith and Sean MacFarland, "The Tipping Point: Anbar Awakens," *Military Review* 88, no. 2 (March-April 2008): 48-49.

Table 7 applies the related lenses of systems analysis and tipping points to the three COIN operations indicating the most prominent relevant features from the perspective of the two opponents. The numerical values depicted at the bottom indicate the likelihood of success based on the variables as well as the overall likelihood of success for both sides. The value indicates the strength of victory for each side. This chart indicates that the two lenses have predictive value. The text below the chart explains each entry.

With respect to the law of the few, the British COIN effort included a diverse group of counterinsurgent forces. COIN forces deliberately included the major ethnic groups in key leadership roles and these leaders provided meaning input in decision making and messages. This permitted COIN forces to build a network of counterinsurgent support rooted in the various communities. In contrast, insurgent forces struggled to expand beyond an ethnic Chinese base. This proved detrimental to their cause given the immigrant minority status of the Chinese.

Regarding stickiness, British forces benefited from the focus on the hearts and minds. Humanitarian relief provided a tangible measure of COIN force authenticity and contributed to the COIN effort. In terms of their message, Malay Communist forces appear to have neither benefited nor suffered. While their ideology explicitly calls for opposition to exploitation it still represents the imposition of an external western paradigm.

The context of East Asian Islam and the end of colonialism reduced the influence of the British in Malaya and thus negatively impacted COIN forces. While the British incorporated this into their planning, they remained constrained by this context. COIN

forces considered Malaya a critical node in preserving Singapore. The context of the Cold War neither benefited nor harmed the communist cause. The people of Malaya faced a real choice in terms of which ideology they would support.

The systems British COIN forces targeted benefited the forces because a logical link existed between the systems focused on and the desired effects. While not uniform across all units, this focus remained consistent enough to positively influence the COIN effort. In contrast, the systems Malay insurgent forces focused on harmed their cause because the targeting of economic activity alienated the population from the insurgents.

The metrics of civil administration, policing, and actionable intelligence information greatly contributed to success. The Combined Emergency Planning Staff demonstrated the wisdom of Lingle‘s quotation at the beginning of chapter two regarding measuring the right things to get the right behaviors. The metric of terrain controlled neither helped nor hindered the communist insurgents. While control of terrain serves as a valid MOE it does not provide feedback as to future actions.

Overall in Malay counterinsurgents produced a net gain of three while insurgents produced a net loss of two giving the COIN forces a predicted margin of victory of five. The final outcome of a COIN victory indicates the viability of a systems and tipping point approach to COIN assessments. Having discussed Malaya, this analysis now turns to Algeria.

The predominance of European leadership in the COIN effort in Algeria harmed COIN efforts in that no maven could adequately understand the context of the environment to create a nuanced message. The predominance of Arab and Berber leaders benefited the insurgent force. Force K demonstrated the ability to penetrate French led

organizations. Additionally, insurgent leaders gained the support of French mavens for their cause within France itself.

Regarding stickiness, the message that Algeria was French failed when not put into practice and helped drive the final tipping point. Algerian independence, in contrast, appealed greatly as it promised previously unknown political control. This too contributed to an insurgent victory. The context of domestic unrest in France distracted COIN leadership and at times directly opposed ongoing actions in Algeria. For the insurgents, the context of colonialism ending combined with the Arab Berber identity reinforced insurgent success.

Regarding systems targeted by the French in Algeria, the lack of focus on rule-of-law initiatives proved detrimental to COIN efforts. The focus on securing the population and eliminating insurgent cells, while necessary, proved ineffective. Emphasis on the justice system would likely have contributed towards success, although certainly would not guarantee a victory. Systems targeted by Algerian insurgents proved insignificant in this analysis. Demonstrating the ability to govern offset the harsh reprisals against Harki forces.

Metrics for COIN forces in Algeria centered on pacification. This proved beneficial for COIN forces as demonstrated by the tipping point in attacks which followed initiation of the program. Metrics for Algerian insurgents included attack rates and political support. While attack rates did not prove significant, political support as a metric contributed to insurgent success.

Overall in Algeria counterinsurgents produced a net loss of three while insurgents produced a net gain of four giving the insurgent forces a predicted margin of victory of

seven. Like Malaya, the actual insurgent victory in this case demonstrates the utility of a systems and tipping point approach to COIN assessment. The isolated examples of success in Algeria and failure in Malaya reinforce the rule-of-law elements in SLTWCT.

In Iraq, the law of the few for COIN forces initially occurred among the leaders of the Shia population but took place later among the Sunni and corresponded with a tipping point. In contrast, insurgent leaders in Iraq never managed to develop unity of effort within or between Shia and Sunni elements. They maintained separate forces, leaders, and goals.

Regarding the stickiness of the message, COIN forces in Iraq initially lacked a message with broad appeal, but the Awakening eventually attracted attention. In contrast to the new Awakening, AQI maintained the same message regarding Sharia law and hostility towards western ideas.[106] The ISI declaration of statehood in September 2006 fell on deaf ears.

The context of the war on terror provided a mixed resolve in Iraq. The desire for victory is in large part offset by the questions concerning the wisdom of initiating military action. Domestic political dissent challenges the perseverance of external and host nation security forces. In the United States this dissent included the argument that Iraq remains tangential to the war on terror. The context of a desire for a restored caliphate, and the general cynicism of Arabs towards their leaders also served as context and provided fertile ground for insurgent elements. This contributed to insurgent efforts.

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[106]Stephen Miller and Keith Johnson, "Nurtured in Ease, Destined for Infamy," *Wall Street Journal*, 3 May 2011, A8.

The systems COIN forces targeted included the population, infrastructure, and insurgents, providing focus for soldiers, commanders, and staff. Field Manual 3-24 provided this focus in 2007 by describing the complexity of a COIN environment and the relationship between the various systems. This represented a change well into the initiation of COIN operations and contributed to success.

The systems insurgent elements targeted in Iraq included COIN forces, the population, and infrastructure which detracted from the pursuit of their desired end state. A key social and economic system targeted by insurgents included the smoking of cigarettes, a common practice in Iraq. This targeting significantly served as a driving force behind alienating the population and other insurgents.

The metrics used by COIN forces in Iraq include SIGACTs and associated data points, host nation force capacity, and rule-of-law and both contributed to success by shaping the focus of COIN elements. Appendix A provides the clearest use of SIGACTs as a measurement tool. Reporting also serves as a metric however classification requirements render such data unavailable for this research. Population surveys, sponsored by various civilian and governmental organizations, also correspond with the tips and reports metric. The metrics used by insurgent elements in Iraq include Sharia law compliance and detract from the achievement of their objectives.

This analysis in Iraq indicates counterinsurgents produced a net gain of four while insurgents produced a net loss of two giving counterinsurgent forces a predicted margin of victory of six. Similar to Malaya and Algeria, the actual insurgent victory in this case demonstrates the utility of a systems and tipping point approach to COIN assessment.

The change in approach by COIN forces increased the diversity, broadened the systems approach, and added rule-of-law measures, enhancing the COIN effort.

The analysis of these three COIN efforts highlights four areas of importance in the relationship between qualitative and quantitative measurement. First, data or information may seemingly provide precision while still not accurately representing the situation. Second, this research raises the question, "How do you recognize you are meeting with a true maven?" Third, these examples highlight the importance of BCT (Brigade Combat Team) and PRT (Provincial Reconciliation Team) cooperation as a model for host nation organization and as an expression of the law of the few. Fourth, these examples help explain why Field Manual 3-24 notes that the Federal Bureau of Investigation falls under the Department of Justice to support rule-of-law.[107] The Bureau falls under this Department to ensure that operators act within legal and evidentiary constraints.

The completed table 8 outlines the assessed tipping points experienced in the three COIN operations. Each table begins with insurgent initiative given that the initial attacks indicate the transition from a purely political faction to an insurgent faction. The pages below this table explain how these tipping points correspond with the efforts of either the COIN or insurgent force. Changes in degree rather than direction indicate a bend in the curve not associated with a tipping point.

Communist forces in Malaya took the initiative by attacking economic targets. The initiative shifted in favor of the COIN force after implementation of the Briggs Plan. The organization the plan brought to bear against the insurgents aided in driving the

[107]FM 3-24, 2-6.

tipping point. The assassination of Gurney provided a momentary tilt in favor of insurgent forces. By 1953, however, the ―hearts and minds" campaign had successfully isolated insurgents from the population.

Table 8. Tipping Points in the Three Insurgencies Complete

Tipping Point	Malaya	Algeria	Iraq
Insurgent	1948-Initiate an attack against an economic target	1954-Initiate multiple attacks against military and civilian targets 1956-Soummam Congress	July 2003-First IEDs April 2004-Fallujah, Sadr City response to political environment
Counter-insurgent	1950-Briggs Plan	1957-Response to attacks in Algiers 1957-Quadrillage 1958-Morice Line 1959-Challe Plan	October 2005-Constitutional Referendum
Insurgent	1951-Assassination of Gurney	1959-Publication of brutal French tactics 1961-Insurgents leverage French domestic turmoil to conduct negotiations	2006-Samarra Mosque attack
Counter-insurgent	1953-Hearts and Minds campaign denies ―liberated" areas		Sep 2006-Awakening Nov 2006-Surge announced

Sources: Author compilation from Noel Barber, *The War of the Running Dogs* (New York: Weybright and Talley, 1972), Table of Contents; David Galula, *Pacification in Algeria, 1956-1958* (Westport, CT: Praeger Security International. 1964; Santa Monica CA: RAND, 1963), 1; John A. Nagl, *Learning to Eat Soup with a Knife: Counterinsurgency Lessons from Malaya and Vietnam* (Chicago IL: The University of Chicago Press, 2002), 75, Appendix A.

In Algeria insurgent forces took the initiative by attack civil and military targets. The Soummam Congress symbolized the level of organization insurgent forces had achieved. The harsh response to attacks in Algiers in 1957 combined with quadrillage, the Morice Line, and the Challe Plan drove a tipping point in favor of COIN forces. The 1959 publication of the use of torture by the French and later French domestic disputes both discredited the COIN messages, driving the final tipping point.

In July 2003 the first use of IEDs initiated a tipping point in favor of insurgent elements. The fighting which began in April of 2004 in Fallujah and Sadr City began for separate reasons. The constitutional referendum of October 2005 preceded a short lived tipping point. The Samarra Mosque attack in February 2006 drove the next tipping point by forcing harsh reprisals. Finally, the death of Zarqawi indicated the next tipping point as he had lost safe haven among the tribes.

Through table 9, the analysis portion of this research ties SLTWCT to elements of the COIN operations in each of the three cases. The pages below the table identify how each element was assessed, or can be inferred to have been used in the same capacity, or how this did not occur, and demonstrates the utility of SLTWCT when compared with the final outcome or current status of an insurgency. While not identified specifically as assessment tools, the chart does correlate the use of SLTWCT elements with the two successful COIN operations and the neglect of most elements with the unsuccessful COIN operation. Thus SLTWCT may be considered as a potential assessment tool. The explanation below the table groups the three counterinsurgencies according to the six elements of SLTWCT.

Security incidents in Malaya dropped significantly well before the formal declaration of the end of the insurgency, indicating other factors delayed the declaration. Similarly security incidents in Algeria dropped dramatically until shortly before COIN political failure, however other factors delayed the ascendancy of insurgent forces. In Malaya rule-of-law procedures moved towards more traditional policing measures while in Algeria rule-of-law procedures remained of secondary importance, helping to overcome tactical successes by COIN forces. Security incidents in Iraq rose dramatically

until a change in COIN strategy combined with a lack of change in insurgent strategy led to a dramatic decrease in incidents.

With respect to local security force organization in Malaya, Barber acknowledges the significance of key individuals in his list of principal characters at the beginning of *War of the Running Dogs*. This demonstrates an example of Gladwell's tipping point elements and how analysis outlines the key stakeholders. Similarly, Horne takes the time to list the Algerian FLN leadership concisely but does not do so for the French side. Local security force organization in Iraq began largely in the Kurdish and large portions of the Shia Arab community. Active engagement by COIN forces combined with alienation by insurgent forces helped drive other portions of the Shia community as well as meaningful portions of the Sunni Arab community to align with COIN forces.

Tips and reports in Malaya increased as a result of the effective work of the Special Branch intelligence unit. The harsh interrogation techniques used by COIN forces in Algeria reduced the population's willingness to provide COIN forces information. The ability of insurgent elements to penetrate COIN forces and the limited ability of COIN forces to do the same further indicates tips and report patterns supported insurgents. The report which led to the death of Zarqawi indicates the value of information which supports intelligence. To varying extents in all cases, the use of tips and reports enabled COIN forces to establish and maintain contact with threat elements.

The initial establishment of a policy akin to police primacy supports the influence of the organization metric and three rule-of-law measures in Malaya. The lack of trials in Algeria provided insurgents a gap to exploit between rhetoric and reality. Without trials,

the other two measures lack value. Establishment of CCCI in Baghdad and the use of LEPs and CPATTs establishes the value placed on rule-of-law in Iraq.

Each of the six elements were assessed or inferred to have been used to some extent in similar capacities in both Malaya and Iraq, although in Iraq the last three rule-of-law elements strengthened later in the operation. Higher security incident volumes in Iraq rendered evidence collection problematic given the threat of additional attacks during the procedure. In both cases, COIN actions do correlate with tipping points. Limited or local use in Algeria was associated with success however overall actions ran counter to these measures to a far greater extent than in the prior two operations and were associated with tipping points in favor of insurgent forces.

Of the three counterinsurgencies, the Iraqi example demonstrates the most significant change in approach through the duration of the operation. During this change, rule-of-law gained in prominence as a guiding principle. In contrast to this Algerian COIN forces changed their approach the least over the course of the conflict. The Malayan Emergency fell between these two with police playing a prominent role from the beginning but warrants and trials gaining prominence later.

In the three cases, table 9 offers an explanation of how actions associated with each element of the paradigm relate to the level of security. Security incidents directly correlate with security. Local security force organization and the three rule-of-law measures approximate the capacity and intentions of both sides in the conflict. Tips and reports reflect the perceptions of the population regarding the capability and intentions of both sides in the conflict.

Table 9. SLTWCT Indicators in the Three Insurgencies Complete

	Malaya	Algeria	Iraq
Security Incidents	Insurgent attacks negatively affect public opinion	Targeting of threat elements temporarily succeeded in reducing attack levels	Virginia chart demonstrates effectiveness
Local Security Force Organization	Active recruitment of senior communist Chinese leaders; civil servant, police, intelligence teams	No host nation maven, Limited development contributed to insurgent victory	Awakening Councils extended the COIN network further into the Sunni community
Tips and Reports	Special Branch gathered information and protected sources	Interrogation techniques have negative impact on population	Tips hotlines; multiple witness statement requirement
Warrants	Limited prosecution or the amnesty program	Limited use contributed to insurgent victory	CCCI, Operation Hammurabi; police primacy; threshold of evidence
Capture and Sensitive Site Exploitation	Limited prosecution or the amnesty program	Limited interest in SSE contributed to insurgent victory	Law Enforcement Professionals; forensic lab investments
Trials	Limited prosecution or the amnesty program	Limited use contributed to insurgent victory	CCCI, Operation Hammurabi

Sources: Author compilation and assessment of Appendix A, Noel Barber, *The War of the Running Dogs* (New York: Weybright and Talley, 1972), 93, 114-115, 117, 172-173, 193; David Galula, *Pacification in Algeria, 1956-1958* (Westport, CT: Praeger Security International. 1964; Santa Monica CA: RAND, 1963), 21, 244; Alistair Horne, *A Savage War of Peace: Algeria, 1954-1962* (Middlesex, England: Penguin Books, 1977), 205, 418; R. W. Komer, *The Malayan Emergency in Retrospect: Organization of a Successful Counterinsurgency Effort* (Santa Monica, CA: Rand, 1972), 34; William McQuade, ―Operation Hammurabi Information Technology Metrics Analysis Report for Baghdad," *The Army Lawyer* (October 2006): 18; John A. Nagl, *Learning to Eat Soup with a Knife: Counterinsurgency Lessons from Malaya and Vietnam* (Chicago IL: The University of Chicago Press, 2002), 92-93; Neil Smith and Sean MacFarland, ―The Tipping Point: Anbar Awakens," *Military Review* 88, no. 2 (March-April 2008): 48-49.

Having established SLTWCT as a potentially valid security metrics paradigm, this analysis now turns to one aspect of how the paradigm might appear in a handbook. The last tipping point serves as an ideal candidate for metric benchmarks. Units of Measure must allow for reasonable progress. Relative weights also merit further analysis. Table 10 compares COIN principles, particularly those gleaned from experiences in the three insurgencies, to SLTWCT in order to assess relative weight.

The next few pages explain the logical connection between COIN principles and the SLTWCT elements. The resulting weights communicate relative importance, assist in task allocation for COIN forces, and support recommendations made in chapter five of this research. Organization serves as the most significant measure while security incidents provide the least decisive indications. This assessment appears to contradict the fact that security incidents help define an insurgency. This apparent contradiction may be resolved by understanding security incidents as a necessary but not sufficient measure of security. The pages following the table also explain this paradox and elaborate on the rationale for the relative weights.

This table indicates organization as more important than security incidents as well as tips and reports, and nearly as important as the three rule-of-law elements combined. This analysis indicates a paradox in that while security incidents are essential to the definition of an insurgency, they indicate only a portion of the security situation. These ratios match the author‘s experience in COIN.

Table 10. SLTWCT Paradigm Weights Assessed by COIN Principles Complete

Metric / Coin Concept		Security Incidents	Local Security Force Organization	Tips and Reports	Warrants	Capture and Sensitive Site Exploitation	Trials
Thompson (Malaya)	1. Government functions within the law		+		+	+	+
	2. Defeat political subversion, not guerillas		+	+			
	3. Secure base areas first[a]	+	+	+			
Galula (Algeria)	1. Gain support of the population	+	+	+			
	2. Population is neutral, COIN forces sustain active friendly minority[b]	+	+	+			
	3. Protect supporters against retribution/prevent loss of support	+		+	+	+	+
	4. Gain support area by area[a]	+	+	+			
	5. Concentrate forces	+	+				
	6. Maintain contact with and control the populace	+	+	+			
	7. Destroy the insurgent political organization				+	+	+
	8. Test and replace local authorities and forces as needed		+		+	+	+
	9. Win over or suppress insurgent remnants	+	+	+			
Kilcullen (Iraq)	1. Building trusted networks[b]	+	+	+			
	2. Engage women but beware of children		+	+			
	3. Take stock regularly	+	+	+	+	+	+
	4. Maintain a single narrative		+				
	5. Local forces mirror the enemy and not the external force		+				
Total (Out of a possible 16 for each) = 48		9	14	10	5	5	5
Adjusted Weights		1.8	2.8	2	1	1	1

Sources: Created by author comparing SLTWCT with principles described in David Galula, *Pacification in Algeria, 1956-1958* (Westport, CT: Praeger Security International. 1964; Santa Monica CA: RAND, 1963), 54-56; Robert Thompson, *Defeating Communist Insurgency* (Saint Petersburg, FL: Hailer Publishing, 1966), 50-57; David Kilcullen, ~~"2~~8 Articles: Fundamentals of a Company Level Counterinsurgency" (Washington, DC, 2006), 5-8; a, b-Duplicate concepts, counted as 75.

Clearly a long term trend of high or increasing security incidents will outweigh stability or improvement in the other five areas. Generally however, security incidents reflect symptoms, not causes of the insurgency. The remainder of this analysis explains how each of the five remaining metrics better reflect COIN concepts to address root causes.

First, organizing as a functioning network communicates to insurgents and the population the potential effectiveness of the response to subsequent security incidents. Insurgents witnessing high levels of organization are less likely to commit further acts of violence. For the same reason potential witnesses within the population are more likely to provide information.

The situation in Algeria reflects this in that prior to the last tipping point security incidents had diminished but organization remained limited and so the security situation remained fragile. The table also indicates correlation between SLTWCT and all relevant principles from each of the three COIN theorists. The relative weights in this chart help explain why MG Flynn placed such great emphasis on intelligence teams providing a greater amount of focus on environmental factors as opposed to threat networks.

Regarding Thompson‘s principles, in SLTWCT the organization operating within the law is measured in the three rule-of-law events. The organization defeats political subversion instead of the guerilla through tips and reports which provide information on the nature of the subversion and the context of the environment. Security incidents and organization indicate the securing of base areas. The strength of bonds in the COIN organization reinforces the protective measures which pre-empt or respond to each security incident. Low security incidents are usually a positive indicator but they must

also be accompanied by a high level of COIN organization. Low security incidents with low levels of organization may indicate an insurgent victory in a particular area. If this occurs strategically, the COIN force and insurgent force may switch places. A low level of security incidents may also simply indicate a low level of COIN activity.

Regarding the ideas of Galula, security incidents, organization as well as tips and reports indicate support of the population with most remaining neutral and some actively providing support. Security incidents, tips and reports, capture/SSE, and trials all indicate the ability of COIN forces to protect supporters against retribution to prevent loss of support. As in the case of Thompson‘s concepts, security incidents and organization offer opportunities to measure support by areas and concentrate forces accordingly.

Security Incidents, organization, and tips and reports measure the ability to maintain contact with and control the populace. The stickiness factor of messaging implies the application of influence rather than control. The three rule-of-law elements indicate progress in destroying the insurgent political organization. These, in addition to organization, indicate the ability to test and replace local authorities. Organizational mavens, salesmen, and connectors publicly and privately win over or suppress insurgent remnants. Security incidents as well as tips and reports also indicate this.

Regarding SLTWCT and Kilcullen, organization as well as tips and reports enables the measuring of trusted networks, engagement of women, and caution in engaging children. The establishment of meaningful partnerships between the external force and host nation forces proves critical. All aspects of SLTWCT permit taking stock regularly. Maintaining a single narrative through organization corresponds directly with

Gladwell's stickiness factor. Finally, precise analysis of organization measures the extent to which local forces have mirrored the enemy rather than the external force.

Many of the empty cells in table 10 do correlate with elements of SLTWCT but are more indirectly related. The nature of open systems reinforces this assertion. For example, tips and reports can reflect gained support by areas however the direct cause is found in the tipping point elements of security force organization. The cells in Table 10 only include the most direct associations rather than indirect relationships.

The pursuit of influence of the populace differs subtly from seeking control of the populace in a way that disproportionally increases the stickiness factor of the COIN force message. While Galula may comprehend the proper intent regarding control, his readers may assume intent different enough to compromise the message. He suggested such misinterpretation regarding how the French soldiers defined Pacification in Algeria. The perceptions of host nation elements warrant consideration as well. Host nation forces might bristle at the idea of being controlled. The term influence creates the sort of subtle message change Gladwell describes which drive tipping points. A clear message goes to insurgents in knowing that COIN forces can effectively kill, capture, or exile them through policing and the legal system. This message will drive the insurgents towards marginalization or, ideally, some form of reconciliation.

This analysis reviewed the available paradigms as candidates for a security paradigm, concluding SLTWCT serves as the most useful candidate. Using examples of success and shortcomings in each of the three COIN efforts, this analysis demonstrated the extent to which COIN forces in the three cases incorporated elements of systems theory, to include tipping point elements. It then reviewed tipping points in each of the

counterinsurgencies and how the actions of each COIN force or insurgent group drove the tipping point. This analysis then compared the actions of the COIN forces to the SLTWCT paradigm to demonstrate its utility in explaining the outcomes. Finally, this analysis examined the relative importance of each element of SLTWCT when viewed through the lenses of the three COIN theorists.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

> Q: How will you measure success, sort of between now and the time of that assessment? What would you like to have happen?
> A: Well, one of the things--I mean, this is one of the things that we've been asking of--in the assignment basically given to General Petraeus and the Afghans and General Rodriguez and so on, is, okay, what are the benchmarks, what are the criteria by which we will judge we are making progress? Some of those are fairly evident. Others they're still developing.
>
> — Robert Gates, Secretary of Defense
> Response to reporter, 2 September 2010

The above quotation demonstrates the awkward exchanges which may result in part from the current lack of a doctrinal security metrics paradigm. This raises the important question. How do COIN practitioners respond to media accusations of failure using numerical measurements? A lack of response in such a situation indicates a limited ability to defend COIN actions. To advance to the stage of science within the military arts and sciences, counterinsurgency metrics should be expressed in numbers to the greatest extent possible. That which remains non-numeric may be considered the art of war. Awareness of the COIN environment as an open system aids in avoiding the illusion of science and the tendency towards micromanagement. This awareness helps distinguish between the art and the science.

This research lends support to the hypothesis of SLTWCT as an appropriate security metrics solution which measures the three events and entities, consisting of security incidents, COIN functions (organization and rule-of-law), and the population, which combine to make up security. MTFRIC already measures COIN threats as an entity. The SLTWCT paradigm serves as the only current candidate that addresses both

of the common metrics of security incidents and actionable intelligence information. For this reason, this research committed added effort to the tipping point concept as all counterinsurgents seek to achieve or sustain some form of tipping point in their favor. Prior to addressing conclusions regarding tipping points, review of the subordinate questions ties together the analysis.

With respect to the subordinate research questions, qualitative and quantitative considerations and judgments are inextricably linked in any valid metric. Historically, desired effects in the successful COIN efforts include the end of hostilities and political reintegration of the former insurgents. The dominant desired COIN effects in the unsuccessful COIN effort included the end of hostilities but lacked an appealing process of political reintegration. The dominant desired effects in the unsuccessful insurgencies included a controlling moral legalism in the form of Sharia Law and a controlling economic legalism in the form of Communism in Iraq and Malaya respectively. In both successful and unsuccessful COIN operations, systems theory has had a great influence whether directly or indirectly. Knowingly or unknowingly, insurgent and COIN forces incorporate Gladwell‘s tipping point concepts in their planning and operations.

Finally, common metrics or indicators of useful metrics in successful COIN operations have included attacks, intelligence and atmospherics, and rule-of-law. The unsuccessful example of Batang Kali in Malaya further supports the importance of rule-of-law. Common metrics in the unsuccessful COIN operation included control of terrain and the population but failed to include rule-of-law and minimized the use of tipping point elements. As Galula pointed out, French psychological operations in Algeria did not

take place uniformly, reducing the stickiness factor. To achieve success, the metrics used must consistently indicate the systems targeted or accounted for in the targeting process.

In his article, General Flynn argued that intelligence officers must build analytical products that ~~–a~~ctually influence commanders."[108] Steam engine governors prove useful as a metaphor in this. The SLTWCT paradigm provides a governor like mechanism because it measures actions and effects generally tied to successful COIN practices. In particular it places emphasis on the primacy of policing efforts. The elements break down into the three categories of security incidents, security force functions, and population perceptions. The security force functions break down further into tipping point measures and rule-of-law measures.

The tipping point measures assess the actual systems which respond to security incidents while the rule-of-law measures assess the function of these systems. Rule-of-law measures enhance legitimacy. The traditional measure of intelligence information indicates the population response to these systems and their functionality. The achievement of events corresponding to each of the five elements which follow a security incident represents a desired outcome for COIN forces and an undesired outcome for insurgents. Conversely, the failure of COIN forces to achieve each of these five represents an undesired outcome for COIN forces and a desired outcome for insurgents.

[108]Flynn, 9.

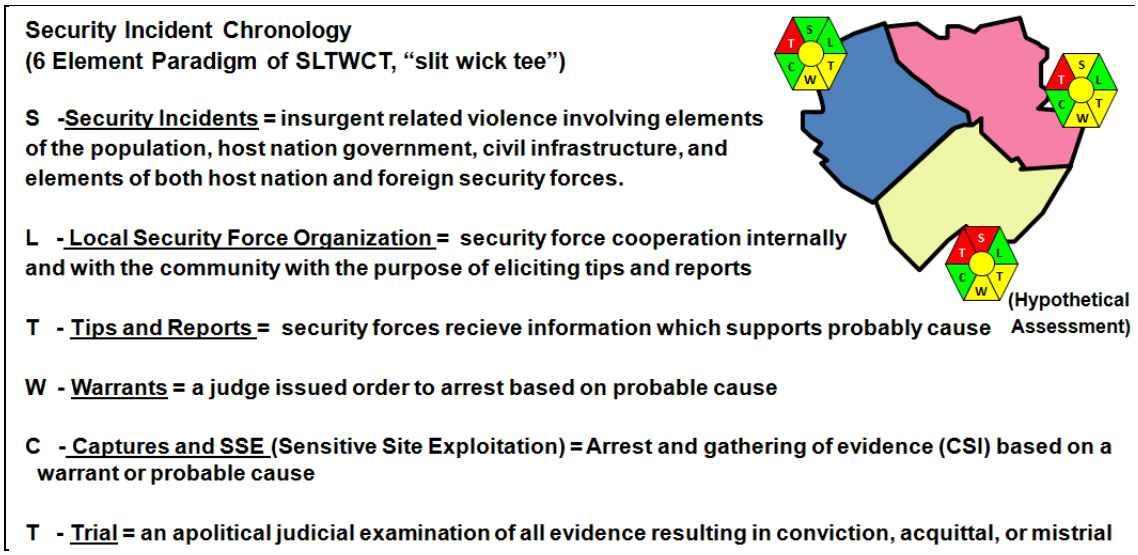

Figure 2. Graphic Representation of a Hypothetical SLTWCT Assessment
Source: Created by author.

Adding SLTWCT to existing doctrinal paradigms also provides the command and staff MG Flynn's requirement of ~~–~~comprehensive reviews of everything that is happening in the various districts."[109] It permits rapid communication between leaders and led regarding protective measures and the vulnerability of the environment to threat elements. Finally, as indicated in figure 2 the paradigm addresses the security aspect of MG Flynn's desired district assessments.[110] In these aspects SLTWCT complements the reforms recommended by General Flynn.

The SLTWCT paradigm does not add new ideas but condenses some of the more successful security practices for the COIN soldier and leader. This research lends support to the assertion that the paradigm fills a doctrinal gap within the security component of

[109]Flynn, 18.

[110]Ibid., 19.

COIN. The paradigm provides an ORSA like memory aid for the non-ORSA soldier. It better enables immediate and long term responses to individual security incidents and helps translate intent into action at the lowest level. It provides soldiers a constructive alternative to seeking unrestrained vengeance for a fallen comrade. The paradigm provides soldiers a vision of the way forward with respect to acts of violence committed by insurgents. In this sense it applies Lingles concept presented at the beginning of chapter 2 that you get what you measure.

Figure 2 illustrates how each of the six element assessments might appear in an assessment product. A hexagon associated with each unit area of operations includes color coding for the assessment of each element in SLTWCT with the overall assessment in the center. Arrows next to and in the center could indicate the latest trend for that element and for all elements. Appendix D provides a menu of subordinate metrics which may combine in the assessment to determine the security rating for each of the six elements. The metrics progress in inclusiveness from broad to narrow.

Those conducting COIN security assessments may select from among these those which best relate to the specific circumstances being addressed. The order of these metrics generally reflect their priority however the unique circumstances of a particular operation may prompt reordering. The rule-of-law metrics prove more difficult in high security incident environments where the gathering of evidence poses an elevated risk of additional attack. While implementing the paradigm may prove more difficult in such circumstances, it still provides the soldier a guide in measuring the preferred actions in a COIN environment.

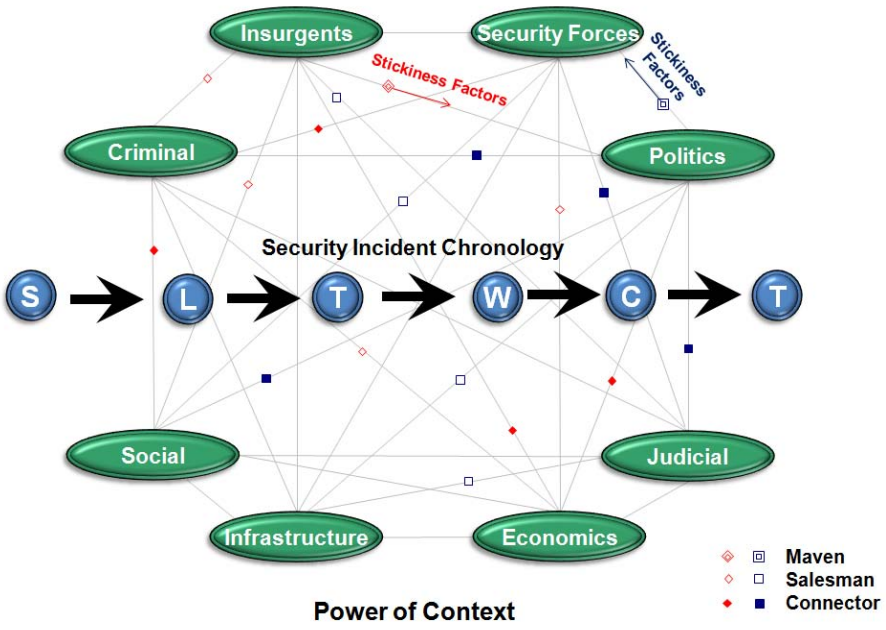

Figure 3. SLTWCT Paradigm and Systems Overview
Source: Created by author.

Similar to a PERT (Program Evaluation and Review Technique) sequence diagram, figure 3 graphically approximates the relationship between the systems in a COIN environment and the events of the security incident chronology. Concurrent with the security incidents, the mavens, salesmen, and connectors from both COIN and insurgent forces advocate themes and messages of varying stickiness in a specific context. The themes travel within and between each of the systems. As a security incident proceeds chronologically from the initial event to the trial any of the eight systems can influence the process.

Figure 4 builds upon Bazinotti‘s depiction of COIN paradigms, adding those of the nine examined in this research originally not included in figure 1. Both POLICE and SLTWCT fill the role of metrics while the other paradigms provide tools or describe the

environment. Each of these tools plays a unique and important role in gaining situational understanding in a COIN environment.

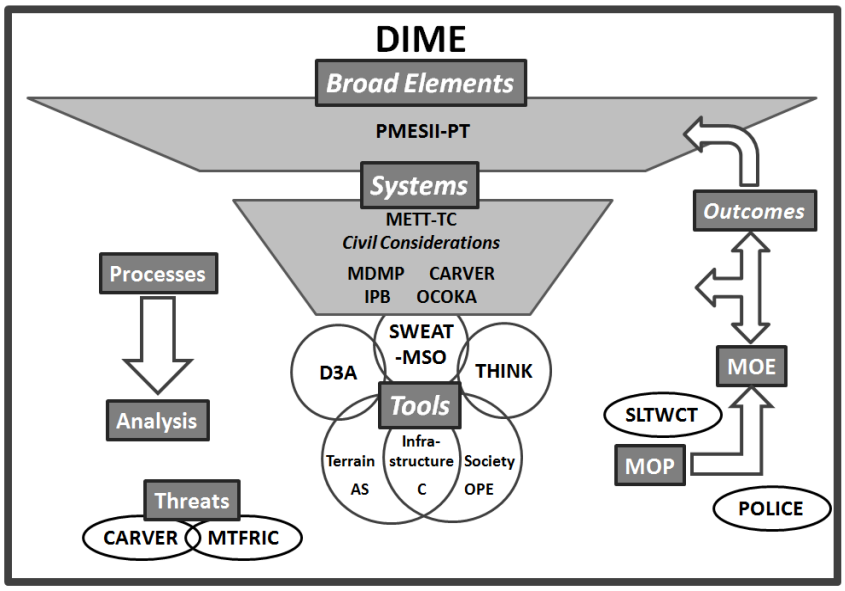

Figure 4. Proposed Overview of Existing Paradigms
Source: Author adaptation of Al Bazzinotti and Mike Thomas, ―Assessing the Criminal Dimensions of Complex Environments,‖ *Military Police* (Fall 2008): 7.

This research highlights five secondary but important points regarding the use of security paradigms in COIN. First, the fact that COIN environments constitute open systems reduces the ability of any metric to prove decisive yet metrics remain critical to the assessment process. Second, traditional metrics include attacks and intelligence which generally correspond with security incidents and tips/reports. Third, the fact that both sides in a COIN environment seek to drive a tipping point corresponds with the Local Security Force Organization metric category. Fourth, the enhancement of rule-of-law has proven valuable to COIN success and corresponds with the last three measures of SLTWCT. Fifth, like the Heisenberg Uncertainty Principle in physics, in COIN

measuring the right things is more important than increasing the accuracy of a measurement.

Besides SLTWCT, another recommendation from this research involves further study on tipping points in counterinsurgency, particularly with respect to identifying mavens, salesmen, connectors, stickiness factors, and context. This could have a significant impact on the information operations community. For example, the term ‗influence' might replace ‗control' as a goal regarding the population. For the systems lens, further analysis of the policing concepts in COMPSTAT offer opportunities to refine COIN techniques based on the most current policing paradigm. This would have a significant impact on the operational community. This research does suggest a restructuring of the overview presented by Bazzinotti.

While not conclusive, the survey results of this research shown in Appendix C indicate US Army COIN practitioners would consider using the SLTWCT paradigm if provided the appropriate resources for implementation. To support this, the relative weights of each element provide an indicator of the division of labor. Commanders would of course tailor the relative weights based on specific circumstances. For example, a high security incident rate might require greater emphasis. COIN units could conduct SLTWCT briefings upon entry to theater to communicate an assessment of the security status much like the SWEAT-MSO brief communicates the assessment of the infrastructure status. Ideally, a review of these metrics should correspond with the intuition of the commander.

This research indicates potential for modification to existing KLE formats to include tipping point measures which better enable assessment of KLE documents. In

such a change, the narrative portion may include stickiness factors and contextual information. In ―Beyond Reconciliation" the authors provide an example of how the tipping point concepts can positively influence key leader engagements.[111] Another change the author recommends is adding the term ―metrics" to the definitions manual and the words ―trial" and ―court" in appropriate places in the IPB TTP, IPB and ISR manuals.

Finally, a SLTWCT Handbook similar to that of SWEAT-MSO would provide a common base for commanders and staff to rapidly communicate understanding regarding the security status in a COIN environment. This handbook would build on the concepts presented in the article on SLTWC2 and refined in this research. The handbook would require additional research regarding the delineation between the green, amber, and red status for each of the six elements, similar to the current assessment products presented to the public by COIN forces in Afghanistan. Further research applying this concept to other COIN operations could strengthen confidence in its utility.

Other findings from this research include important points that warrant additional research. For example, table 10 indicates a paradox of security incidents defining an insurgency while remaining of equal or less importance relative to organization, tips and reports, and the combined weight of the rule-of-law measures. This research also reinforces the importance of host nation participation and leadership in COIN operations. Finally, this research reinforced the assumption that the current definition of effects adequately supports COIN.

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[111]Nathan Minami, David Miller, Michael Davey, and Anthony Swalhah, ―Beyond Reconciliation: Developing Faith, Hope, Trust, and Unity in Iraq," *Military Review* 91, no. 2 (March-April 2011): 57.

In this aspect, this research also contradicts one of the author‘s premises that COIN doctrine lacked the necessary specificity to communicate the author‘s effects of reconcile, capture, kill, marginalize, and exile. The counterparts exist as follows: reconcile~reintegrate, capture~seize, kill~destroy, marginalize~neutralize, and exile~dislocate. This represents the most significant change in the views of the author through the conduct of this research.

Given the tie to effects, many units might choose to assign this assessment security process to the fire support coordinator and staff. Prior to this change the author identified the preference for trial over conviction as the final metric in the paradigm because convictions better reflect an outcome rather than a category of metrics. A third change in view of the author was a shift from a focus on MOE to the broader concept of metrics, adding MOP. The final change consisted of modifying the SLTWC2 terms of SIGACTs to security incidents, network to organization, and conviction to trial because these terms relate more closely to the definition of security and the desired outcomes.

No paradigm will provide a silver bullet for all COIN security problem sets however SLTWCT does offer a useful tool to establish a mindset, collect and analyze data in a more meaningful way, and systematically address key security requirements for success in COIN operations. While the paradigm will not automatically render a COIN operation decisive or low in cost, it assists in focusing COIN efforts towards meaningful actions. This research indicates the paradigm fills an existing gap in COIN literature in the crucial area of assessing the level of security, and warrants consideration for addition to US Army doctrine.

GLOSSARY

Capture and Sensitive Site Exploitation. Arrest and gathering of evidence (i.e. Crime Scene Investigation) based on a warrant or probable cause

Counterinsurgency. Military, paramilitary, political, economic, psychological, and civic actions taken by a government to defeat insurgency

Economic System. The web of resources through which goods and services flow

Effect. The physical or behavioral state of a system that results from an action, a set of actions, or another effect. The result, outcome, or consequence of an action. A change to a condition, behavior, or degree of freedom

Harka/Harki. Native Arab Berber Algerians serving in a security forces dedicated to the conduct of COIN operations in Algeria in support of French forces.

Insurgency. An organized movement aimed at the overthrow of a constituted government through the use of subversion and armed conflict

Intelligence Information. Tips, reports, or survey data which, when analyzed, contributes to the overall intelligence picture.

Judicial System. The legal apparatus designed to process disputes through established courts based on the application and interpretation of a particular set of laws

Local Security Force Organization. The development by host nation security forces of relationships internally and within the population that allow the forces to elicit tips and reports and provide protective measures

Measure of Effectiveness (MOE). A criterion used to assess changes in system behavior, capability, or operational environment that is tied to measuring the attainment of an end state, achievement of an objective, or creation of an effect. MOE answer the question, "Are we doing the right things?"

Measure of Performance (MOP). A criterion used to assess friendly actions that is tied to measuring task accomplishment. MOP answer the question, "Are we doing things right?"

Metrics. A non-doctrinal umbrella term for MOE and MOP

Pacification. Identification and employment of the favorable minority to destroy the hostile minority and to control [influence] and rally the neutral majority

Paradigm. A conceptual framework that permits the explanation and investigation of phenomena or the objects of study in a field of inquiry.

People or Population. The citizens or residents of the country in which the insurgency occurs

Police Primacy. The establishment of local police forces as the primary security authorities with military forces in a supporting role.

Political Action. Political, ideological, and administrative system to control [influence] the population.

Political System. The governing system which accounts for the management of public goods and services.

Security. A condition that results from the establishment and maintenance of protective measures that ensure a state of inviolability from hostile acts or influences

Security Incident. Violence involving elements of the civilian population, host nation government institutions, civil infrastructure, and elements of both host nation and foreign security forces

Security Incident Chronology. The chain of events from the ideation of an attack to the final consequences for the perpetrator and others involved, regardless of the stage to which the attack may have progressed.

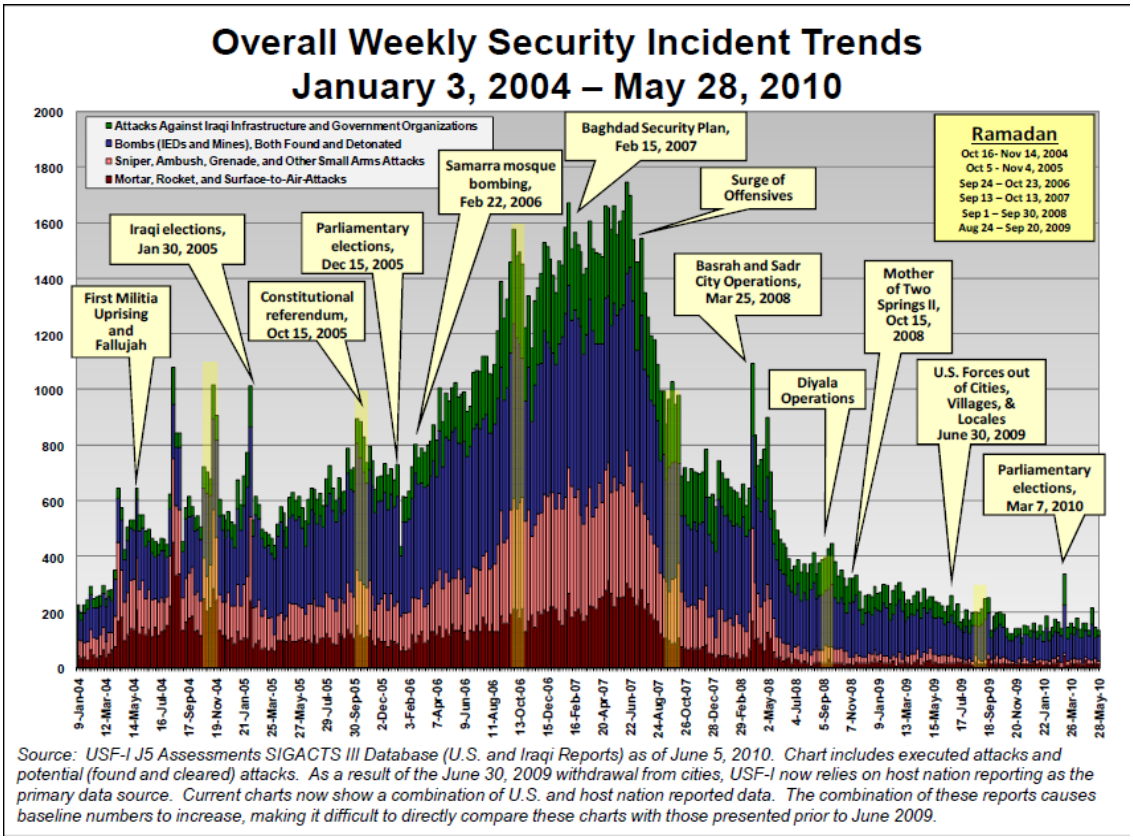
Survey. A scientific sampling of host nation population opinions regarding the entities and context involved in a counterinsurgency [no current doctrinal definition equates this to human terrain reconnaissance]

Trial. An apolitical judicial examination of all evidence resulting in conviction, acquittal, or mistrial

Warrant. A judge issued order to arrest based on probable cause

APPENDIX A

Iraq Weekly Security Incident Trends

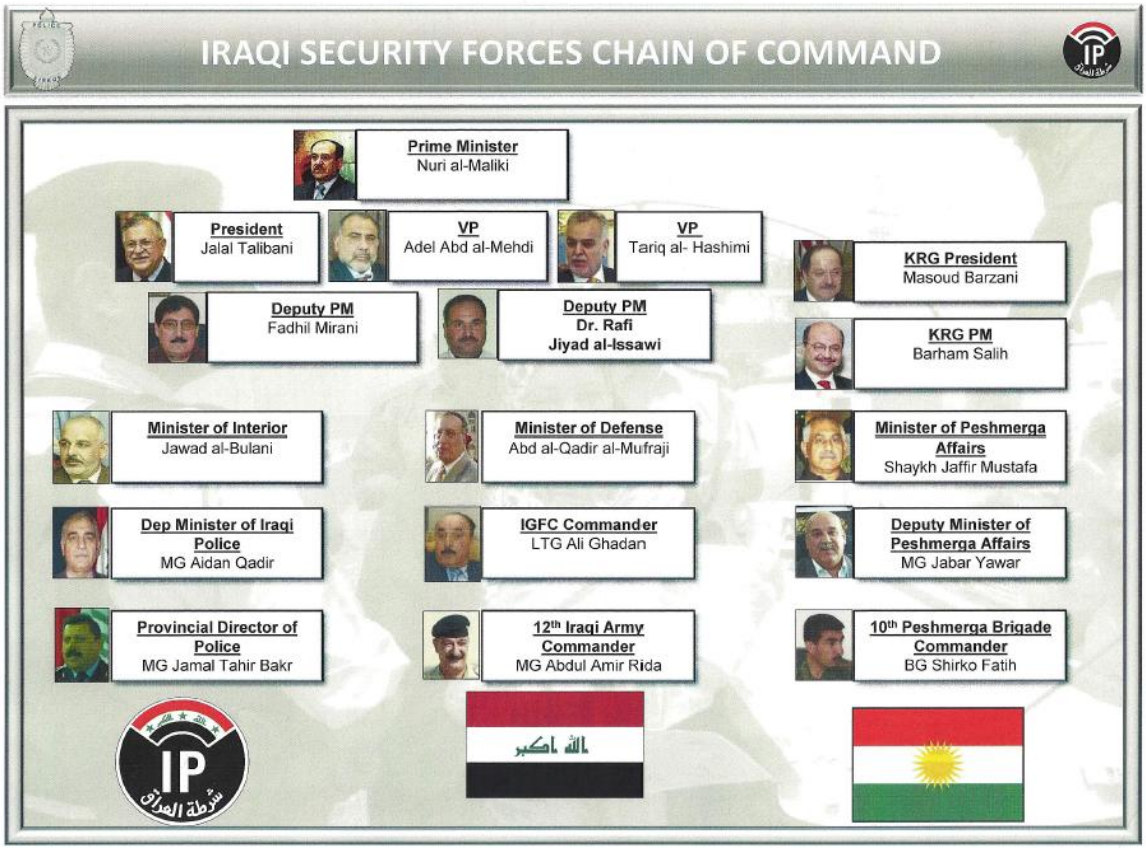


Source: USF-I J5 Assessments SIGACTS III Database (U.S. and Iraqi Reports) as of June 5, 2010. Chart includes executed attacks and potential (found and cleared) attacks. As a result of the June 30, 2009 withdrawal from cities, USF-I now relies on host nation reporting as the primary data source. Current charts now show a combination of U.S. and host nation reported data. The combination of these reports causes baseline numbers to increase, making it difficult to directly compare these charts with those presented prior to June 2009.

The change in definition of security incidents to add host nation reporting reinforces the reduction trend. Tipping points reflected in the chart include the initial tip into insurgency in July 2003 with the first IEDs. This was reinforced by the April 2004-Fallujah and militia responses to the political environment. The next tip occurred in October 2005 with the constitutional referendum and elections. The tip after that resulted from the 2006 Samarra Mosque attack. The final tip resulted from the September 2006 Awakening and the November 2006 surge announcement. This chart serves as a model for analysis of the remaining five elements of SLTWCT.

APPENDIX B

Iraqi Chain of Command Board



This chain of command board represents the three security force organizations and their leadership that 2/1 CAV engaged to enhance a security network of networks throughout 2009. A translated version of this board was created for posting in Iraqi Police stations. Two other versions for the Iraqi Army and Peshmerga with their respective backgrounds were meant for their headquarters. 2/1 CAV posted an English version in the Tactical Operations Center (TOC). After the departure of 2/1 CAV these security forces executed the plan to conduct joint security operations pending political resolution of the status of Kirkuk province. At the time we created this product Fadhil Mirani had been nominated to serve as deputy prime minister but his nomination was later withdrawn. When posted in the TOC this product served as a catalyst for some interesting conversations with some of our Iraqi partners.

Source: Created by Author

APPENDIX C: Metrics Survey and Results

1. How many COIN rotations have you participated in?

Afghanistan			
One	8	72.73 %	
Two	3	27.27 %	
Total Responses	**11**	**100.00**	**%**
Iraq			
One	15	60.00 %	
Two	9	36.00 %	
Three or more	1	4.00 %	
Total Responses	**25**	**100.00**	**%**
Other			
One	4	80.00 %	
Two	1	20.00 %	
Total Responses	**5**	**100.00**	**%**

2. Were you involved in assessing security during your deployment?

Yes	14	50.00 %	
No	14	50.00 %	
Total Responses	**28**	**100.00**	**%**

3. Have you ever worked with ORSA (Operational Research and Systems Analysis) in a COIN environment to improve your organization's effectiveness?

Yes	6	21.43 %	
No	22	78.57 %	
Total Responses	**28**	**100.00**	**%**

The experience was a productive exchange.

Strongly Agree	4	66.67 %	
Agree	2	33.33 %	
Total Responses	**6**	**100.00**	**%**

4. The problems MG Flynn discussed are common throughout the intelligence community.

Strongly Agree	3	10.71 %	
Agree	17	60.71 %	
Neither Agree nor Disagree	6	21.43 %	
Disagree	1	3.57 %	
Strongly Disagree	1	3.57 %	
Total Responses	**28**	**100.00**	**%**

5. Appropriate security metrics can more effectively link the intelligence community to operators.

Strongly Agree	1	3.70 %	
Agree	16	59.26 %	
Neither Agree nor Disagree	7	25.93 %	
Disagree	2	7.41 %	
Strongly Disagree	1	3.70 %	
Total Responses	**27**	**100.00**	**%**

6. With respect to assessment as described in FM 5-0, do you consider quantitative or qualitative metrics more important in COIN?

Qualitative	8	28.57 %	
Quantitative	8	28.57 %	
Equally Important	7	25.00 %	
Not sure	5	17.86 %	
Total Responses	**28**	**100.00**	**%**

9. With respect to Malcolm Gladwell's book and the Tipping Point Leadership reading in L103, when do you think most tipping points are identified?

Before they occur	3	10.71 %	
During the change	6	21.43 %	
After they occur	16	57.14 %	
Not Sure	3	10.71 %	
Total Responses	**28**	**100.00**	**%**

Do you think meaningful security metrics can better assist in identifying tipping points prior to their occurrence?

Yes	12	54.55 %	
No	2	9.09 %	
Not Sure	8	36.36 %	
Total Responses	**22**	**100.00**	**%**

10. A security paradigm similar to SWEAT-MSO would aid soldiers, staff, and commanders in assessing the security environment.

Strongly Agree	3	10.71 %	
Agree	15	53.57 %	
Neither Agree nor Disagree	7	25.00 %	
Disagree	1	3.57 %	
Strongly Disagree	2	7.14 %	
Total Responses	**28**	**100.00**	**%**

11. If provided a SLTWCT handbook and a user friendly databasing system, I would consider using SLTWCT as a security metrics paradigm in a counterinsurgency.

Strongly Agree	5	18.52 %	
Agree	13	48.15 %	
Neither Agree nor Disagree	6	22.22 %	
Disagree	1	3.70 %	
Strongly Disagree	2	7.41 %	
Total Responses	**27**	**100.00**	**%**

APPENDIX D

SLTWCT Subordinate Metrics Menu

93 Total

1. Security Incidents (17)
   a. __Total number of incidents by type
   b. __Total number of insurgent related incidents by type
   c. __Number of high profile attacks
   d. __Number of civilian deaths from all acts of violence
   e. __Number of civilian deaths from insurgent related attacks
   f. __Number of civilian injuries from all acts of violence
   g. __Number of civilian injuries from insurgent related attacks
   h. __Number of ethnically motivated attacks
   i. __Number of religiously motivated attacks
   j. __Number of ideologically motivated attacks
   k. __Number of suicide attacks
   l. __Ratio of attacks which target secondary or ad hoc targets to total attacks
   m. __Ratio of attacks targeting external and host nation forces
   n. __Host nation security force deaths
   o. __Number of attacks against host nation officials
   p. __Number of attacks against facilities
   q. __Number of major crimes committed

2. Local Security Force Organization (34)
   a. __Total number of host nation COIN mavens, salesmen, and connectors
   b. __Percent of population represented by identified host nation COIN mavens, salesmen, and connectors
   c. __Percent of each ethnic or sectarian population group represented by identified host nation COIN mavens, salesmen, and connectors
   d. __Percent of terrain with host nation police primacy
   e. __Number of interagency host nation security meetings
   f. __Percentage of relevant agencies represented at interagency meetings
   g. __Percent host nation security force positions filled
   h. __Host nation security force to population ratio
   i. __Percent of fully trained host nation security forces
   j. __Number of key leader engagements
   k. __Number of key leader engagements producing a signed agreement
   l. __Number of first-time key leader engagements

m. __Number of former insurgents supporting host nation COIN forces
n. __Number of former insurgents supporting external COIN forces
o. __Host nation security force AWOL statistics
p. __Host nation security force substantiated abuse cases
q. __Total Escalation of Force (EOF) incidents
r. __Percent of host nation Escalation of Force (EOF) incidents are inappropriate
s. __Percent of host nation forces conducting independent operations
t. __Ratio of prominent leaders who will and will not meet with external forces
u. __Ratio of prominent leaders who will and will not meet with host nation forces
v. __Total number of prominent leaders who will meet with external forces
w. __Total number of prominent leaders who will meet with host nation forces
x. __Total number of prominent leaders who will not meet with external forces
y. __Total number of prominent leaders who will not meet with host nation forces
z. __Percent of host nation security forces with necessary equipment and supplies
aa. __Percent of host nation headquarters with approved chain of command board
bb. __Percent of host nation headquarters without political photo or portrait posted
cc. __Percent of groups represented proportionally in government bodies
dd. __Number of civilians seeking employment as security forces
ee. __Percent of trained host nation investigative officers
ff. __Ratio of investigative officers to the population
gg. __Percent of trained host nation forensic specialists
hh. __Ratio of forensic specialists to the population

3. Tips and Reports (16)
   a. __Total number of tips and reports
   b. __Percent of tips and reports which support the issue of a warrant
   c. __Number of intelligence reports from areas of low reporting
   d. __Number of pending attacks reported by local populace to host nation
   e. __Number of pending attacks reported by local populace to the external force
   f. __Ratio of report frequency to population density
   g. __Number of tips to host nation forces regarding criminal activity
   h. __Number of caches found as a result of tips by locals
   i. __Number of munitions found in caches reported by local
   j. __Survey data indicating the population perceptions of security*
   k. __Percentage turnout in an election*
   l. __Ratio of empty to full market areas*
   m. __Grade school attendance levels*
   n. __Number of essential service protests*
   o. __Percent of Internally Displaced Persons returning to the area*
   p. __Ratio of supportive to hostile media reports or events*

4. Warrants (9)
    a. __Total number of outstanding warrants
    b. __Percent of warranted top ten targets
    c. __Percent of warranted targets
    d. __Total warrants for major crimes
    e. __Estimated number of insurgent cells
    f. __Percent of insurgent cells with at least one member warranted
    g. __Ratio of warrants issued between various threat groups
    h. __Number of insurgent leaders who left area after a warrant was issued
    i. __Number of insurgent leaders who have ceased active support of the insurgency

5. Capture and Sensitive Site Exploitation (SSE) (9)
    a. __Total number of detainees warranted before capture
    b. __Number of top ten targets captured
    c. __Number of insurgent desertions and defections
    d. __Number of high value targets killed
    e. __Number of high value target detainees
    f. __Number of insurgent cells disrupted
    g. __Percentage of jails at normal capacity
    h. __Percentage of jails which pass inspection
    i. __Percentage of detainees providing information supporting capture of a top ten target

6. Trials (8)
    a. __Total number of trials completed per month
    b. __Number of top ten targets tried in court
    c. __Percent of defendants convicted in court
    d. __Percent of defendants warranted prior to trial
    e. __Average wait time for court cases
    f. __Number of host nation courts per 100,000 residents
    g. __Percent of trials which include first hand testimony
    h. __Percent of trials which include forensic evidence

*Reflects critical views of population but does not indicate security incident chronology

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