

THE COLLECTIVE-ACTION FRAME AND EMERGENCE: A BETTER
UNDERSTANDING OF THE OPERATIONAL ENVIRONMENT

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE
Conflict, Security, and Development

by

KURT J. MCDOWELL, MAJOR, US ARMY
B.A., University of Missouri, Columbia, Missouri, 2002

Fort Leavenworth, Kansas
2013-02

Approved for public release; distribution is unlimited.

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 13-12-2013		2. REPORT TYPE Master's Thesis		3. DATES COVERED (From - To) FEB 2013 – DEC 2013	
4. TITLE AND SUBTITLE The Collective-Action Frame and Emergence: A Better Understanding of the Operational Environment				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) MAJ Kurt J. McDowell				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Command and General Staff College ATTN: ATZL-SWD-GD Fort Leavenworth, KS 66027-2301				8. PERFORMING ORG REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for Public Release; Distribution is Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT How might military professionals better appreciate the role that collective action plays in an area of operations? Military doctrine and education posture mid-career professionals to focus on a systems-oriented approach and center of gravity (COG) analysis. The role of alliances, networks, and sub-systems comprising multiple, interrelated actors and groups is insufficiently addressed. I develop and propose a “collective-action frame” that comprises an appreciation for both networks and emergence to better prepare military professionals in understanding the operational environment. First, I analyze recent scholarship to build a comprehensive picture of the tactical role that collective action plays in conflict. Second, I argue that emergent outcomes further increase the gap between COG focused military planning and operational needs. Finally, the U.S. military's concept of mission command provides an opening for military doctrine to embrace the importance of collective action.					
15. SUBJECT TERMS Collective Action, Alliances, Emergence, Emergent Outcomes, Complexity, Systems Approach, Center of Gravity, Military Education, Military Doctrine, Operational Environment, Mission Command					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT (U)	18. NUMBER OF PAGES 77	19a. NAME OF RESPONSIBLE PERSON
a. REPORT (U)	b. ABSTRACT (U)	c. THIS PAGE (U)			19b. PHONE NUMBER (include area code)

MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

Name of Candidate: MAJ Kurt McDowell

Thesis Title: The Collective-Action Frame and Emergence: A Better Understanding of
the Operational Environment

Approved by:

_____, Thesis Committee Chair
LTC Celestino Perez, Ph.D.

_____, Member
Phillip G. Pattee, Ph.D.

_____, Member
LTC Robert H. McCarthy III, M.A.

Accepted this 13th day of December 2013 by:

_____, Director, Graduate Degree Programs
Robert F. Baumann, Ph.D.

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

THE COLLECTIVE-ACTION FRAME AND EMERGENCE: A BETTER UNDERSTANDING OF THE OPERATIONAL ENVIRONMENT, By Major Kurt McDowell, 77 pages.

How might military professionals better appreciate the role that collective action plays in an area of operations? Military doctrine and education posture mid-career professionals to focus on a systems-oriented approach and center of gravity (COG) analysis. The role of alliances, networks, and sub-systems comprising multiple, interrelated actors and groups is insufficiently addressed. I develop and propose a “collective-action frame” that comprises an appreciation for both networks and emergence to better prepare military professionals in understanding the operational environment. First, I analyze recent scholarship to build a comprehensive picture of the tactical role that collective action plays in conflict. Second, I argue that emergent outcomes further increase the gap between COG focused military planning and operational needs. Finally, the U.S. military’s concept of mission command provides an opening for military doctrine to embrace the importance of collective action.

ACKNOWLEDGMENTS

I would like to acknowledge Colonel Edward Bohnemann and Lieutenant Colonel Rafael Paredes, the Commander and Deputy Commander of the United States Army 172nd Separate Infantry Brigade while deployed to Paktika, Afghanistan, during 2011–2012. Their insistence in engaging the Provincial Governor, Provincial Chief of Police, Afghan Army Brigade Commander, and Local Police Commando manifested in collective action with emergent outcomes. Then, I only realized what was occurring as a bringing together of influential key leaders to develop bonds, cohesion, trust, and alliances. This thesis is a protracted product of their determination and influence over a young information operations officer. However, without the tutelage of Lieutenant Colonel Celestino Perez Jr. at the U.S. Command and General Staff College, Army Scholars Program, Local Dynamics of War Seminar, this thesis would have never reached ample potential. Finally, I am indebted to Dr. Phillip Pattee for his advice and counsel.

TABLE OF CONTENTS

	Page
MASTER OF MILITARY ART AND SCIENCE THESIS APPROVAL PAGE	iii
ABSTRACT.....	iv
ACKNOWLEDGMENTS	v
TABLE OF CONTENTS.....	vi
ACRONYMS.....	vii
ILLUSTRATIONS	viii
CHAPTER 1 INTRODUCTION	1
CHAPTER 2 LITERATURE REVIEW	6
Joint Doctrine.....	6
From Operational Art to Operational Plans.....	8
Army Doctrine	10
Fog of COG	11
CHAPTER 3 RESEARCH METHODOLOGY	14
CHAPTER 4 ANALYSIS.....	18
Center and Periphery Alliance Theory	18
Power Interests and Alliance Configuration.....	23
Innovative Overlapping Sub-Systems	29
The Attraction of Inclusive Action	38
Collective and Connective Action	43
The Electronic Narrative.....	48
Emergent Outcomes.....	54
The Collective-Action Frame	57
Afghan Spiraling Initiatives.....	60
CHAPTER 5 CONCLUSION AND RECOMMENDATIONS	62
Conclusion	62
Recommendations.....	64
REFERENCE LIST	67

ACRONYMS

ADRP	Army Doctrine Reference Publication
CGSC	Command and General Staff College
COG	Center of Gravity
JP	Joint Publication
PMESII	Political, Military, Economic, Social, Information, and Infrastructure
RAFT	Relationships, Actors, Functions, Tensions

ILLUSTRATIONS

	Page
Figure 1. Center and Periphery.....	20
Figure 2. Collective-Action Frame, Iteration 1	22
Figure 3. Alliance Formation	25
Figure 4. Third-party guarantor.....	27
Figure 5. Collective-Action Frame, Iteration 2	28
Figure 6. Informal Bridge.....	31
Figure 7. Sub-system Overlap	33
Figure 8. Collective-Action Frame, Iteration 3	35
Figure 9. Al Anbar Awakening	37
Figure 10. Success Rates of Nonviolent and Violent Campaigns, 1900-2006.....	39
Figure 11. Success Rates by Decade, 1940-2006.....	39
Figure 12. Nonviolent Campaign Attraction.....	41
Figure 13. Collective-Action Frame, Iteration 4	42
Figure 14. New Social/Political Action Framework	44
Figure 15. Connective and Collective Action	45
Figure 16. Collective-Action Frame, Iteration 5	47
Figure 17. Social-Media Rich Environment.....	49
Figure 18. Swarming	51
Figure 19. Collective-Action Frame, Iteration 6	53
Figure 20. Collective-Action Frame, Iteration 7	56

CHAPTER 1

INTRODUCTION

If you do not seek out allies and helpers, then you will be isolated and weak.

— Sun Tzu, *The Art of War*

The conventional story of the al Anbar awakening describes how U.S. forces and local tribal sheiks allied against al Qaeda. It is a success story well known throughout the professional U.S. military community. Although this narrative is contestable, allying with tribal sheiks to oust al Qaeda from al Anbar, Iraq, was a plausible turning point towards coalition accomplishment in Operation Iraqi Freedom. The tide turned immediately after tribal sheiks choose to engage in collective action with the U.S. military instead of al Qaeda. Muhammad Fanar Kharbeet, son of a local tribal sheik, explained the sharp turn of events, “I’m not exaggerating that in two months, in two months everything was finished” (McCary 2009, 51).

Collective action saturates every tactical area of operations. Political scientists define collective action as occurring “whenever a desired joint outcome requires the input of several individuals. Almost all productive relationships involve some form of collective action” (Gibson 2009, 15). Collective action subsists in many different contexts. In recent conflicts collective action appears in cyber communities then manifests itself in physical form. In other circumstances collective action is a method to sustain conflict. The historical perspective of collective action is viewed as a master cleavage narrative, but it transpires as convoluted local dynamics. Collective action has strength in nonviolent form but is more complex and emergent under unstable conditions.

How might military professionals discern the complexities of the operational environment? The answer to this question is subject to how the military practitioner appreciates the role that collective action plays in an area of operations. The al Anbar example may be familiar, but it is not unique. I examine recent scholarship on the tactical role that collective action plays in conflict. Yet many more contemporary academic studies convey the significance of collective action. Although there is a current surge in available research concerning local conflicts and collective action, U.S military doctrine and education fails to address the importance of a collective action perspective.

The gap in U.S. military doctrine and education is evident. U.S. military doctrine and education that describe how to understand an operational environment provide two structures of comprehension. On one side of the divide is a systems-oriented approach. On the other side is COG analysis. The space between is where doctrine insufficiently addresses the overlapping roles of actors, sub-systems, alliances, and interrelated agents all entangled in the phenomenon of collective action.

As a result the institutional military postures practitioners to focus on a singular COG, a mere physical entity whose role is crucial to friendly or adversary operations. The leading voice in this argument is Colonel (Retired) Dale C. Eikmeier, assistant professor at the U.S. Army Command and General Staff College (CGSC). In the following pages I detail his perspective on COG analysis and how to best understand the operational environment. Ultimately I will argue against his approach to COG analysis, but offer that a collective-action frame can coexist with both the systems-oriented approach and COG critical factor analysis.

I propose that the collective-action frame better prepares the military professional to understand future complex operational environments. Framing assists the military practitioner to make “sense of an operational environment and a problem by establishing context. . . . Framing provides a perspective from which commanders and staffs can understand and act on a problem” (Joint Chiefs of Staff 2012a, 2-5). If the gap in literature is a physical opening, then the collective-action frame is a plug to fill the gap. I contend that not only will the collective-action frame bridge the divide and coexist with current doctrine, but also that the frame complements the systems-oriented approach and critical factor COG analysis.

This assertion has relevance to evolving U.S. Army doctrine and educational ambitions. The new concept of mission command provides an opening for military doctrine to embrace the importance of collective action. Mission command recognizes a nature of operations and role of the commander that is congruent with my bid for a collective-action frame.

My argument unfolds in the next four chapters. First, I review pertinent literature in chapter 2 revealing the aforementioned gap between a systems-oriented approach on one end of the divide and COG analysis on the other. I focus on principal joint doctrine and works by Eikmeier, but include broader sources to fully display the body of knowledge.

Second, in chapter 3 I explain my research methodology. My research began with a primary question that led to a critical follow-up question. To answer these questions my methodology employs a complementary approach to abductive reasoning.

Third, I analyze seven scholarly works that explore collective action. I further dissect their theories by identifying elements that contribute to the construction of a collective-action frame. I also scrutinize how a traditional systems approach and singular COG analysis contrast with collective action. I start by examining Kalyvas, who is generally attributed as initiating a contemporary swell in micro-fracture research (2003). I follow with a recent book by Christia, which argues that relative power concerns drive the seemingly multifarious decisions to form or fracture alliances (2012).

I continue chapter 4 with exploring a work by Parkinson. She demonstrates how everyday social and familial networks overlap in collective action to generate organizational innovation and resiliency (2013). Next, I investigate Chenoweth and Stephan (2011). Chenoweth proffers an argument with compelling evidence that nonviolent collective action proves victorious twice as often compared to violent campaigns (2013). I then study a model Burnore assembles in his thesis. The model illustrates how social media has altered our understanding of collective action (2013). I remain focused on cyber action with Petit, which allows me to provide a vivid portrait of collective action operating in different domains (2012). Lastly, I consider passages from Connolly to demonstrate how emergent causation and complexity theory complicate collective action (2011). Collective action considered with emergence increases the gap between COG focused military planning and operational requirements.

My analysis ties together in chapter 4 through the construction of a frame. I build a cohesive picture of a collective-action frame by teasing out critical elements from each article. Lastly I examine a passage from General David (Retired) Petraeus that sheds light

on how one esteemed military officer understood the complexities of his operational environment through a lens of collective action and emergence (2010).

I conclude by juxtaposing the collective-action frame against both the systems-oriented and singular physical entity COG approaches. I expound on how and when they are able coincide and support each other. Finally, I provide recommendations for U.S. military doctrine and education to consider. Next, in chapter 2 I begin with a review of joint doctrine.

CHAPTER 2

LITERATURE REVIEW

Chapter 2 explores the literature relevant to the concept of a COG in U.S. military doctrine and education. This chapter aims to discern the gap between a systems-oriented perspective on one hand and singular COG identification on the other. I focus on literature covering the operational environment and focus on discrepancies and commonalities. In order to grasp the tension doctrine allows the examination first reviews principal joint doctrine relevant to COG analysis. Then to clearly identify the gap in literature, the examination reviews curricula at a primary U.S. military education institution. Finally to provide breadth, I examine U.S. army doctrine and relevant scholarly articles.

Joint Doctrine

The joint force conducts planning through the use of operational art and design. Operational design employs an ends-ways-means methodology to illustrate how the joint force applies resources to meet military goals. An element of operational design is the COG, which assists in visualizing the operational environment. Joint Publication (JP) 5-0, *Joint Operational Planning* (referred to as JP 5-0) acknowledges the complex and ambiguous operational environment and suggests that operational design helps mitigate uncertainty through extensive understanding and innovation (Joint Chiefs of Staff 2011, III-1-3).

To understand the operating environment JP 5-0 provides the political, military, economic, social, information, and infrastructure (PMESII) framework. To further

comprehension, a systems perspective that acknowledges complex, interconnected relationships between the PMESII variables is critical to appreciating relationships in the system. JP 5-0 asserts, “Most important to this analysis is describing the relevant relationships within and between the various systems that directly or indirectly affect the problem at hand.” These relevant relationships are further understood through analyzing pertinent actors’ tendencies and potentials and how they will manifest and escalate themselves in the operational environment. JP 5-0 concludes the systems and relevant relationship discernment with defining the problem beyond the interactions and relationships of actors by acknowledging opportunities and context (Joint Chiefs of Staff 2011, III-9-12).

Before introducing the COG concept, JP 5-0 presents an adjacent element of operational design: that is effects, the consequences of actions. Desired effects compel practitioners to appreciate unpredictable third-party actions, unintended consequences, and subordinate creativity. Practitioners are then forced to balance increasing difficulties of creating, predicting, and measuring the effects of non-physical entities (Joint Chiefs of Staff 2011, III-21-22).

JP 5-0 introduces the COG as “one of the most important tasks confronting the JFC’s staff during planning.” It then defines a COG as “a source of power that provides moral or physical strength, freedom of action, or will to act.” It is what Clausewitz called “the hub of all power and movement, on which everything depends . . . the point at which all our energies should be directed.” JP 5-0 reinforces COG importance: “This process cannot be taken lightly . . . hasty analysis can have very serious consequences.” The publication stipulates that at the strategic level a COG could be an alliance, but as we

descend to closer levels of war a COG is usually a military element and “Mostly physical at operational and tactical levels.” However, the text continues to reach back again to a systems approach when conceding that COGs are created from relationships and cannot live in a vacuum (Joint Chiefs of Staff 2011, III-21-23).

JP 5-0 creates an evident tension on identifying a COG. The context of operational design pushes the idea of a COG towards a systems-oriented approach. The doctrine deems interactions between actors important; it quotes Clausewitz to provide emphasis. Nevertheless, the publication changes directions when describing the COG, as if non-physical entities are too difficult for a practitioner to analyze when closer to the tactical level of war.

Fortunately, for additional information on COGs and the systems perspective, JP 5-0 redirects readers to JP 2-01.3, *Joint Intelligence Preparation of the Operational Environment*. The systems perspective established in JP 2-01.3 assists practitioners by identifying system nodes and their relationships. Throughout JP 2-01.3 much of the same language is found in JP 5-0, albeit with a richer systems perspective. Although JP 2-01.3 persists with tension, “However, a COG can also be composed of a set of cross-system nodes and links that might encompass key nodes of one or more systems” (Joint Chiefs of Staff 2009, II-65). This more detailed publication gives an opening for the COG to exist as more than merely a single physical entity.

From Operational Art to Operational Plans

At CGSC, the primary institution for educating mid-career U.S. Army officers, the COG concept is instilled through lessons developed by Dale Eikmeier. He compiled a joint planning primer entitled, *From Operational Art to Operational Plans* which details

his most current COG concepts, distributed to all CGSC students. This primer parallels JP 5-0 by explaining conceptual and detailed planning in a more methodical but engaging format. The primer recognizes JP 2-01.3 and the systems perspective when unveiling the unique relationships, actors, functions, tensions (RAFT) framework. The primer begins with a systems-oriented approach when stating that practitioners must have a detailed understanding of the multiple systems in an operational environment. In fact a parallel is made to the human body as a complex system of systems that interact in the environment or context that surrounds it (Eikmeier 2012a, 15-16).

Continuing the tension found in JP 5-0 the primer recommends conducting operational design using RAFT as a shortcut, but warns, “However graphics often lack detailed information and explanation that narratives provide.” The primer advocates using both methods so not to lose any granular detail. Immediately following the discussion on narratives and graphics, the primer suggests the use of matrices to help categorize data found in the operational environment. One example is to juxtapose RAFT against PMESII in a matrix format, although the primer concedes that any product that effectively illustrates the environment is suitable (Eikmeier 2012a, 21-24). The idea of using these matrices runs against the very reason narratives were recommended earlier. The mere act of categorizing the operational environment into matrices of indiscriminate stovepipes forces the practitioner to focus on what category best fits which data and loses the granular understanding contained in the narrative. The primer concludes any discussion on a systems perspective with recommending the use of any framework, “PMESII like . . . think RAFT” in order to recognize the problem and depict actions required to solve the problem (Eikmeier 2012a, 28).

This abrupt dismissal of the systems perspective not even one-third through the primer’s pages exemplifies the knowledge gap found in U.S. military doctrine and education. Eikmeier exacerbates the tension in JP 5-0 by taking a left turn and fully dismissing the notion of a non-physical, non-entity COG. He recognizes the tension found in doctrine but instead of embracing the tension he rejects any non-physical perspective characterization of a COG, such as an alliance, because they “have no basis in logic.” Eikmeier recommends that practitioners “view the center of gravity as something that *is the primary entity that possesses the inherent capability (power) to achieve the objective* [italics original].” (Eikmeier 2012a, 34). Eikmeier drives home the chasm with this mental leap, “the interrelationships among the systems permit them to understand how actors in the environment ultimately derive their physical strength, or what they use as their primary entity” (Eikmeier 2012a, 35). Could not actors in the environment rely upon interrelationships—or collective action—for physical strength? Why limit practitioners to only an entity?

Army Doctrine

The emphasis found in Army doctrine on the concept of a COG is noticeably less than its prominence in joint doctrine. Army Doctrine Reference Publication (ADRP) 5-0, *The Operations Process* (referred to as ADRP 5-0), the doctrinal manual that nests with JP 5-0, does not discuss the COG. ADRP 5-0 does reference a systems perspective for the army design methodology. In order to better understand and visualize the operating environment, the publication recommends diagramming relationships between relevant actors. ADRP 5-0 states, “Clarifying the relationships among actors requires intense effort since these relationships must be examined through multiple perspectives”

(Department of the Army 2012b, 2-7). But ADRP 5-0 offers no further discussion on this “intense effort” or the “multiple perspectives” required to examine relationships (Department of the Army 2012b, 2-7).

ADRP 3-0, *Unified Land Operations* contains a section on the COG. ADRP 3-0 mirrors JP 5-0 with the aforementioned Clausewitz quote and stresses the importance of the COG as a “vital analytical tool.” In contrast to joint doctrine ADRP 3-0 does not discriminate between strategic COGs versus operational and tactical COGs. Instead ADRP 3-0 acknowledges COGs as either physical or moral. While physical COGs “can often be influenced solely by military means,” moral COGs are ethereal. A list of example moral COGs include “tribal influence” or “religious tradition.” Unfortunately ADRP 3-0 continues the theme of doctrinal tension by resigning any military influence over a moral COG, as if an intangible source of power is too difficult for military practitioners to address (Department of the Army 2012a, 4-3-4-4).

Fog of COG

A compendium of seven articles written by CGSC faculty in 2012, entitled *Addressing the Fog of COG: Perspectives on the Center of Gravity in US Military Doctrine* attempts to address the COG controversy found in US military doctrine and education. In chapter 1, Klug examines multiple counterinsurgencies and determines that counterinsurgency operations contain numerous COGs. He uses the phrase, “fighting a mosaic war” to describe the multiple COGs as, “each piece of the mosaic.” However he concludes with the variables of political purpose, location, approach, and phase to provide a framework for better comprehension of an operational environment (Klug 2012, 23-24).

In chapter 3, Paparone and Davis argue that professional military education should stop teaching the COG concept and “disenthrall the institution away from such singular and overextended metaphors.” They propose a multitude of interesting theories to instead consider, such as the “sociology of knowledge and social construction theory.” However the multiple perspective approach does not directly contribute to the practitioner attempting to understand an operational environment (Paparone and Davis 2012, 74-75).

Melton offers a promising argument on the COG in chapter 4. Although he dismisses the notion of an intangible COG, he does embrace a view of the enemy as a system. Consequently he concludes with six questions, one of which is, “What are his systemic strengths and weaknesses?” Melton suggests that these questions are more favorable to the operational planning process than a COG construct. Unfortunately his questions are mostly strategic in nature and he stipulates that the systems view of enemy forces should only be applied at the operational and strategic levels of warfare (Melton 2012, 98-99).

Addressing the Fog of COG concludes with a chapter by the aforementioned Eikmeier. His chapter follows the same argument found in his joint planning primer, although he unpacks his RAFT framework further. He refers to RAFT as a system of systems approach that doctrine advocates. However Eikmeier offers a caveat when determining the COG using a systems perspective, “it is easy to get lost in a system’s networked forest of nodes and links and lose sight of what the target is” (Eikmeier 2012b, 147). Unfortunately *Addressing the Fog of COG* provides a wealth of information

concerning the viability of COG analysis, but fails to produce valuable insight on the distance between a systems approach and singular COG identification.

The gap in U.S. military doctrine and education is evident and the commonalities clear. The gap extends between a systems-oriented approach to understand the operational environment and identifying a COG as non-physical and a single entity. Scholarly articles fail to acknowledge or close this divergence. Joint doctrine, Eikmeier, and Army doctrine all show commonalities using a systems perspective but alter course when identifying a COG devoid of networks, intangible perceptions, or any complexity. Finally, to expand the chasm the literature suggests that any notion of a non-physical, single entity COG is simply too difficult for the military practitioner to discern.

Next, I explain my methodology to address this gap in U.S. military doctrine and education. Recent works by Stathis Kalyvas and others have not been drawn upon to address this fissure. The literature makes evident the collective-action frame as a sensible approach to decrease the divide.

CHAPTER 3

RESEARCH METHODOLOGY

Akin to the realist philosophy of science view my method of research begins with a question concerning the comprehension of a messy and complicated environment (Shapiro 2005, 40). My research revolves around the primary question: how might military professionals better appreciate the role that collective action plays in an area of operations? I answer the question by proposing that a collective-action frame better prepares military practitioners to understand their operational environment. Upon research, writing, and reflection, I realized that the introduction of complexity and emergent outcomes into an area of operations complicates the military practitioners understanding of the operational environment.

Consequently, the awareness of emergence widens the gap found in U.S. military doctrine and education. The military professional cannot rely on classic causality variables to determine the future state of his environment. Areas in conflict are chaotic, and emergence is organic to the environment. Multiple sites of collective action between actors, organizations, and open systems combine to generate emergent outcomes. The collective-action frame is lacking without blending in emergence. Therefore, the frame must infuse a tolerance of emergent outcomes by coupling the two within one frame.

My research compelled me to consider a secondary research question: how might military professionals discern the complexities of the operational environment? To answer these questions I employ abductive reasoning to build a collective-action frame as a plausible bridge across the gap. Political scientists define abduction as “reasoning based on mature theories from observed effects to unobservable causes” (Shapiro 2005, 39).

The seven scholarly works I analyze in chapter 4 complement each other by providing different perspectives of collective action. They range from micro-fracture studies, to tactics in cyberspace, the recognition of nonviolent resistance, an appreciation of network overlaps, and include complexity and emergence theory. My method of abduction does have limitations. The boundaries of my research invite criticism for not including various studies related to collective action, network scholarship, systems theory, or otherwise. This critique is valid. However, if my collective-action frame is a plausible concept, then the thesis welcomes additional contributions. Further works can only bolster my argument for the collective-action frame, or they will strengthen the academic community by giving me and my readers more complicating factors to consider.

I prefer to impart my methodology as a parallel to a traditional indigenous people's proverb regarding six blind men resolving to explain what an elephant is. John Godfrey Saxe recounts a version of the traditional proverb:

It was six men of Indostan
To learning much inclined,
Who went to see the Elephant
(Though all of them were blind),
That each by observation
Might satisfy his mind.

The *First* approach'd the Elephant,
And happening to fall
Against his broad and sturdy side,
At once began to bawl:
"God bless me! but the Elephant
Is very like a wall!"

The *Second*, feeling of the tusk,
Cried,-"Ho! what have we here
So very round and smooth and sharp?
To me 'tis mighty clear

This wonder of an Elephant
Is very like a spear!"

The *Third* approached the animal,
And happening to take
The squirming trunk within his hands,
Thus boldly up and spake:
"I see," quoth he, "the Elephant
Is very like a snake!"

The *Fourth* reached out his eager hand,
And felt about the knee.
"What most this wondrous beast is like
Is mighty plain," quoth he,
"Tis clear enough the Elephant
Is very like a tree!"

The *Fifth*, who chanced to touch the ear,
Said: "E'en the blindest man
Can tell what this resembles most;
Deny the fact who can,
This marvel of an Elephant
Is very like a fan!"

The *Sixth* no sooner had begun
About the beast to grope,
Then, seizing on the swinging tail
That fell within his scope,
"I see," quoth he, "the Elephant
Is very like a rope!"

And so these men of Indostan
Disputed loud and long,
Each in his own opinion
Exceeding stiff and strong,
Though each was partly in the right,
And all were in the wrong!

MORAL.

So oft in theologic wars,
The disputants, I ween,
Rail on in utter ignorance
Of what each other mean,
And prate about an Elephant
Not one of them has seen! (Linton 1878, 150-152)

The articles I analyze are analogous to the blind men. Taken independently, they fail to paint an accurate portrayal of an elephant. Pooled collectively, and with the awareness of a surge in recent scholarship exploring local action and micro-cleavages, the analysis reveals collective action as a sound perspective that conceivably plugs the gap.

I draw out certain arguments from my analysis of the academic works examined. I then unite these contributions from literature to construct a collective-action frame for the military professional to consider for practice. I conclude my analysis with a real world perspective of an operational environment that establishes prior and effective use of a collective-action frame. Next, in chapter 4, I begin with my analysis of the pivotal center-periphery alliance theory.

CHAPTER 4

ANALYSIS

In chapter 4 I analyze seven scholarly works that explore how collective action unfolds in tactical situations. Throughout this chapter I navigate between analysis, summary, and critique. After considering the scholarly contributions, I synthesize my analysis to compose an inclusive collective-action frame. I conclude with an evaluation of General Petraeus applying the collective-action frame to understand his area of operations in Afghanistan.

Center and Periphery Alliance Theory

The center and periphery alliance theory links interests at the supra-local, or national level, to the local level of war. The theory places an emphasis on “joint action” between varied actors and organizations, how they interact, and explores the significance of micro-dynamics in conflict (Kalyvas 2003). Figure 1 illustrates the center and periphery alliance.

Actors in the public and private spheres overlap to connect interests at the top of hostilities to local dynamics. Top down influences correlate with the master cleavage of war. The master cleavage is often the conventional view of why conflict initiates and how violence unfolds. The master cleavage view of war simplifies the actual complexities of conflict and fails to appreciate diverse interactions and interests in the private sphere.

Accepting the master cleavage account of conflict without appreciating local tensions is dangerous for the military practitioner. Agreeing with the master cleavage aligns the military professional with Eikmeier’s approach to COG analysis. The singular

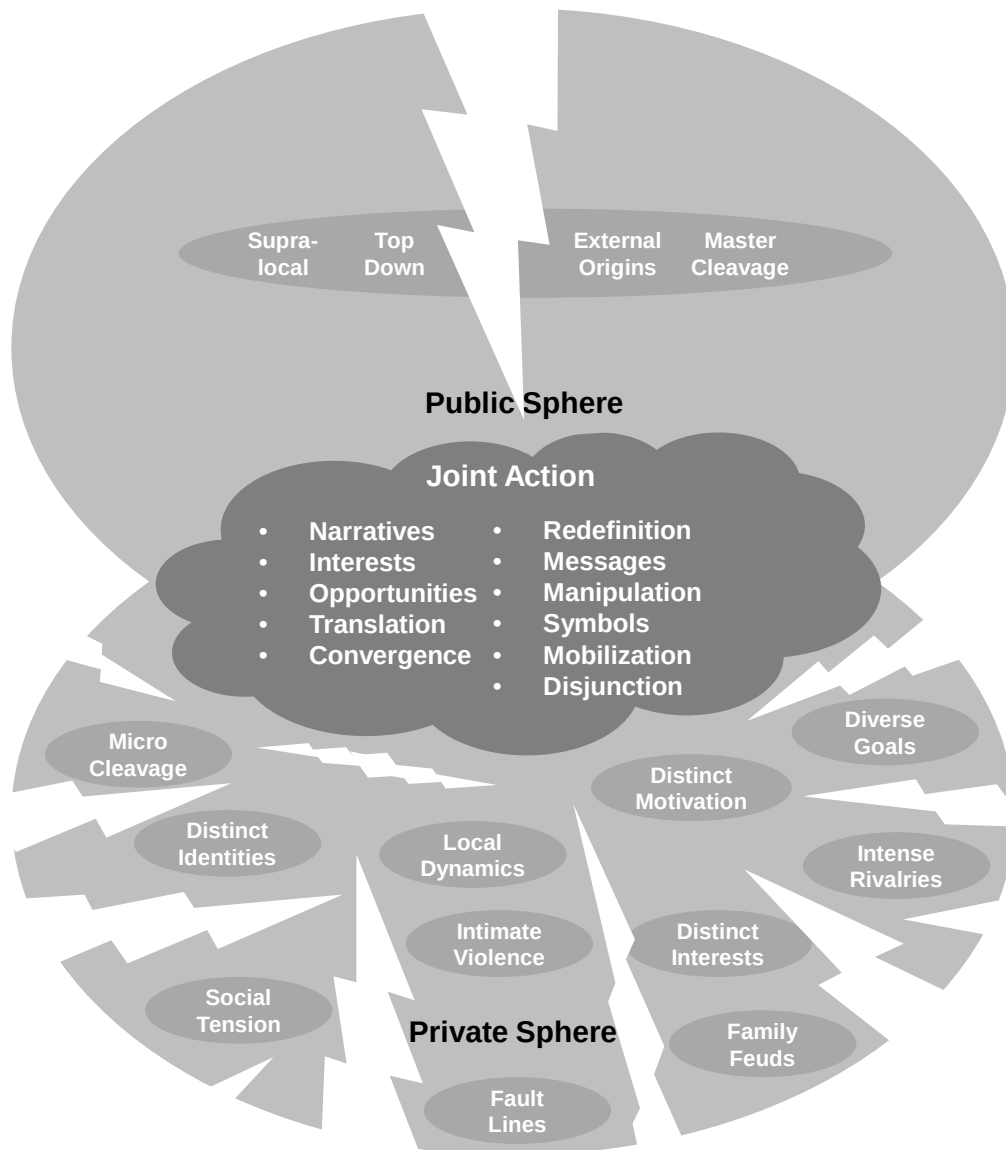
physical entity COG approach dismisses the value of joint action. If an alliance between actors in positions of power at the national level and elites at the local level is essential for conflict to unfold, then Eikmeier's approach is invalid.

In the private sphere innumerable micro-fractures subsist. Conflict often acts as a catalyst for pre-existing fault lines to erupt in violence. Fault lines evolve out of intimate tensions between sub-groups of people. They may endure as long lasting family feuds, identity clashes, regional rivalries, or competition for advantage. Opposite the master cleavage, fault lines swell into micro-cleavages. They are deeply personal, widened by distinct motivations, and shaped by narratives.

A systems-oriented approach alone loses the context of the private sphere. A link and node diagram dilutes alliances amongst actors to simple lines that in reality are saturated with meaning. Describing the lines merely in terms of functions and tensions loses the depth of overlapping sub-systems, power interests, opportunities, identity disjunction, and narratives. The tactical unfolding of conflict refuses to follow neat lines.

Supra-local and local level interests overlap and result in joint action. Mutual exploitation defines their overlap. A constantly redefined narrative allows the mobilization of violence for the benefit of both the local elite and supra-local authorities. The multiple intersections are disjointed convergences of collective action, redefining and manipulating each other to serve their own unique interests, manifesting in violent conflict.

Supra Local Actors at
the Center



Local Actors at
the Periphery

Figure 1. Center and Periphery

Source: Created by author utilizing Stathis Kalyvas, "The Ontology of "Political Violence": Action and identity in civil wars," *American Political Science Review* 1, no. 3 (September 2003): 485-494.

The center-periphery alliance theory holds great prominence. This contribution to academia by Kalyvas prompted a recent increase in micro-fracture analysis and holds great weight for political scientists. The theory is the foundation of my analysis and I offer the following critique with prudence.

The picture I conceptualized of the center-periphery alliance theory centers on the overlap of two spheres. Although viewing the theory as a connection of supra-local authorities and local elites is vital, I perceive the overlap without boundaries. Instead, a narrative ties actors at the top to dynamics on the ground.

Figure 2 displays the significance of the narrative. The alliance narrative ties the center to the periphery and accounts for all the micro-cleavages and the master cleavage. Narratives are rich with meaning and defined by symbols, messages, and ideology. They shapes actor's decisions, resonate within them, and drive them to action. However, narratives are translated for communities through local elites and national leaders. They evolve to serve the interests of elites and the supra-local agents. Symbols, messages, and context remain, but their purpose changes. The redefinition of narratives provides pathways for mobilization and operates as excuses for violence. The exploitation of narratives is crucial to understanding the local dynamics of conflict.

Figure 2 begins the collective-action frame I offer as a bridge across the divide in U.S. military doctrine and education. Throughout chapter 4, I continue to construct the frame with the addition of mature theories that explore collective action.

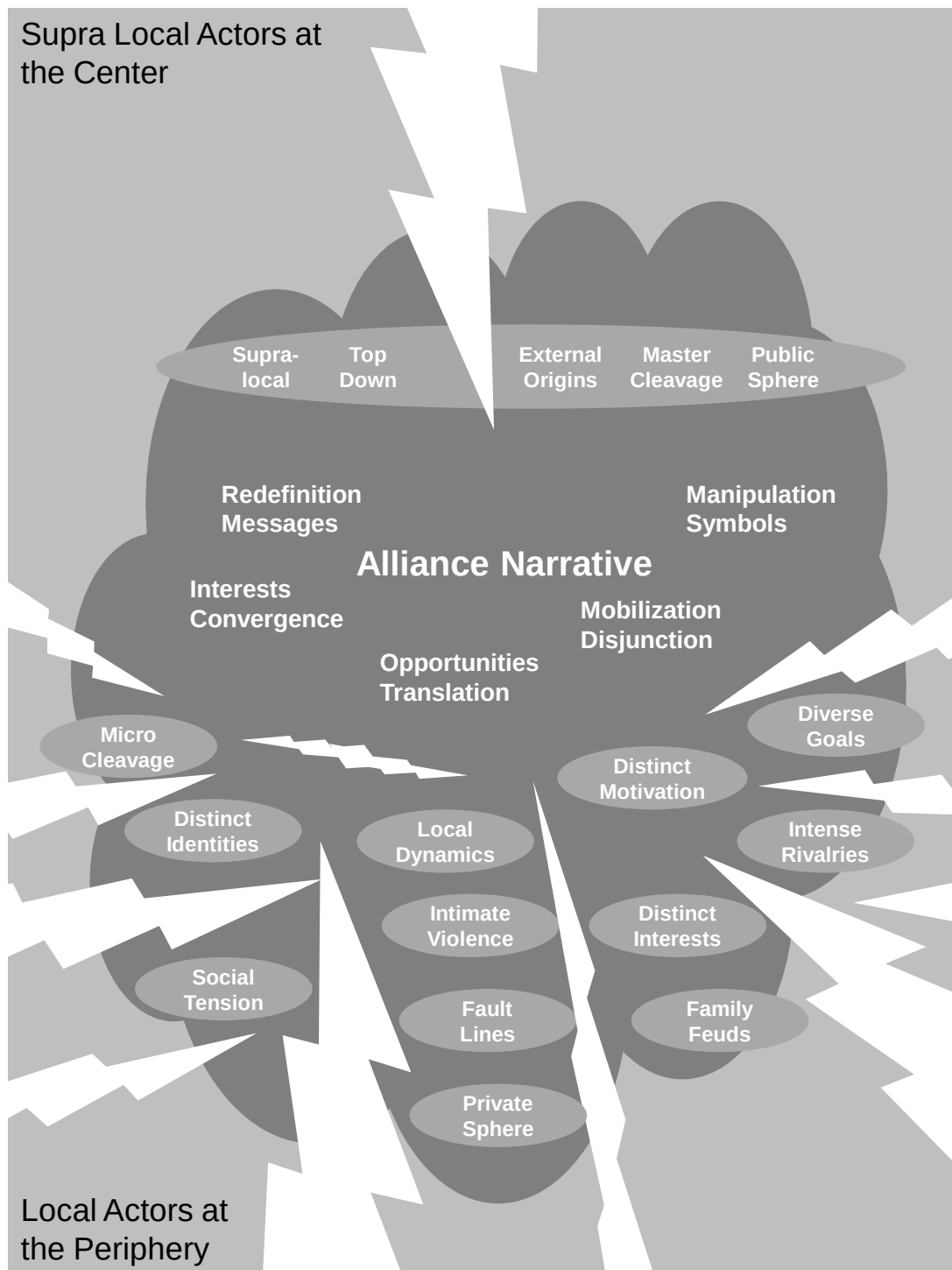


Figure 2. Collective-Action Frame, Iteration 1

Source: Created by author.

The military practitioner better appreciates the role that collective action plays in their area of operations by reading Kalyvas alone. The center-periphery alliance theory complicates the military professional's understanding of the operational environment. No longer is counterinsurgency a battle between the U.S. military with the host nation government against an insurgency at large competing over the population as a whole. The military practitioner now appreciates the intricate concerns fundamental to his new reality. When he deploys to his area of operations he no longer accepts the master cleavage narrative at work. He automatically scrutinizes local dynamics at play and how regional pre-existing cleavages incite micro-fractures to crack and fissure into conflict that would have seemingly been national level top down influences. Instead he recognizes the origin of local conflict. With just one article the military professional now has a finer grasp of their operational environment.

Power Interests and Alliance Configuration

Power interests drive alliance formation and fractionalization in warring groups. Alliances evolve according to relative power distribution (Christia 2012, 7). The ensuing fragmentation and assembly are inherent casual mechanisms exerting external and internal forces. The resulting arrangements were not foreseeable through identity based arguments, previous tensions, or local cleavages. The convoluted path of conflict constantly reforms and redefines itself in intricate structures.

Conventional understanding of complex operating environments that undergo frequent allegiance shifts reverts to identity based arguments. However, when group alliances transpire or modify form, relative power distribution is the central motivating factor. Party leaders justify alliance decisions, but their rationale transforms over time as

“warring groups will aim to side with the winner, so long as they can have a credible guarantee that the winner will not strip them of power” (Christia 2012, 3).

Eikmeier’s version of COG analysis allows no room for relative power and alliance formation as driving factors in conflict. He emphasizes that an alliance COG proves illogical (Eikmeier 2012a, 34). However, actors are inextricably coupled to their relationships, and actors rely upon those interrelationships for strength and dividends. Eikmeier’s COG formula discounts the power of an alliance. Therefore, the complex operational environment has no room for Eikmeier’s approach to COG analysis. The nature of “Military operations are human endeavors. They are contests of will characterized by continuous and mutual adaptation by all participants” (Department of the Army 2012c, 1-1). The operational environment is complex largely due to the human element of conflict. The reality of military operations contradicts the focus on a singular, physical entity as the source of power in an area of operations. However, a collective-action frame recognizes the strength of human endeavors.

Figure 3 illustrates the influence of relative power distribution on alliance formation and group fractionalization. The drive to win increases the size of group arrangements and concern over future political returns balances the growth of alliance formations. Pre-existing fractures at the local level between subgroups possess more influence than allied groups. Although power concerns trump subgroup ties, local micro-fractures are often catalysts for group fractionalization. Over time power interests and commitment problems transform warring group factions into optimally sized units (Christia 2011, 44). Alliances form and fracture to ensure both victory and post-conflict power dividends.

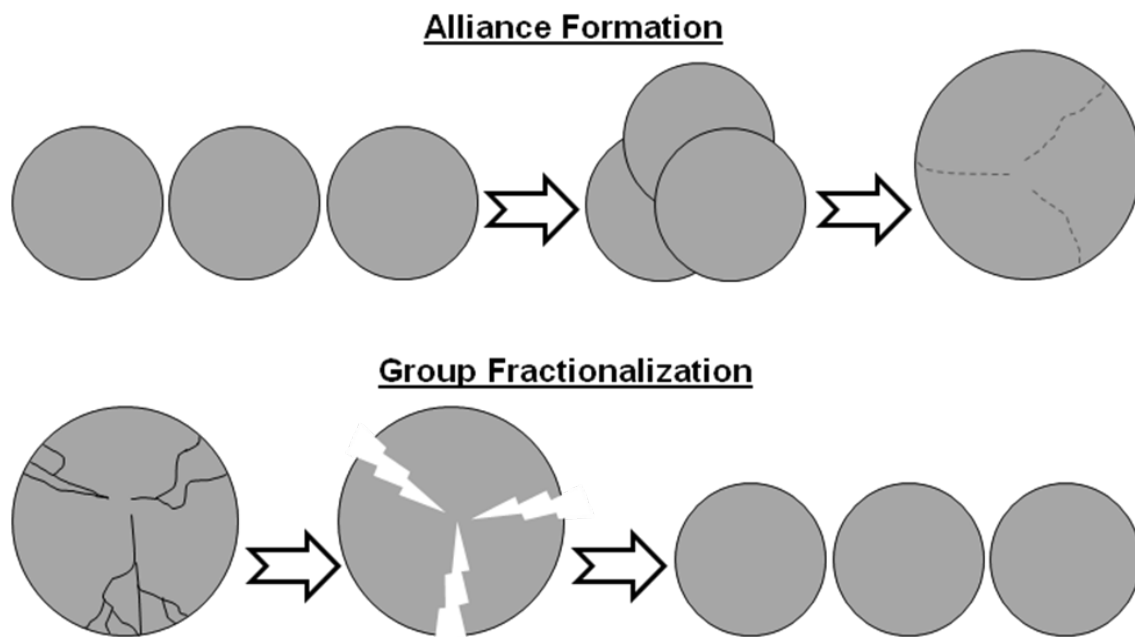


Figure 3. Alliance Formation

Source: Created by author utilizing Fotini Christia, *Alliance Formation in Civil Wars* (New York: Cambridge University Press, 2012).

The relative power distribution theory for alliance formation and fractionalization does not allow for the presence of a third-party guarantor. However, the inclusion of a third-party guarantor into the mix of warring actors is important for the military professional. Commitment problems extend the duration of wars and add to the complexity of conflict. The continual process of splintering, reconfiguring, fragmenting, and reconsolidation prolongs conflict unless a third-party intervener is powerful enough to guarantee post-conflict settlements.

The role of the U.S. military in the al Anbar awakening is an example of a third-party guarantor:

Although initially perceived as an occupying force bent on stealing Iraq's oil and natural resources, the U.S. military became and is now seen as a complementary and supportive power . . . As one sheikh put it, 'We consider the Americans to be our friends at the moment so that we can get rid of the extremists.' (McCary 2009, 50)

The U.S. military possesses the necessary strength and resolve to significantly alter a landscape in conflict. When local tribal sheiks viewed the U.S. as a supportive power committed to the ouster of al Qaeda, the alliance between the U.S. military and tribal sheiks evolved.

Figure 4 shows the entrance of a third-party guarantor into a warring landscape. Instead of a continual process of fracturing and formation, the third party acts as an attractor. The strength and resolve inherent to a third-party guarantor assures post-conflict commitments. In turn, numerous warring groups ally around the third-party guarantor due to their quest for post-conflict political power and dividends.

The collective-action frame considers the third-party guarantor largely because the U.S. military performs as a third-party guarantor in many interventions.

Understanding how the presence of U.S. forces transform an area of operations is important for the military professional. Without appreciating the forces that a powerful third party introduces into an operational environment and ensuing narrative alterations, the practitioner fails to realize important dynamics at play.

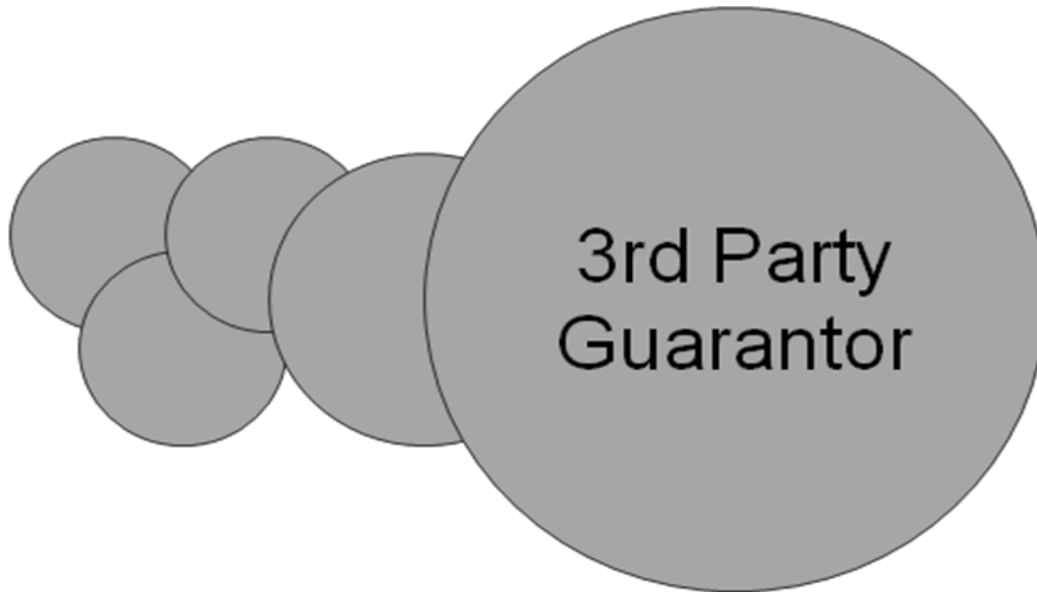


Figure 4. Third-party guarantor

Source: Created by author.

Warring group fractionalization corresponds with the center-periphery alliance theory. Pre-existing fractures or bonds at the local level between subgroups possess more influence than allied groups. Figure 5 illustrates the inclusion of the relative power distribution theory into the collective-action frame. The foundation of the frame is the center-periphery alliance theory. The introduction of the relative power distribution theory enriches the collective-action frame. Power concerns embedded in the alliance narrative manifest as evolving group configurations. The military professional applying the collective-action frame understand the influence of power in alliance formations and group fractionalization.

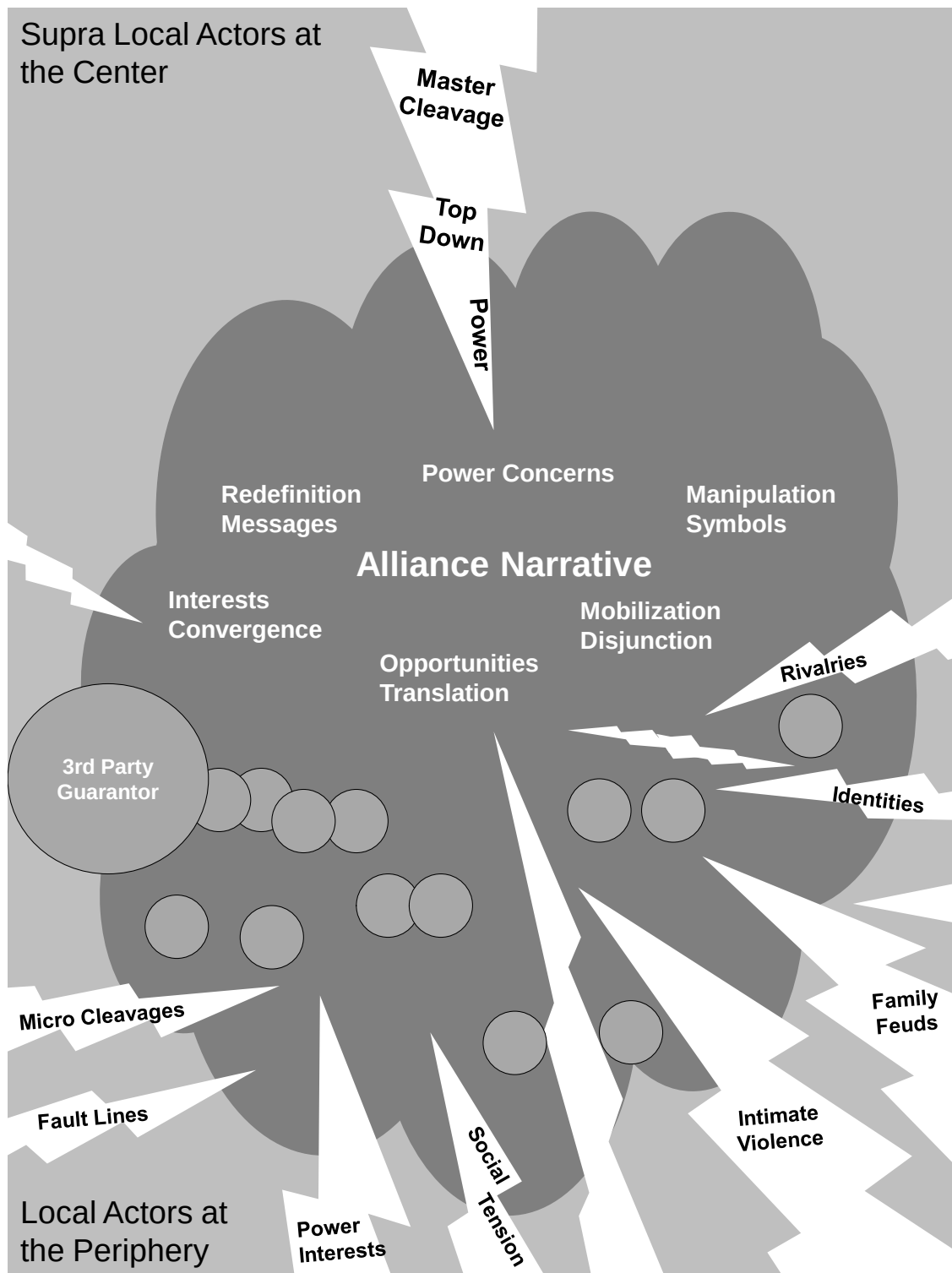


Figure 5. Collective-Action Frame, Iteration 2

Source: Created by author.

Figure 5 illustrates the second build of the collective-action frame. Units, organizations, warring groups, networks, and systems, join the frame as circles. The groups are all similarly sized to show the influence of relative power distribution. All the groups remain embedded in the alliance narrative. The narrative bonds each group together through varied accounts of the same fabric. A third-party guarantor enters the frame larger in size to show its increased capacity of strength and determination. The master cleavage and micro-cleavages persist as fractures that drive the initiation and unfolding of conflict. However, the vicinity around the third-party guarantor contains less fissures. Not because the third party removes pre-existing tensions, rather they have faded into the background. The guarantor reassures post-conflict commitments, attracts diverse groups, and they begin to form more faithful alliances.

Innovative Overlapping Sub-Systems

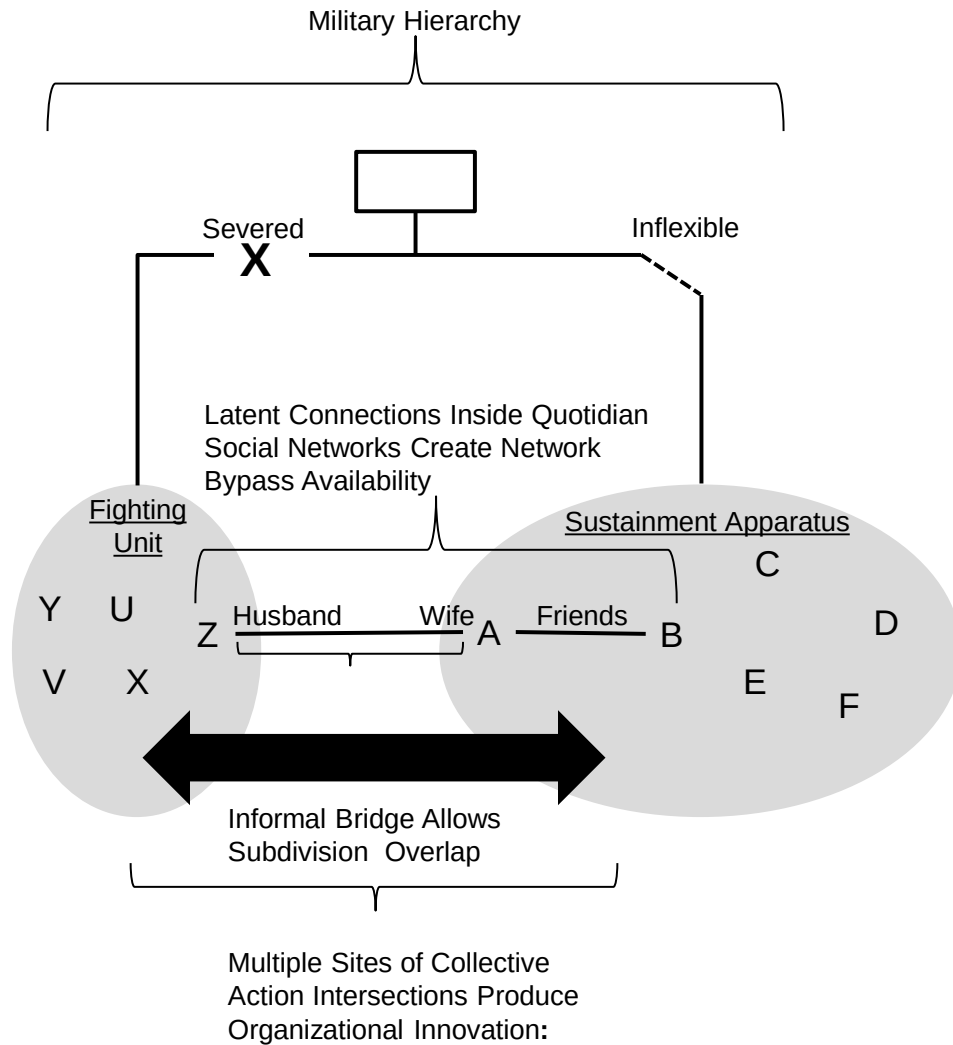
A rebel fighter is inextricable from his everyday relationships and his militant group. He routinely lives in multiple sub-systems. A link and node diagram shows the fighter connected to a militant hierarchy, it dismisses his routine social and familial ties. However, under volatile conditions links to his command may sever or grow inflexible. He not only depends upon quotidian associations to sustain the battle, but the latent connections evolve into creative solutions (Parkinson 2013, 423). The soldier survives in multiple sub-systems, where those sub-systems overlap is where organizations thrive. Collective action sustains conflict and increases organizational resiliency.

The overlap of militant hierarchal systems and quotidian sub-systems in rebel groups generate sites of organizational innovation. Systems are sets of actors inseparable from their routine associations. Militant organizations thrive as open systems of systems

with the potential to increase resiliency where sub-systems overlap. Relationships between actors perform as organizational bridges essential for protracted conflicts. These informal bridges are locations of system interconnectivity that drive progress and creative solutions (Parkinson 2013, 419). A Palestine Liberation Organization officer reveals powerful testimony:

We used women to move the money. . . . It was like a grape, meaning everything is tied to everything, what is the group called? [Me: a bunch?] It was an ‘anq̄ud—a bunch of grapes . . . like a cluster bomb! [Laughter]. . . . No one can talk to the people below you. It protects people. . . . We were searching for security. [Me: How was it structured?] Like this. [At this point Yousef drew a diagram in my notebook with a central stem and branches jutting off. I asked where the women would be in the diagram, and he indicated the branches linking the grape/male nodes to each other via the stems/female ties]. (Parkinson 2013, 425)

Figure 6 illustrates one intersection of collective action, the informal bridge spanning between militant subdivisions. Actors A and Z represent actors in a spousal relationship. Although they serve in different militant subdivisions, their everyday relationship creates a site of collective action. In the case of a broken or rigid military hierarchy their collective action produces organizational innovation. The sustainment subdivision that actor A associates with is able to support the fighting subdivision actor Z affiliates with. When informal bridges create sub-system overlap, organizations realize increased resiliency (Parkinson 2013, 413).



- Generate Mobilization Pathways
- Increase Organizational Subdivisions
- Bypass Inflexible or Severed Military Hierarchies

Resulting in Increased Organizational Resiliency

Figure 6. Informal Bridge

Source: Created by author utilizing Sarah Elizabeth Parkinson, "Organizing Rebellion: Rethinking High-Risk Mobilization and Social Networks in War," *American Political Science Review* 107, no. 3 (August 2013): 418-433.

Figure 6 draws attention to the conceptual informal bridge to span organizational subdivisions. An informal bridge is a clever method to depict one site of collective action transpiring due to an everyday relationship. However the image of a bridge does not adequately represent the multiple sites of sub-system overlap. Quotidian networks do not span a divide, rebel fighters exist in multiple systems concurrently. Their everyday relationships overlap with their rebel allegiances. One bridge does not equal the power of many sites of collective action where sub-systems overlap.

The notion of overlap instead of an informal bridge is important to the military practitioner. A systems-oriented approach stops with lines devoid of meaning connecting physical nodes. It does not contain the necessary weight of sub-system overlap which “reveals a rich picture of mass mobilization, organizational evolution and social change” (Parkinson 2013, 422). At the other end of the U.S. military doctrine and education gap Eikmeier recommends accounting for “interrelationships among the systems” to determine “their physical strength, or . . . primary entity” (Eikmeier 2012a, 35). However, the interrelationships are sources of strength, not a mismatched entity. Sites of organizational innovation and resilience are points of interest for consideration as military objectives. As figure 7 displays, I prefer to view the strength of quotidian networks underpinning organizational systems without informal bridges but actual overlap.

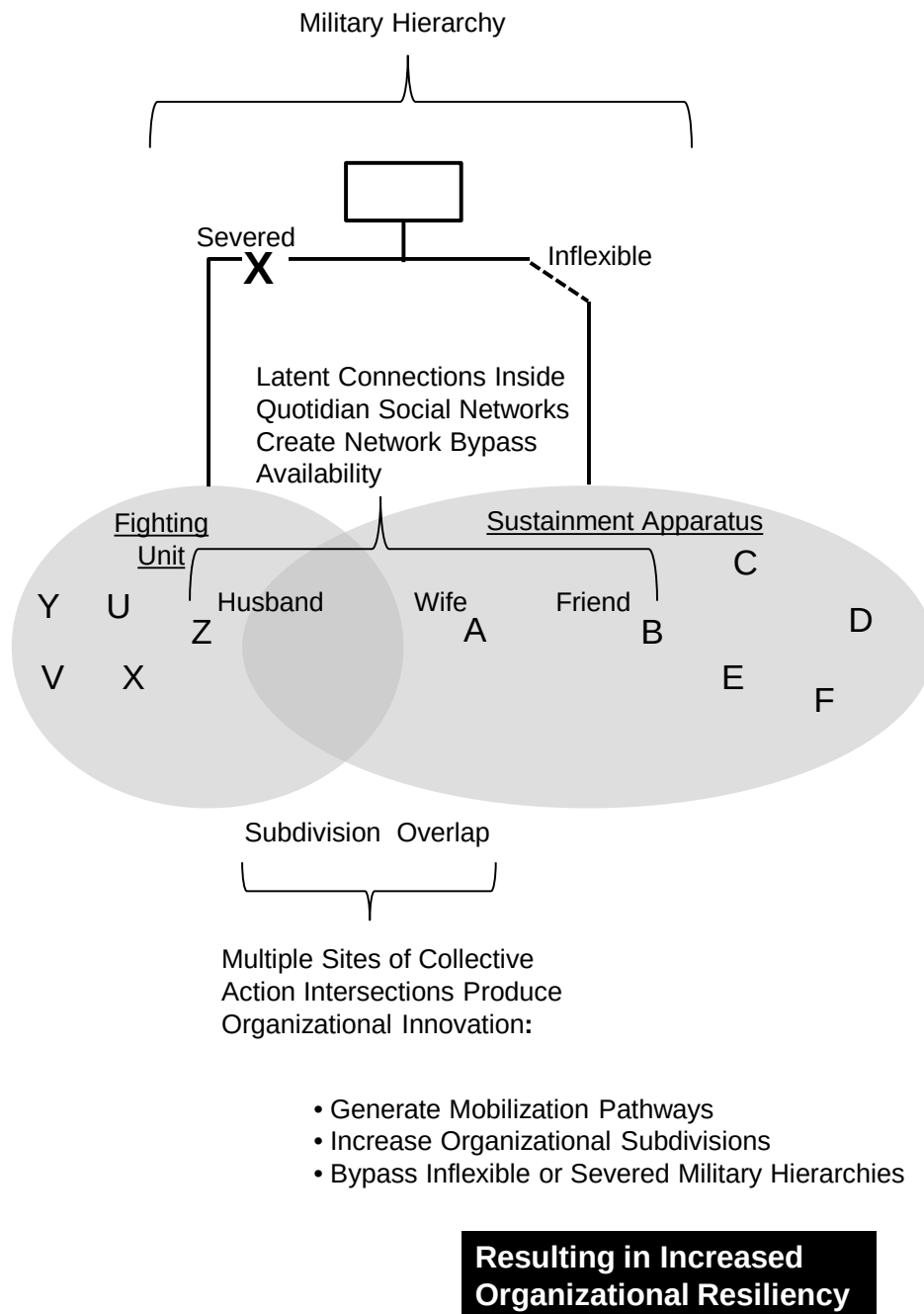


Figure 7. Sub-system Overlap

Source: Created by author utilizing Sarah Elizabeth Parkinson, "Organizing Rebellion: Rethinking High-Risk Mobilization and Social Networks in War," *American Political Science Review* (August 2013): 418-433.

A crucial component of the collective-action frame is the potential for innovation where networks overlap. Figure 8 includes the sites of innovation where sub-systems overlap. Where every group allies with another is a site of potential innovation. However, it is fundamental to appreciate that any group organic to the area of conflict not only overlaps with potential allies but also their quotidian ties. All the groups and individual actors shown on figure 8 live in multiple sub-systems.

Narratives redefine themselves through everyday networks. Narratives pose as messages, symbols, speech and text, but they live inside individual actors and groups. Without everyday affiliations narratives would lose their reach and strength. The alliance narrative and quotidian networks intertwine together; one does not exist without the other.

The current U.S. military doctrine and education approach to understanding the operational environment fails to capture quotidian networks. Whether the military practitioner relies on a systems-oriented approach or a singular physical entity approach, he loses the rich visualization of collective action occurring underneath militant hierarchies and formal systems.

Figure 8 illustrates the third build of the collective-action frame. Sites of innovation where organizations overlap are highlighted. Again, the alliance narrative embraces the power of routine relationships and associated sub-systems.

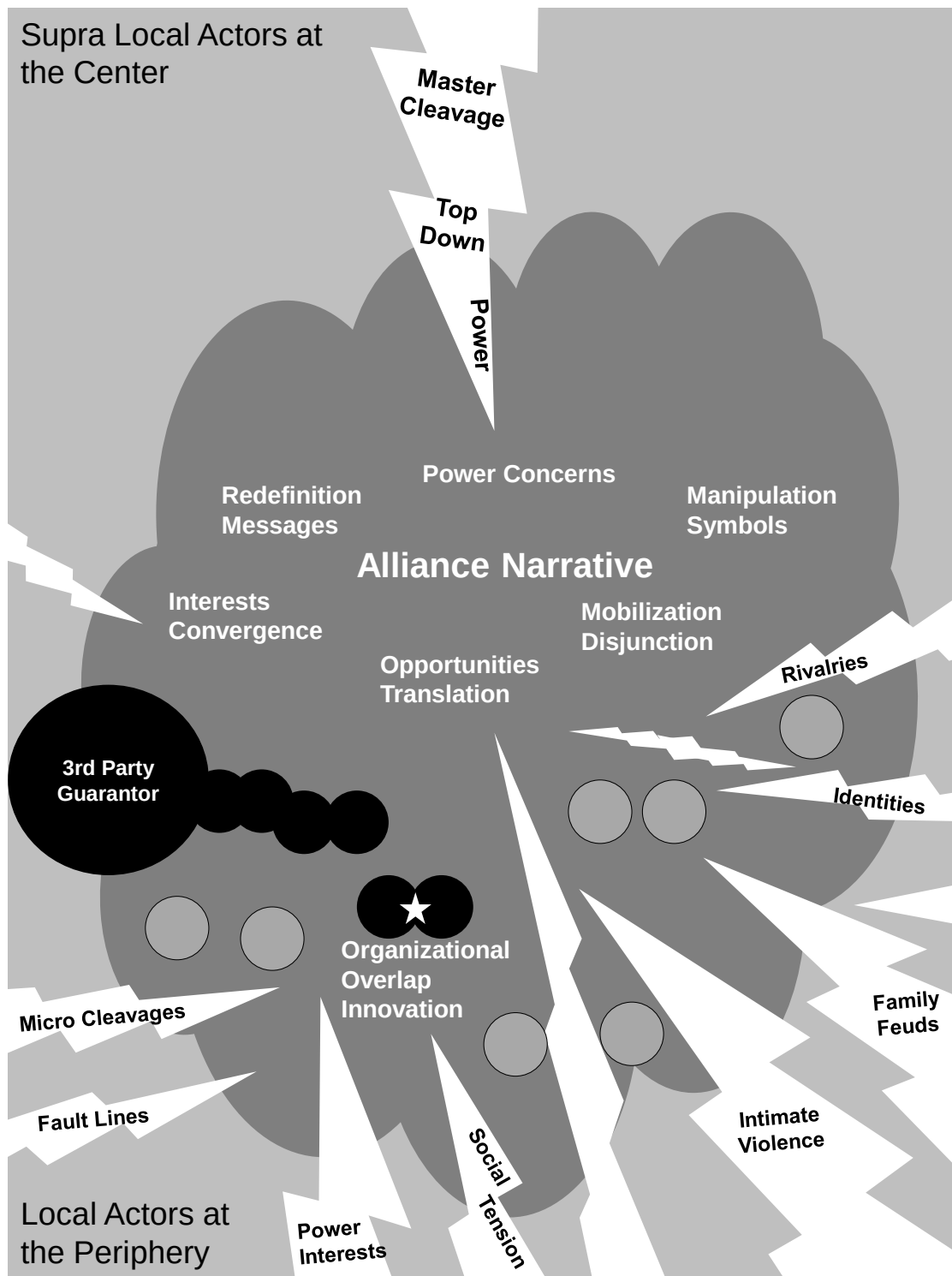


Figure 8. Collective-Action Frame, Iteration 3

Source: Created by author.

The al Anbar awakening embodies the collective-action frame thus far. Elements of micro-dynamics, sub-system overlap, power interests, the alliance narrative, and the third-party guarantor contribute to the below passage:

There is a misperception among analysts and those unfamiliar with Iraq and al Anbar that insurgents, militias, death squads, security forces, and local al Qaeda members are all entirely separate entities. In truth, many in Iraq pledge allegiance to more than one cause, meaning various groups could count on many of the same individuals within the general populace to support their causes, from providing personnel to logistics support to navigating unknown territory. Previously, the one thing every single group had in common was a disapproval of the continued U.S. military presence. Once this unifying factor was erased, varying allegiances became competing interests in the minds of participating individuals. When forced to choose, these men followed their tribes. (McCary 2009, 52)

Figure 9 depicts the al Anbar sheiks allied with al Qaeda against the U.S. Over time al Qaeda's influence threatens the tribal sheiks continued rule. Since the sheiks forecast an undesirable outcome of decreasing power, they explore the idea of fracturing their alliance. Subsequently they form a new alliance with the U.S. Future power concerns motivated the sheiks to fracture and form alliances. The tribal sheiks shifted the narrative from condemnation of U.S. forces to a rallying cry to support the U.S. and oust al Qaeda. The narrative changed but local fighters did not waver in their allegiance to the tribal narrative. Many Iraqis demonstrated their loyalty to multiple subgroups, when needed they supported each other's interests to realize their objectives.

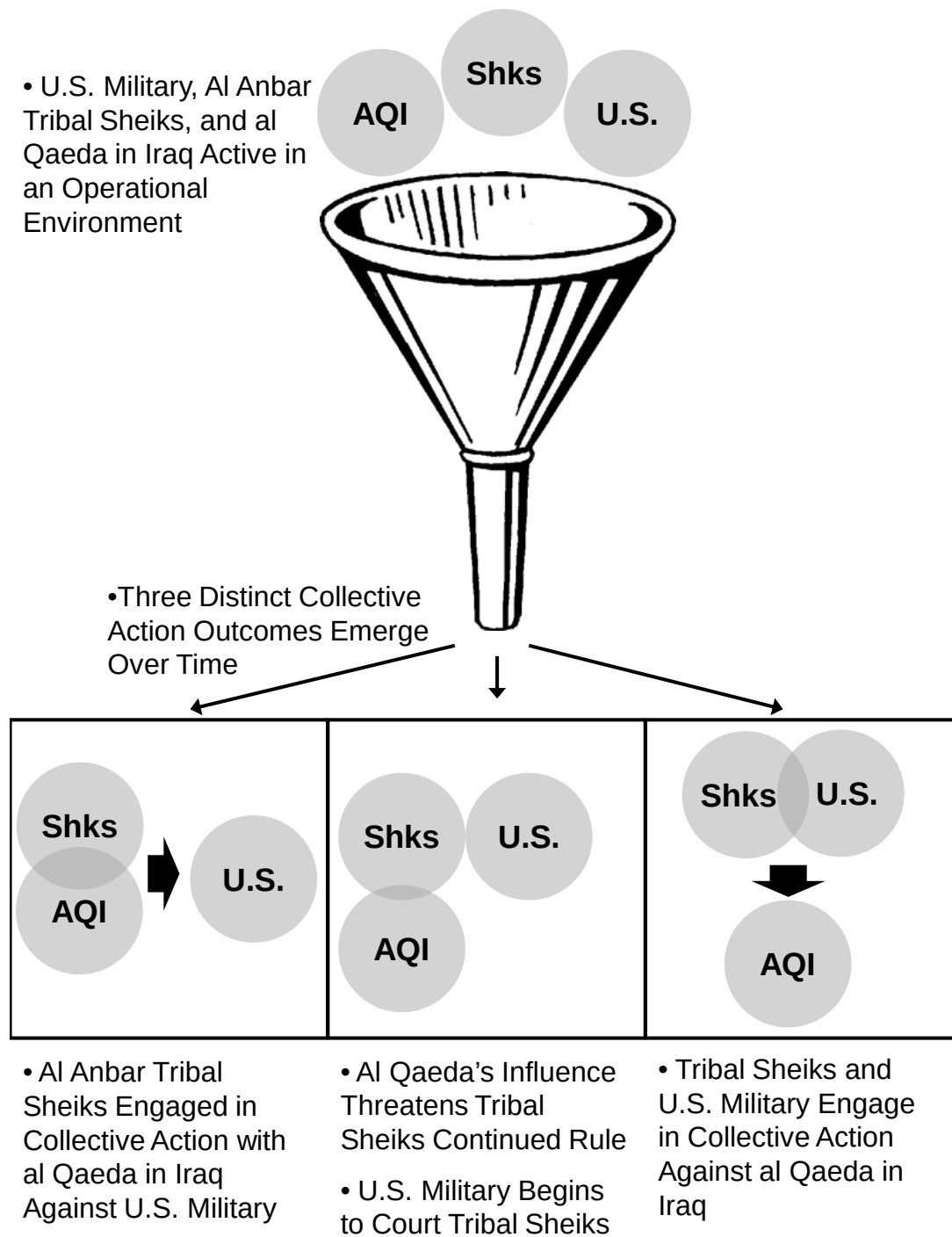


Figure 9. Al Anbar Awakening

Source: Created by author utilizing John McCary, "The Anbar Awakening: An Alliance of Incentives," *The Washington Quarterly* 32, no. 1 (January 2009): 43-59.

The Attraction of Inclusive Action

Nonviolent collective action possesses the attraction of gravitational pull with a tipping point effect. The forces at play in an operational environment may include civil resistance. As nonviolent collective action increases participation the attraction grows stronger. Sustained involvement reaches an exponential tipping point where success is conceivably foreseeable (Chenoweth 2013). To better understand the operational environment the military practitioner must appreciate forces that attract masses of actors and attain a point of inevitability.

Collective action devoid of violence is at least twice as likely to prevail compared to collective action with violence. The triumph of nonviolence is attributed to “people power” (Chenoweth 2013). Civil resistance is an active form of participatory conflict such as a protest, boycott, demonstration, or mass non-cooperation. Nonviolent campaigns do not fail when they achieve active and sustained participation from at least 3.5 percent of their population (Chenoweth 2013). Figures 10 and 11 show the success of nonviolent campaigns compared to violent campaigns.

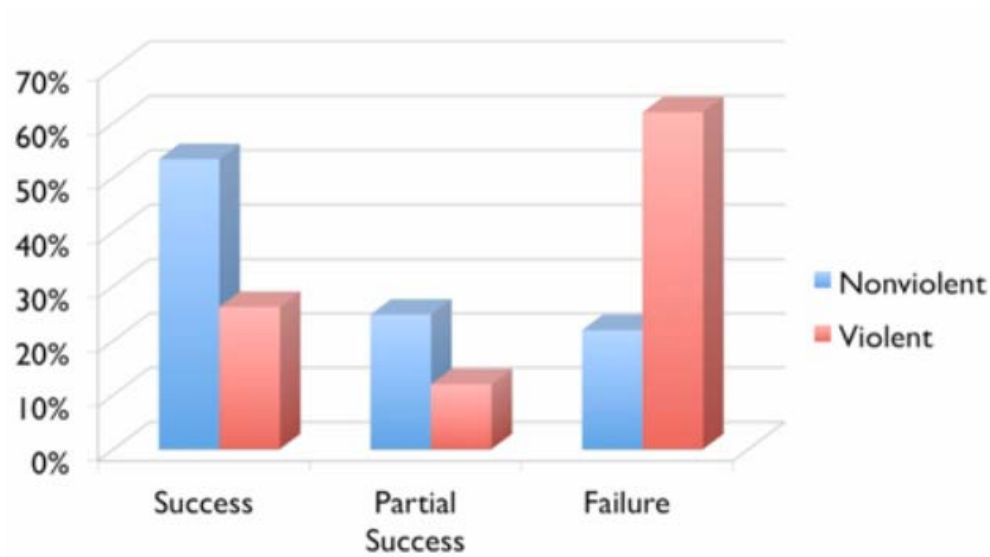


Figure 10. Success Rates of Nonviolent and Violent Campaigns, 1900-2006

Source: Erica Chenoweth, *The Success of Nonviolent Civil Resistance* (TEDxBoulder, 2013), <http://tedxtalks.ted.com/video/The-success-of-nonviolent-civil> (accessed November 13, 2013).

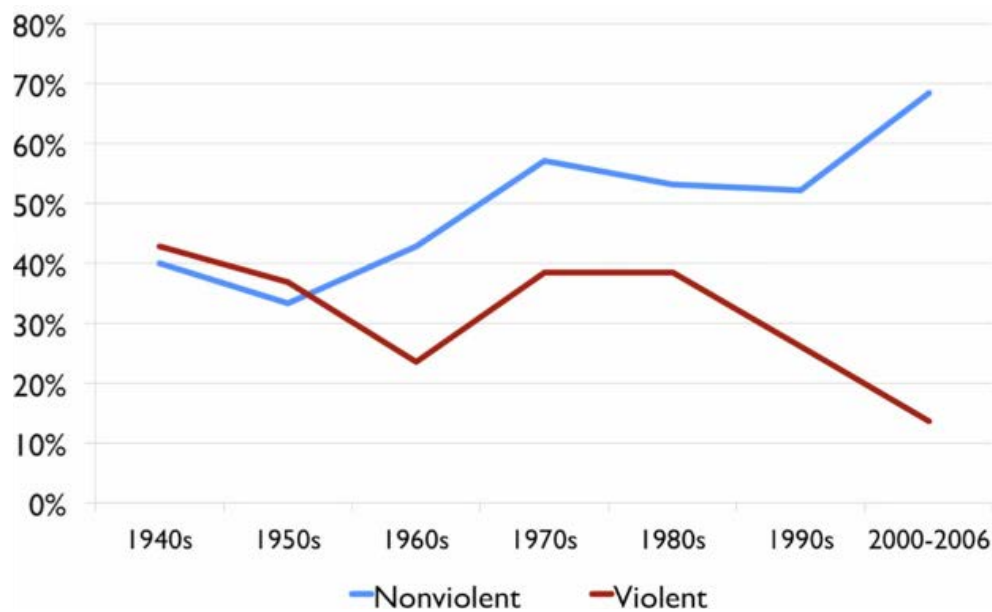


Figure 11. Success Rates by Decade, 1940-2006

Source: *The Success of Nonviolent Civil Resistance* (TEDxBoulder, 2013), <http://tedxtalks.ted.com/video/The-success-of-nonviolent-civil> (accessed November 13, 2013).

Every movement with the sustained 3.5 percent level of involvement was nonviolent and on average four times more inclusive and representative than their violent counterparts. Civil resistance victories, even in the cases aiming to overthrow a brutal and effective dictatorship, are on the rise and climbing (Chenoweth 2013).

Nonviolent movements have the tactical advantage of sustainability when they are sufficiently large and coordinated. Dispersion techniques allow the collective action to shift tactics quickly when they become too dangerous. Boycotts can morph to strikes, protests evolve into coordinated black-outs, and the movement continues and remains just as disruptive (Chenoweth 2013).

Essential for the collective-action frame is the attractive nature of inclusivity. Naturally, violent campaigns are more exclusive than civil resistance movements. Women, children, elderly, and the disabled are generally restricted from violent contribution. Nonviolent campaigns are more attractive in part due to their inclusive nature. For the collective action frame, as figure 12 illustrates, I prefer to envision the success of nonviolent campaigns as an attractive and potentially overwhelming force.

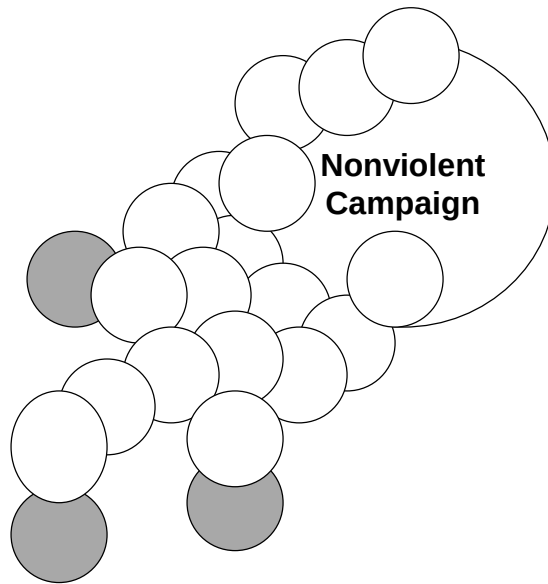


Figure 12. Nonviolent Campaign Attraction

Source: Created by author.

Figure 12 shows groups in white participating in a growing nonviolent campaign. Greater amounts of participants draw more people into the fold. Safety in numbers encourages risk adverse citizens to join movements. Observable civil resistance movements may pull in the previously undecided. Eventually the groups extend to overlap with other violent or authoritative groups, depicted in gray.

When the civil resistance reaches a tipping point of activity and diversification, connections to other sectors of society overwhelms. Participants have pre-existing relationships with policing forces, civil administrators, corporate concerns, educational institutions, religious leaders, members of the press, and other open systems (Chenoweth 2013). These intersections of affiliations spark a reevaluation of personal allegiances that jeopardize the status quo. Figure 13 incorporates the attraction of nonviolence into the collective-action frame.

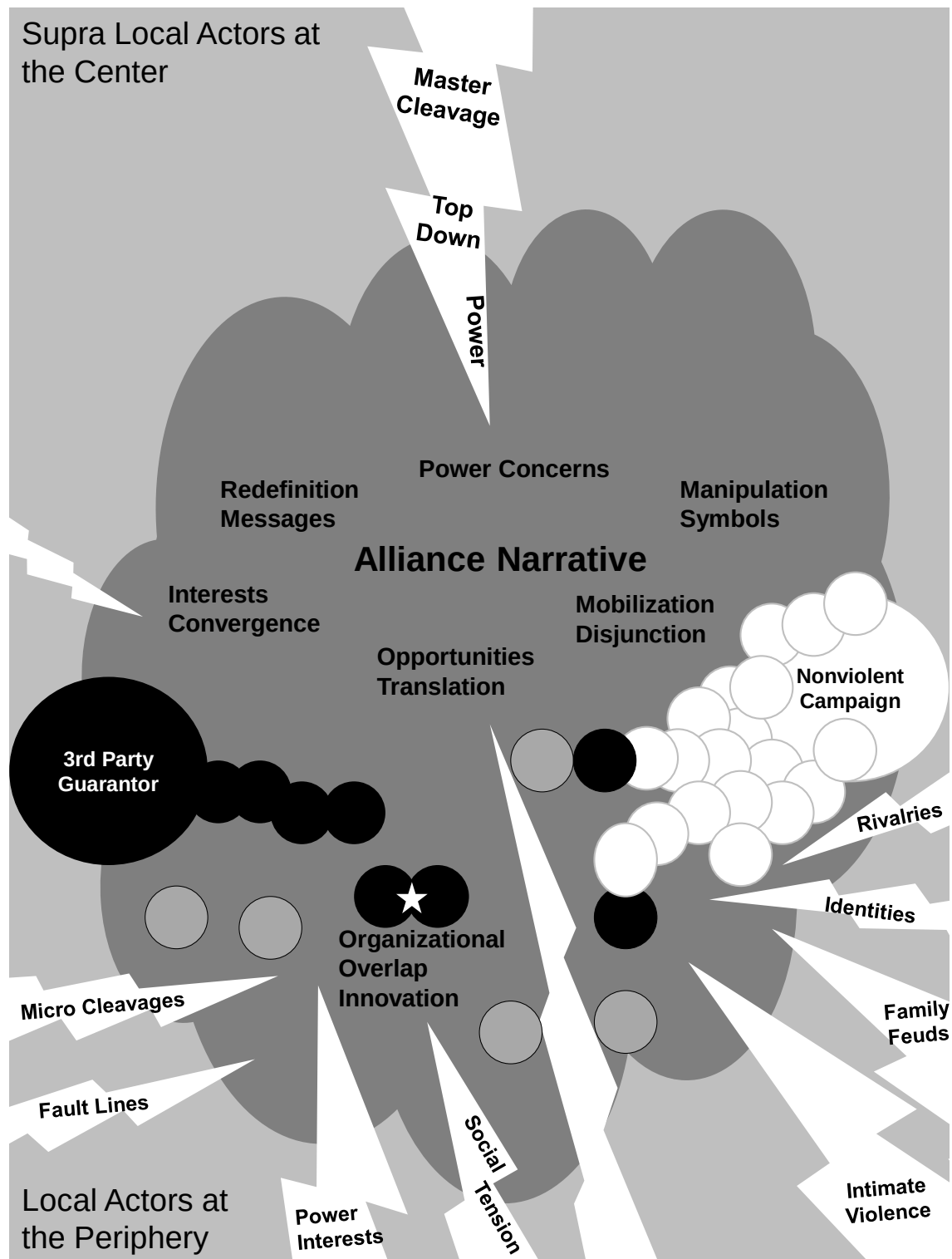


Figure 13. Collective-Action Frame, Iteration 4

Source: Created by author.

The attractive power of a sustained nonviolent campaign entering the collective-action frame is similar to the attraction of the third-party guarantor . Due to the inclusivity of nonviolence the campaign draws groups and actors into the fold (Chenoweth 2013). Like the third party, the nonviolence reduces the visibility of micro-cleavages. Although pre-existing fractures remain, they also fade into the background.

Dissimilar to the third-party guarantor , non-violent campaigns overlap violent or authoritative groups without formal alliances. Their overlap is due to vast amounts of participation. Potential sites of innovation materialize where those violent groups overlap with actors and groups pulled towards nonviolence. Most importantly, the nonviolent campaign is now an organ living in the alliance narrative body. It is a powerful account inside the narrative that unites its members with factions of violent conflict, supra-local and local. The everyday associations of nonviolent participants overlap throughout many sub-systems in conflict.

Collective and Connective Action

The introduction of social media complicates the traditional understanding of collective action. Figure 9, draws on the concept of “connective action” (Bennett and Segerberg 2013, as cited in Burnore 2013). Collective action in the physical realm and connective action in the cyber arena interlock together. Social media empowers individual actors to function at the same level as traditional organizations, whether they are formal, hybrid, or organizational-less (Bimber 2012, as cited in Burnore 2013). The advent of social media brings together the individual, differing types of organizations, and networks. Networks operate in both the cyber and physical domains as either organizationally brokered (leader networks), organizationally enabled (coordinating

networks), or crowd enabled networks (Earl and Kimport 2011, 3-13, as cited in Burnore 2013). A catalyst that spurs collective action generates fusion where the actor, organizations, and networks intersect. However, the outcome is not only collective action in the traditional physical sense but also digital connective action. Connective action is parallel to collective action; concomitantly they employ e-mobilization, e-tactics, and e-movements in both the cyber and physical spheres to attain their goals or objectives (Earl and Kimport 2011, 3-13, as cited in Burnore 2013).

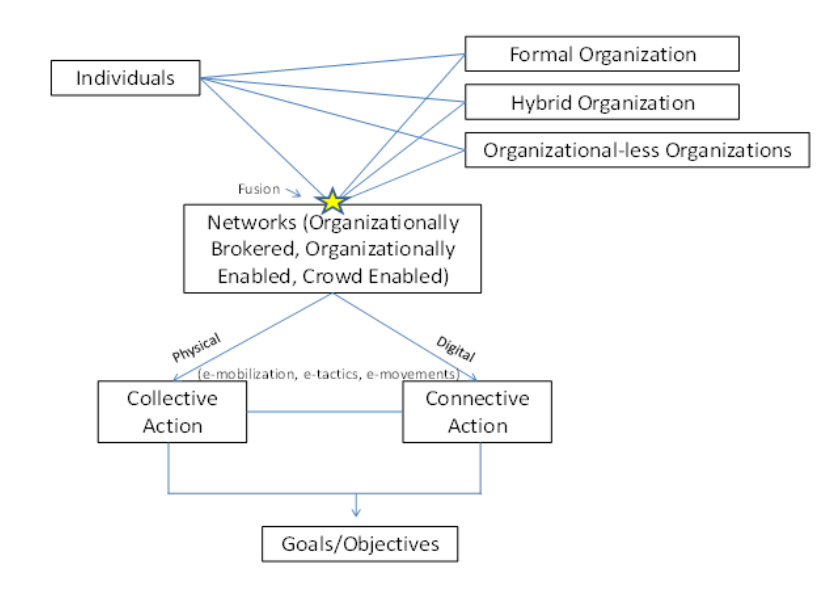


Figure 14. New Social/Political Action Framework

Source: Nathanael Burnore, “Social Media Applications for Unconventional Warfare” (Master’s Thesis, Command and General Staff College, Fort Leavenworth, KS, 2013), 50.

As internet connectivity spreads throughout the globe and technology advancements reach the masses, social media concerns rise in importance. The preponderance of collective action in the future operating environment will walk hand in

hand with connective action, they are inseparable. For the purposes of the collective-action frame, connective action and collective action are conjoined, as figure 15 depicts.

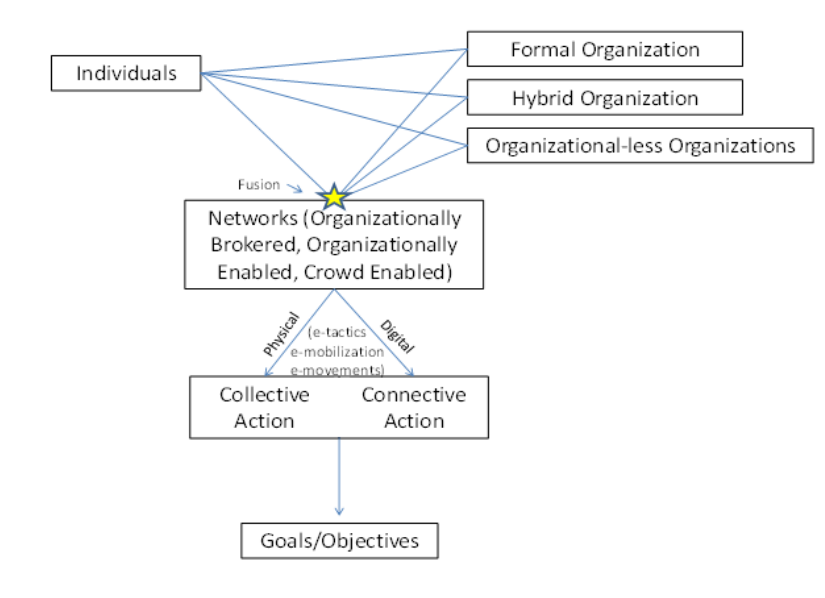


Figure 15. Connective and Collective Action

Source: Adjusted by author utilizing Nathanael Burnore, “Social Media Applications for Unconventional Warfare” (Master’s Thesis, Command and General Staff College, Fort Leavenworth, KS, 2013), 50.

The military practitioner employing a collective-action frame must adapt his perspective to include social media concerns. Social media thrives in diverse locations and on many different platforms. Social media extends the reach of information flow from communication nodes to the hands of every individual. Collective action is a joint process incumbent upon the exchange of ideas. Social media conduits of interaction transform the nature of collective action and is essential for an intervener to consider.

The power of social media compels the collective-action frame to appreciate connective action as an inherent capacity of collective action. Figure 16 illustrates the adaption of connective action into the collective-action frame and is the fifth build. Connective action underpins the alliance narrative. However, connective action is not subordinate to the alliance narrative, it also lives inside it.

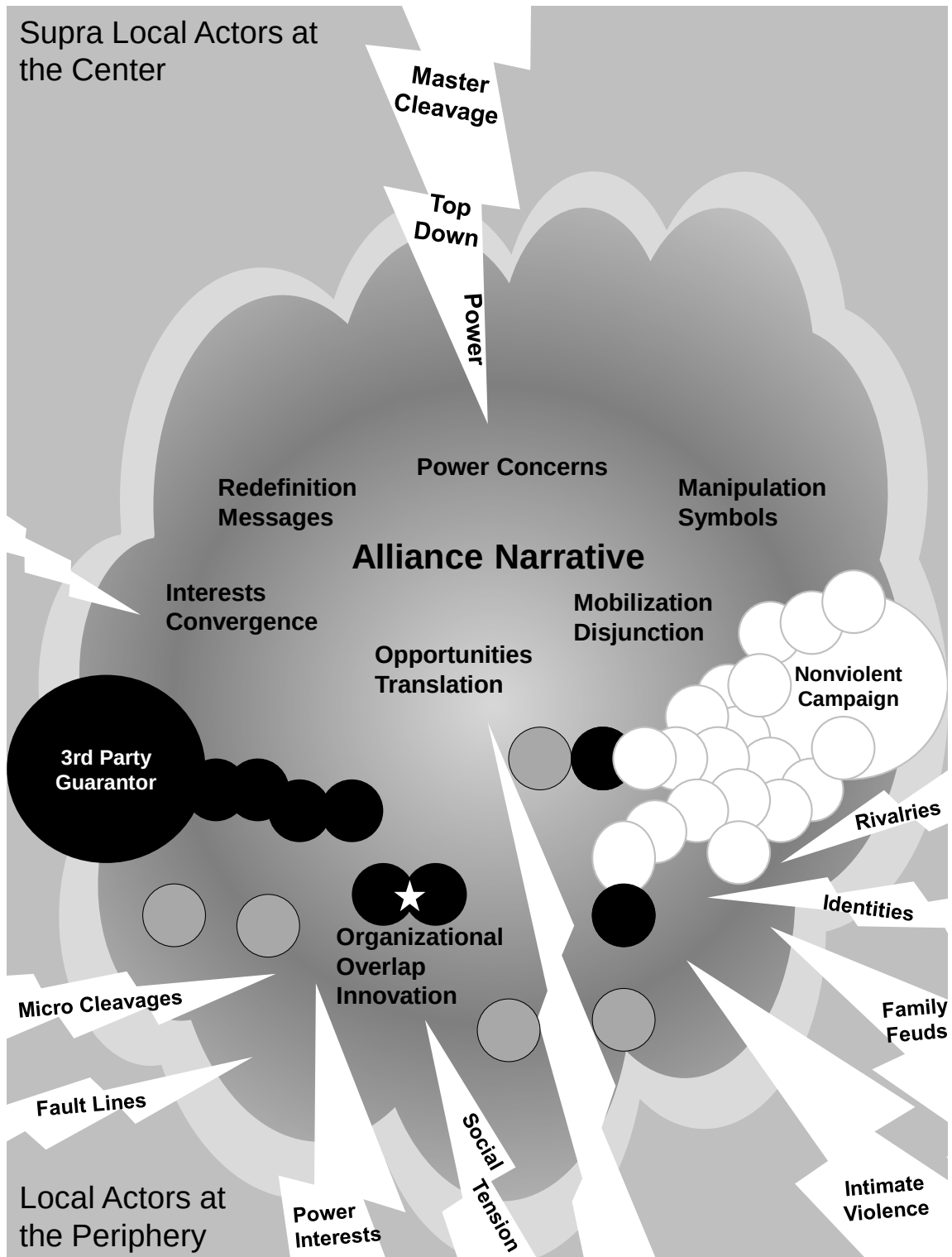


Figure 16. Collective-Action Frame, Iteration 5

Source: Created by author.

The Electronic Narrative

Cyber actors view their collective action as “inevitable” (Petit 2012, 22). The new tactical image of collective action is “a scattered network of digerati, males and females, urban and rural, local and global, all tweeting, posting and hacking from thousands of locations” (Petit 2012, 28). Cyber tactics in social media from an unconventional warfare perspective include social mobilization, the digital underground, and the electronic narrative. Social media and the digital underground are intimately interwoven across the electronic narrative texture. Figure 17 illustrates the overlap of the digital underground and social mobilization atop a powerful electronic narrative.

Social mobilization includes the digital masses as individual actors constantly colliding within and through each other through social media. The cyber actors not only connect to each other but operate without borders in a multi-spherical world where they frequent the physical and the virtual (Petit 2012, 25). Social mobilization as an organization reveals itself in a flash fire of collective action fury. Mobilization includes the tactic of swarming.

Analogous to social mobilization is the digital underground originating from the mobilization not as masses but proto-leader cyber actors allied as entangled threads throughout the digital masses. The digital underground may not view themselves as leaders, some actors are distinct network or tactical organizers, other actors operate multi-spherically in influential physical concerns as well. The digital underground leads by responding almost instantaneously, attempting to foster unity of effort towards particular interests (Petit 2012, 25).

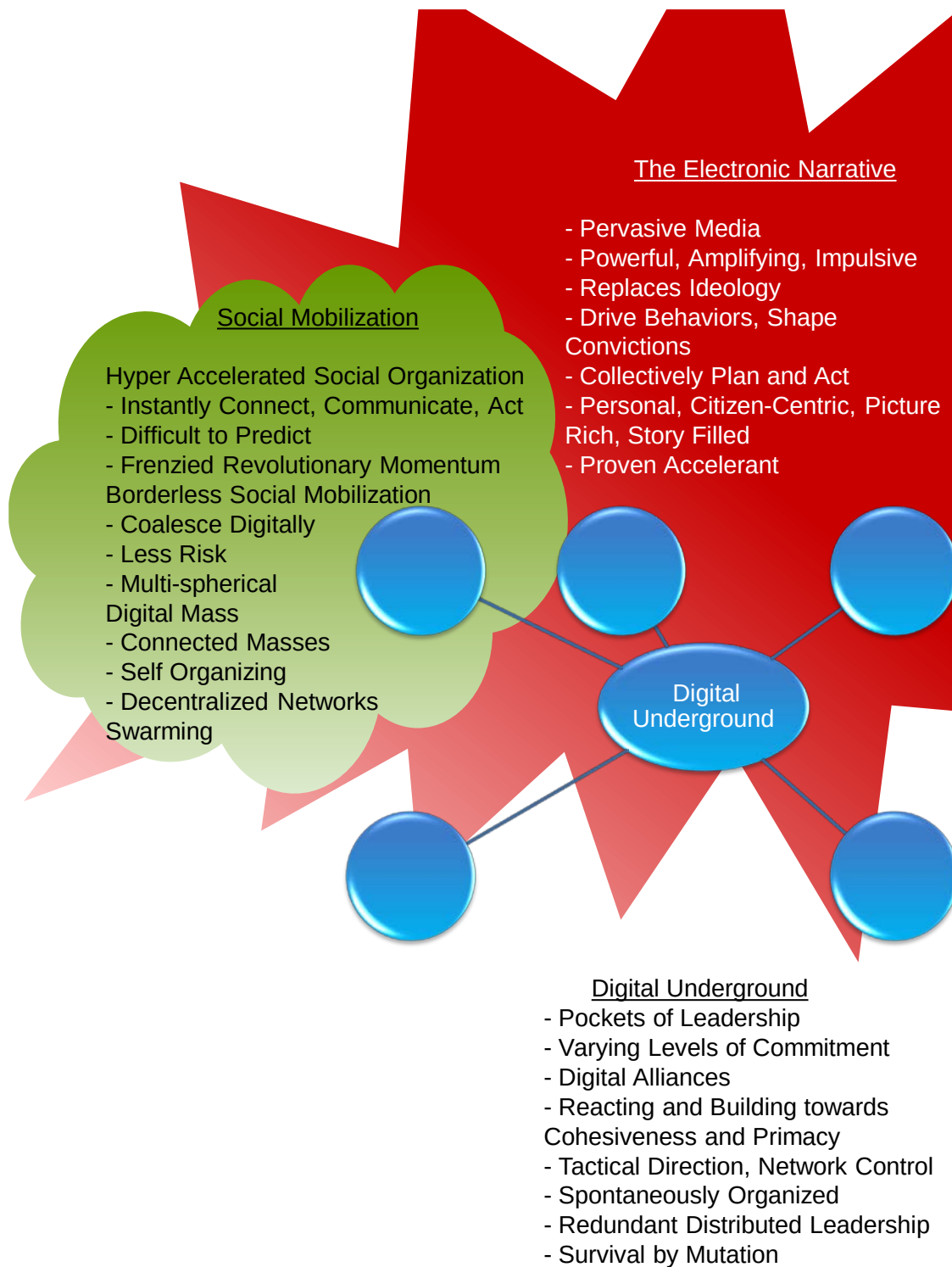


Figure 17. Social-Media Rich Environment

Source: Created by author utilizing Brian Petit, "Social Media and UW," *Special Warfare* (April-June 2012): 21-28.

Purposeful connective action only transpires via the electronic narrative. This narrative is omnipresent. Remarkably the narrative is more authoritative, replacing dogmatic principles, but still motivating action and forming belief (Petit 2012, 27). The electronic narrative supports the digital underground and social mobilization. It reinforces actors operating in social media and allows the rapid pace of interactions.

Instead of a element listed underneath the division of social mobilization, swarming deserves special recognition. Swarming is tactical manifestation of collective action in both the cyber and physical realms. Figure 18 depicts each feature of social media as dye spiraled into a funnel. There inside the cyber container where social mobilization, the digital underground, and the electronic narrative pour into, they blend into one vibrant and distinct liquid. The swarming action is no longer a fabric woven together by threads, but now inseparable and dynamic with each actor reverberating and amplifying the others efforts in a spiral of activity. Swarming is the tactical action inspired by social media but acting concurrently on the ground. It operates omnidirectionally, can shift focus rapidly, and has no obstacles (Petit 2012, 24).

Swarming

- *Seemingly Amorphous*
 - *Deliberately Structured*
 - *Coordinated Strategically*
 - *Strike in all Directions*
 - *Shift Quickly*
 - *Span all Barriers*
-



Figure 18. Swarming

Source: Created by author utilizing Brian Petit, “Social Media and UW,” *Special Warfare* (April-June 2012): 21-28.

The collective-action frame incorporates the foundational strength of social media, the electronic narrative. It resonates inside each cyber actor as deeply intimate testimonies. The electronic narrative complements the center-periphery alliance narrative. Equivalent to the alliance narrative, the electronic narrative constantly evolves and

redefines itself. However, the electronic narrative does not serve elite power interests, it replaces ideology. The electronic narrative is deeply personal, created by the actor in cyber space connected to his various social media platforms. He chooses the images, footage, and messages that reverberate in his head. His electronic narrative is a result of the social media networks he joins. Due to the intimacy of the electronic narrative its mobilization capacities are immense and seemingly instantaneous.

The sixth build of the collective-action frame balances the alliance narrative with the electronic narrative. Figure 19 illustrates the presence of the electronic narrative by adding countless individual clouds to the alliance narrative cloud. The alliance narrative continues its importance depicted as a darker shade of gray, but the electronic narrative penetrates and reverberates inside it depicted as a lighter shade of gray.

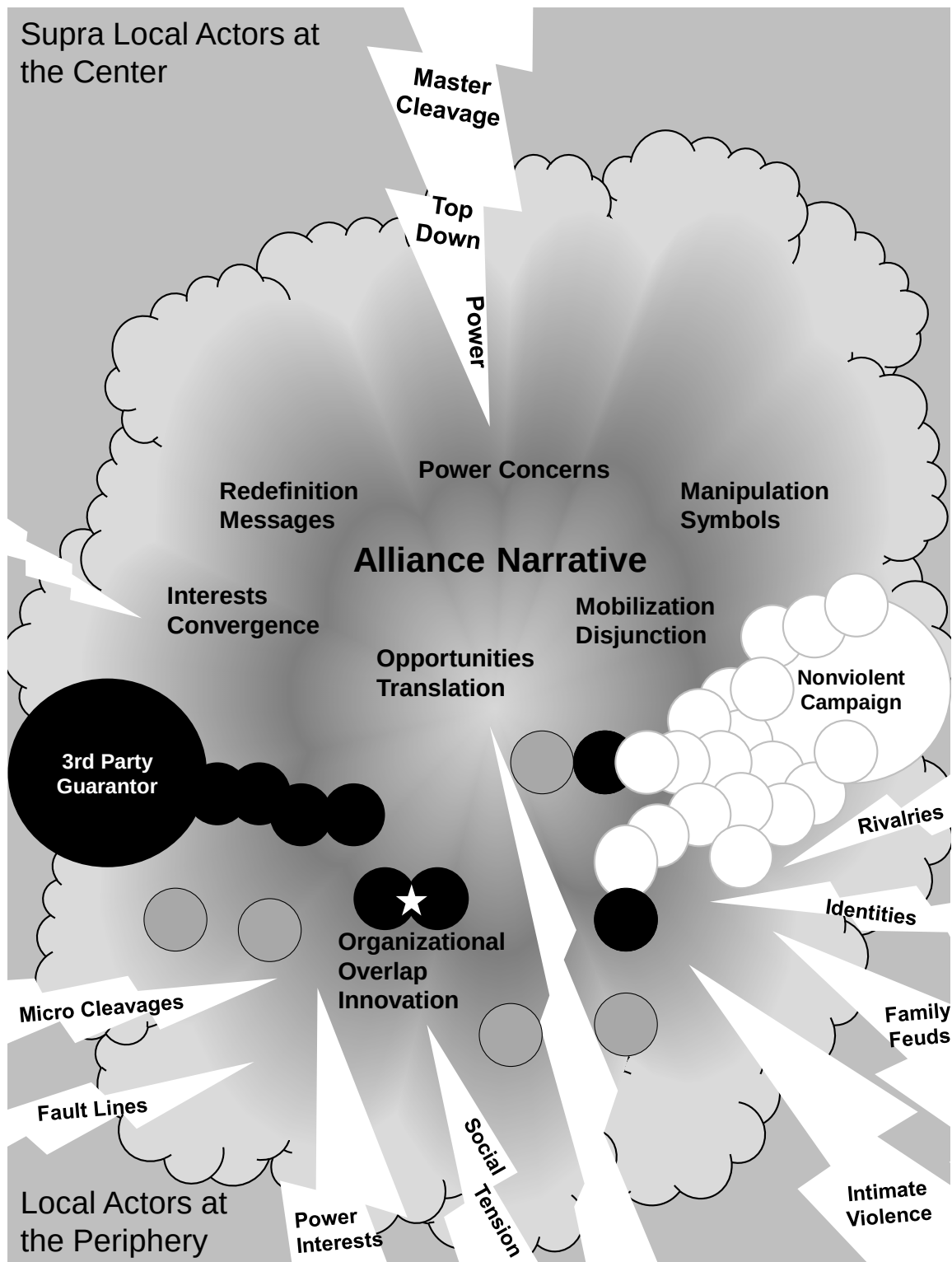


Figure 19. Collective-Action Frame, Iteration 6

Source: Created by author.

Emergent Outcomes

Understanding an area of operations using a relationships and actors network template to determine which single physical entity is the source of all power is insufficient. Emergent outcomes are organic to conflict, the inherent dynamism forces practitioners to appreciate collective action and emergence. The U.S. military conducts “operations in complex, ever-changing, and uncertain operational environments” (Department of the Army 2012c, 1-1).

The operational environment nests with the academic field of emergence and complexity. Emergent causality resonates “within and between force fields in a way that is causal but beyond the power to isolate and separate all elements in determinate ways” (2011, 174). Emergent outcomes are more relevant under unstable conditions. Although not easily distinguishable, emergence is causal. The increasing amount of open systems in an environment make emergence even more complex. Internal and external forces continually shape emergent outcomes. The emergent can suddenly transform due to frequently intertwined internal or external forces. New systems may self-organize and progress due to emergent causation. Emergence causes either stabilization or increased dynamics, perceived as a spiraling effect (Connolly 2011, 171).

U.S. military doctrine and education advocates understanding the operational environment by starting with a systems-oriented approach, but emergent outcomes widen the distance to operational requirements even greater. The advent of emergent causation under complex conditions is “causal – rather than reducible to a mere web of definitional relations – in that a movement in one force field helps to induce changes in others” (Connolly 2011, 171).

U.S. military doctrine and education advocates the analysis of networks by discerning functions and tensions. However, what transpires cannot be reasoned through independent-dependent variable causation. “What is operating here is closer to spiral causality” (Connolly 2011, 174). Due to emergence the element of creativity must be considered, the same creativity found in sub-system overlap and social media swarming. Emergence and complexity theory better prepare the military practitioner to comprehend the maturing cyber domain. The Arab Spring is a powerful example of collective action and emergent outcomes:

In Egypt, thousands of social-media exchanges combined the normally benign activity of online social commentary with the unpredictable actions of revolutionaries, disenfranchised individuals and opportunists. The result? A persistent wave of e-mass inspired civil disobedience that toppled a 30-year regime in 18 days with a “narrative and a nudge. (Petit 2012, 24)

The understanding of emergence and complexity adds to the difficulties for the military practitioner. The implications for the military professional when he first deploys to an area of operations means that his understanding of an operational environment cannot rely on classic causality variables to determine outcomes. A gap exists between a final state and an initial state of any complex system that only an appreciation of emergence can illuminate (Sapolsky 2010). In order for the collective-action frame to appreciate ambiguities in the operational environment the frame must include the awareness of emergent outcomes. Figure 20 illustrates the final build of the collective-action frame, the inclusion of emergent outcomes.

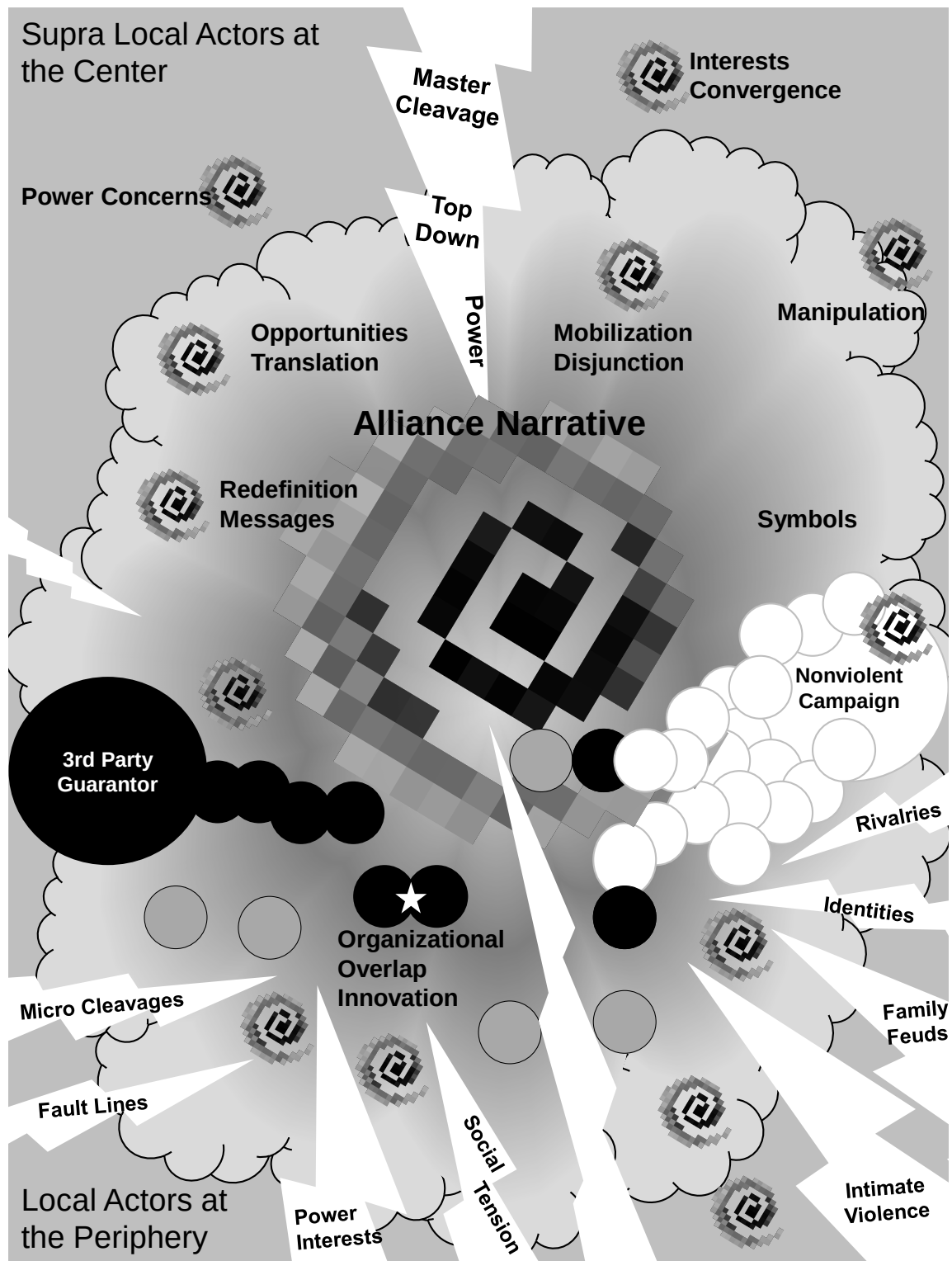


Figure 20. Collective-Action Frame, Iteration 7

Source: Created by author.

The collective-action frame integrates emergent outcomes by depicting emergence as spirals. Spiraling emergence centers the frame as an emergent outcome of conflict. Emergence also reveals itself in the form of many emergent causal spins, internal and external forces that continue to shape the emergent outcome. The original attributes of the center-periphery alliance theory now correspond with casual spins.

The inclusion of so many spiraling effects into the collective-action frame should not to confuse the military professional. Rather, it illustrates the uncertainty characteristic to the operational environment. The military practitioner must appreciate the ambiguity of war by considering the convoluted path of conflict unraveling consistent with complexity and emergence theory. However, the understanding of emergence further complicates comprehension of the operational environment. Emergent causality increases the divide between U.S. military doctrine and education and the operational needs of military practitioners.

The Collective-Action Frame

The military practitioner employing current U.S. military doctrine and education techniques to understand an area of operations fails to appreciate the complexity of his environment. The Eikmeier approach begins with building a structure of the environment. Using a systems-oriented approach the military professional creates a link and node diagram of lines and circles. The only meanings attributed to the shapes are labels of actors and functions for the nodes and labels of relationships and tensions for the links. This is an admirable start to begin comprehension of an unfamiliar and mysterious operational environment.

To further understanding of his area of operations the military practitioner then applies the PMESII variables. Unfortunately, the variables are then stovepiped and stripped of their context. The area of operations is now defined by a matrix of vague terms, phrases, and references. This matrix may be juxtaposed with another set of variables such as RAFT, METT-TC (Mission, Enemy, Terrain and weather, Troops and support available, Time available, and Civil considerations), ASCOPE (Areas, Structures, Capabilities, Organizations, People, and Events), SWEAT-MS (Sewers, Water, Electrical, Academic, Trash, Medical facilities, and Security), or any other set of variables in fashion. The resulting matrix is redundant, time consuming, and may result in decreased comprehension.

The practitioner then updates the link diagram and begins critical factor analysis. His analysis starts by determining what the goal of the enemy is, deciding how the adversary can accomplish his goal, and what resource would accomplish that goal. The single physical entity that solves this formula is the COG. Then, its vulnerabilities are targeted in the military orders process.

The benefit of this approach is the simplicity. It is easy for the military professional to understand, and executing the steps is time effective. The military professional that employs a collective-action frame also begins with a systems-oriented approach to begin understanding his new environment. He may also use elements of RAFT to draw an eventually cluttered diagram. However, this is where the collective-action frame diverges from the Eikmeier approach.

Instead of jumping to PMESII or any other set of variables, a collective-action frame generates a richer understanding of dynamics in the environment. The intersections

on the link and node diagram evolve into sites of interaction between groups. Every node has corresponding sub-systems that strengthen it. The lines are folds of overlap where organizations create potential innovative solutions. Alliances between groups reveal power interests and key leaders with influence inside convoluted networks. Micro-fractures inside the local population expose the intensity and indiscriminate sites of conflict. The influence of U.S. military presence accounts for a change in the behavior of actors. Masses of people and civil resistance show potential attractors and growing forces in the environment. Social media and actors operating in both the physical and cyber realms influence the speed of collective action and increase personal connections. Most importantly, a collective-action frame values the narrative that binds actors at varied levels together and motivates how conflict unravels.

A collective-action frame may seemingly require more time than the current approach to understand the operational environment, but with practice is conceivably more efficient. Scholarly works and mature theories introduce points of consideration. Direct accounts from local actors and elites present detailed substance. Different viewpoints clash and provide areas in contention. New questions require further research. However, the process and answers provide richer comprehension for the military professional.

A collective-action frame enhances COG and critical factor analysis. True motivations, objectives, power concerns, and interests inform the adversarial goals required in critical factor analysis. Sites of collective-action develop into candidates for COG consideration. These sites of collective action convert to ideal targets in the military orders process.

The collective-action frame embraces emergent outcomes. The military professional with a collective-action frame therefore appreciates intervention, area of operations activities, end-state objectives, and the military orders process in a different light. Instead of trusting proven techniques to produce certain outcomes, the practitioner recognizes and is attentive to forces that shape outcomes amidst conflict. The collective-action frame mindful of emergent outcomes responds to new organizations and systems that materialize in an area of operations. The military professional now welcomes inevitable transformation of open systems of systems living inside the operational environment. Emergence alters military objectives from classic causal claims to additional external forces in an already spiraling environment. The practitioner employing a collective-action frame intensifies the assessment process to continually evaluate changes in the operational environment. He emboldens certain initiatives and activities that gain traction, and he deescalates interventions that potentially heighten instability.

Afghan Spiraling Initiatives

On August 15, 2010 David Petraeus conducted an interview on NBC's "Meet the Press". During a conversation concerning progress in Afghanistan General Petraeus invoked elements of collective action and emergence:

we've got to build on the progress that has been established so far because there's certainly nothing like irreversible momentum. What we have are areas of progress, we've got to link those together, extend them and, and then build on it because, of course, the security progress, as you noted earlier, is the foundation for everything else, for the governance progress, the economic progress, rule-of-law progress and so forth. Obviously, they influence security as well. They can either reinforce it or they can undermine it. And the, and the trick is to get all of it moving so that you're spiraling upward where one initiative reinforces another. (Petraeus 2010, as cited in Perez 2011)

General Petraeus may not have mentioned collective action but clearly understood the operational environment in those terms. He saw areas that needed connections to each other in order to build further. He saw how different systems influenced each other, as even the foundation was influenced by the systems it supported. General Petraeus did not utter the phrase “emergent causation.” But he sought an irreversible momentum or “novel capacities of self-organization or autopoiesis within one of the two systems that had not been spurred into motion before . . . generating a new stabilization and sometimes intensifying disequilibrium” (Connolly 2011, 171). He understood that the momentum could either reinforce and stabilize the environment or undermine efforts and increase volatility. General Petraeus captures the essence of an collective-action frame when he concludes, “the trick is to get all of it moving so that you’re spiraling upward where one initiative reinforces another” (Petraeus 2010, as cited in Perez 2011).

Next, in chapter 5 I provide my conclusion with a perspective on how the collective-action frame complements the systems-oriented approach and critical factor COG analysis. Then, I provide recommendations for the military profession to incorporate and the practitioner to consider. Mission Command provides an opportunity for the realization of collective-action frame.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

Conclusion

Spiraling collective action swarms inside the future complex operational environment. The nature of the environment compels practitioners to recognize the influence of collective action in their area of operations. I conclude that the collective-action frame better prepares military professionals to understand the inherent intricacies of the operational environment.

My proposal to frame the space created by U.S. military doctrine and education is not a rigid proposition, but rather a flexible submission that contends collective action conceivability. It is plausible that a collective-action frame provides practitioners an enhanced ethos of understanding. I submit that a collective-action frame may buttress the systems-oriented approach and COG analysis, albeit a flexible COG analysis that emphasizes critical factor analysis over single physical entity persistence. However, since JP 5-0 calls the COG “one of the most important tasks confronting the JFC’s staff during planning” collective action is certainly as important, if not more vital, for the military professional (Joint Chiefs of Staff 2011, III-21).

The collective-action frame I built in chapter 4 is not a framework of variables. I do not intend to apply my collective-action frame as the collective-action framework to solve every collective action problem in a given tactical area of operations. My collective-action frame is an exercise that proves the viability of the using a collective action perspective to increase understanding of the operational environment. I analyzed seven academic works and built a frame to plug the gap in U.S. military doctrine and

education. Another military professional analyzing the same seven works may draw out other elements and construct an altogether different collective-action frame. Future exercises incorporating a collective-action frame should entertain scholarly works distinct from the studies I selected. The varied approaches to developing a collective-action frame would all benefit further comprehension of the operational environment. The collective-action frame is an approach to not only plug the gap but understand what actually transpires in an area of operations.

The collective-action frame coexists with a systems-oriented approach and critical factor COG analysis. A systems approach complements the collective-action frame by mapping out the beginnings of a operational environment structure. The frame deepens the practitioner's understanding of the environment from a RAFT perspective to a lens that places alliances, sub-systems, actors, and emergent outcomes into a rich context.

The frame coexists with critical factor COG analysis as well. However the collective-action frame rejects the singular physical entity COG approach that Eikmeier advocates. The critical factor COG analysis complements the collective-action frame by determining critical vulnerabilities in collective action situations. Sites of collective action are relevant as objectives in the military orders process. My research leads me to the conclusion that the future complex operational environment has no place for a singular entity COG approach. Eikmeier's approach to COG analysis gives the military practitioner a false sense of reality. If the future operational environment were not complex, perhaps his argument would have relevance. However, the messy nature of conflict fills every area of operations with complexities. A singular, physical entity focus does not correspond to the reality of conflict.

Although evident through more than a decade of intense conflict in Iraq and Afghanistan, U.S. military doctrine or education does not value collective action. It is incumbent upon the U.S. military to capture a collective action perspective, or risk losing valuable insight due to the certain attrition of military professionals. We are compelled to provide the future deployed military practitioner this knowledge before he enters the anticipated byzantine operational environment. The Army has a clear moment to codify the collective-action frame in doctrine, but the joint community should follow Army precedent and revitalize their doctrine as well. Just as important is the need to rebalance the institutional Army with education above training. Lastly, I provide recommendations for U.S. military doctrine and education to consider.

Recommendations

1. Mission Command provides an opening for U.S. military doctrine and education to reinforce a collective-action frame. Two of the three commander's tasks in mission command are:

A. Develop teams, both within their own organizations and with unified action partners.

B. Inform and influence audiences, inside and outside their organizations

(Department of the Army 2012c, 1-3).

Developing teams with unified action partners include governmental and non-governmental organizations to achieve unity of effort. Influencing audiences outside their organization is an open ended directive. Commanders should ask themselves questions such as, "Who should I engage in collective action with?" and "How can I influence people and systems so outcomes emerge towards stability?"

2. U.S. military doctrine and education should capitalize further on a movement in the right direction at the U.S. Army War College. The 2014 Campaign Planning Handbook, Department of Military Strategy, Planning, and Operations states:

Analysis then shifts to define how these systems interrelate with one another. This analysis produces a holistic view of the relevant enemy, adversary, neutral, and friendly systems as a complex whole, within a larger system that includes many external influences. While identifying the nodes and links within a system may be useful in describing important aspects of the OE, more important is describing the relevant relationships within and between the various systems that directly or indirectly affect the problem at hand. Commanders and staff must understand that relationships, especially those dealing with human interaction, are extremely dynamic. So, they must understand the dynamics, as that is what we will affect by our actions (and inaction). The “product” of the analysis of the current OE is a set of narratives that describe the important interests in the OE of the key actors. Though the narratives may be PMESII-based, they go far beyond the baseline PMESII analysis to describe the dynamics of relationships of the critical aspects of the environment. One example narrative might be to explain the interaction of the Taliban with the drug lords and the relationships with the local population, and the effects on those relationships of actions by outside actors. (U.S. Army 2013, 31-32)

The Carlisle Barracks understanding of the operational environment hints at the concepts of collective action and emergent outcomes. This is a step forward, a perspective espoused by heralded General Petraeus. Joint and Army doctrine should follow lead.

3. Rebalance CGSC training on COG focus with collective action and emergence education. A significant portion of common core training at CGSC is dedicated towards COG analysis. In fact, the “most challenging” test at the mid-career college is an examination to determine if students can correctly identify the COG in a north African World War II scenario. This training influences U.S. Army officers to focus on a single physical entity with no education on current scholarship concerning collective action or emergence that would actually coincide with their recent experiences in Iraq and Afghanistan. The foundation of COG analysis is critical factor analysis, which easily

coexists with a collective action education. After instructing students on COG and critical factor analysis, certainly a few hours can be carved out to examine scholarly articles that disagree with notions of a single physical entity COG. I recommend following this with a “competition of ideas” discussion on understanding a complex operational environment.

However, without a clear rebalancing of education over training, CGSC students will never realize the importance of collective action and emergent outcomes. Students receive few injects of how collective action unfolds in a tactical area of operations unless they select certain regional electives. Perhaps the guest speaker program could invite thought provoking scholars to discuss recent revelations in micro-fracture studies at the local dynamics of war. Currently the guest speaker program is lacking and is largely geared towards general officers briefing routine slide presentations. Ideas to rebalance CGSC education over training are plentiful. Hopefully the collective-action frame will make the cut.

REFERENCE LIST

- Bapat, Navin A., and Kanisha D. Bond. 2012. Alliances between militant groups. *British Journal of Political Science* 42, no. 4 (October): 793-824.
- Bennett, W. Lance, and Alexandra Segerberg. 2013. *The logic of connective action: Digital media and the personalization of contentious politics*. New York: Cambridge University Press.
- Bimber, Bruce, Andrew J. Flanagin, and Cynthia Stohl. 2012. *Collective action in organizations: Interaction and engagement in an era of technological change*. New York: Cambridge University Press.
- Burnore, Nathanael. 2013. Social media applications for unconventional warfare. Master's Thesis, U.S. Army. Command and General Staff College, Fort Leavenworth, KS, 13 December.
- Chenoweth, Erica. 2013.. The success of nonviolent civil resistance. TEDxBoulder <http://tedxtalks.ted.com/video/The-success-of-nonviolent-civil> (accessed November 13, 2013).
- Chenoweth, Erica, and Maria J. Stephan. 2011. *Why civil resistance works: The strategic logic of nonviolent conflict*. New York: Columbia University Press.
- Christia, Fotini. 2012. *Alliance formation in civil wars*. New York: Cambridge University Press.
- Connolly, William E. 2011. *A world of becoming*. Durham: Duke University Press.
- Department of the Army. 2006. Field Manual 3-24, *Counterinsurgency*. Washington, DC: Government Printing Office, December.
- . 2012a. Army Doctrine Reference Publication 3-0, *Unified land operations*. Washington, DC: Government Printing Office, May.
- . 2012b. Army Doctrine Reference Publication 5-0, *The operations process*. Washington, DC: Government Printing Office, May.
- . 2012c. Army Doctrine Reference Publication 6-0, *Mission command*. Washington, DC: Government Printing Office, May.
- Eikmeier, Dale C. 2012a. *From operational art to operational plans: A joint planning primer*. Fort Leavenworth, KS: Government Printing Office.

- . 2012b. Modernizing the center of gravity concept—so it works. In *Addressing the Fog of COG, Perspectives on the Center of Gravity in US military Doctrine*, ed. Celestino Perez, Jr, Ph.D., 133-164. Fort Leavenworth, KS: Combat Studies Press.
- Gibson, Clark C., Krister Andersson, Elinor Ostrum, and Sujai Shivakumar. 2009. *The samaritan's dilemma: The political economy of development aid*. New York: Oxford University Press.
- Joint Chiefs of Staff. 2009. Joint Publication 2-01.3, *Joint intelligence preparation of the operational environment*. Washington, DC: Government Printing Office, June.
- . 2011. Joint Publication 5-0, *Joint operational planning*. Washington, DC: Government Printing Office, August.
- Kalyvas, Stathis N. 2003. The ontology of “political violence”: Action and identity in civil wars. *American Political Science Review* 1, no. 3 (September): 485-494.
- Klug, Jonathan. 2012. Behind the Mosaic: Insurgent centers of gravity and counterinsurgency. In *Addressing the Fog of COG, Perspectives on the Center of Gravity in US military Doctrine*, ed. Celestino Perez, Jr, Ph.D., 1-32. Fort Leavenworth, KS: Combat Studies Press.
- McCary, John C. 2009. The anbar awakening: An alliance of incentives. *The Washington Quarterly* 32, no. 1 (January): 43-59.
- Melton, Stephen L. 2012. Center of gravity analysis—the black hole of Army doctrine. In *Addressing the Fog of COG, Perspectives on the Center of Gravity in US military Doctrine*, ed. Celestino Perez, Jr, Ph.D., 81-100. Fort Leavenworth, KS: Combat Studies Press.
- Paparone, Christopher R., and William J. Davis, Jr. 2012. Exploring outside the tropics of Clausewitz: Our slavish anchoring to an archaic metaphor. In *Addressing the Fog of COG, Perspectives on the Center of Gravity in US military Doctrine*, ed. Celestino Perez, Jr, Ph.D., 65-80. Fort Leavenworth, KS: Combat Studies Press.
- Parkinson, Sarah E. 2013. Organizing rebellion: Rethinking high-risk mobilization and social networks in war. *American Political Science Review* 107, no. 3 (August): 418-433.
- Perez, Celestino Jr. 2011. The soldier as lethal warrior and cooperative political agent: On the soldier's ethical and political obligations toward the indigenous other. *Armed Forces and Society* 38, no. 2 (April): 177-204.

———. ed. 2012. *Addressing the fog of COG, perspectives on the center of gravity in US military doctrine*. Fort Leavenworth, KS: Combat Studies Press.

Petit, Brian. 2012. Social media and UW. *Special Warfare* (April-June): 21-28.

Petraeus, David. 2010. NBC interview with David Gregory. *Meet the Press Transcript for August 15, 2010*. http://www.msnbc.msn.com/id/38686033/ns/meet_the_press-transcripts/ (accessed November 14, 2013).

Sapolsky, Robert. 2010. *Emergence and complexity: Human behavior biology May 21, 2010*. http://www.youtube.com/watch?v=o_ZuWbX-CyE (accessed November 21, 2013).

Saxe, John Godfrey. 1878. The blind men and the elephant. In *Poetry of America: Selections from one hundred American Poets from 1776 to 1876*, ed. William James Linton, 150-152. London: George Bell & Sons.

Shapiro, Ian. 2005. *The flight from reality in the human sciences*. Princeton: Princeton University Press.

U.S. Army War College. 2013. *Campaign planning handbook academic year 2014*. Carlisle Barracks, PA: USA AWC.