





## **SMA Prior Work in the Information Environment**

## An Annotated Bibliography

Strategic Multilayer Assessment (SMA)

#### October 2020

In January 2020, Headquarters US Air Force (HAF)—in coordination with the Joint Staff—requested that the Strategic Multilayer Assessment¹ (SMA) team use its deep bench of prior research, extensive network of experts, and ties to leading research institutions to inform critical aspects of the JROCM 068-19 *Operations in the Information Environemnt DOTMLPF-P Change Recommendation (DCR)*. For this study, which is called *Integrating Information in Joint Operations* (IIJO), SMA will assess the ways in which the Joint Force can most effectively integrate information and influence into its activities across the competition-conflict continuum.

Editors: Nathan Heath (NSI, Inc.) and Veronica Murdoch (SMA)

SMA White Papers and reports can be downloaded from <a href="http://nsiteam.com/sma-publications/">http://nsiteam.com/sma-publications/</a>



<sup>&</sup>lt;sup>1</sup> **SMA Mission**: Strategic Multilayer Assessment (SMA) provides planning support to Commands with complex operational imperatives requiring multi-agency, multi-disciplinary solutions that are not within core Service/Agency competency. Solutions and participants are sought across USG and beyond. SMA is accepted and synchronized by Joint Staff (JS/J-3/DDGO) and executed by OUSD(R&E)/RRTO. For more information about SMA, please contact Mariah Yager at <a href="mailto:mariah.c.yager.ctr@mail.mil">mariah.c.yager.ctr@mail.mil</a>.

#### Introduction

The current SMA project, Integrating Information in Joint **Operations** (IIJO), builds on strong foundation of prior SMA work on influence and information operations. The themes underlying the research reflect shifting priorities as SMA has responded to requests ranging from counterterrorism to deterrence to great power competition. However, the requirement to inform and



Figure 1 Top 50 keywords in SMA information and influence operations research

influence actors and populations through effective, strategic communication remains consistent. This annotated bibliography² comprises nearly 50 SMA studies and speaker series events in five areas related to the information environment: 1) bio-psycho-social drivers of instability, 2) messaging & counter-messaging, 3) competition and conflict, 4) influence, and 5) cyber considerations. The following section highlights the type of content that you can expect to discover in each of the five key areas related to information operations. You may also skip to Table 1 for a full list of relevant populations categorized by the five areas as well as relevant state and non-state actors.

# Highlights from Five Key Areas of SMA Research Related to Information and Influence Activities

#### Messaging & Counter-messaging

SMA has produced a significant body of work on the ways in which state and non-state actors use messaging to convey narratives and/or to influence populations. Several works in this section focus on effective counter-messaging techniques. These include 1) management of unintended negative consequences from counter-VEO influence operations, 2) maneuver and engagement against ISIS in the narrative space, 3) means of undermining ISIS's virtual caliphate, and 4) identification of capability gaps in counter-ISIS messaging. Regarding state actors, studies explore

<sup>&</sup>lt;sup>2</sup> Disclaimers: The views expressed in this article are those of the author and do not reflect the official policy or position of the Department of Defense or the US Government. Mention of any commercial product in this paper does not imply Department of Defense (DoD) endorsement or recommendation for or against the use of any such product. No infringement on the rights of the holders of the registered trademarks is intended. The appearance of external hyperlinks does not constitute endorsement by the United States DoD of the linked websites, or the information, products or services contained therein. The DoD does not exercise any editorial, security, or other control over the information you may find at these locations.

the use of narratives to shape Russian and Chinese behavior, as well as narrative analyses of Russian, Chinese, and Iranian media.

#### Bio-Psycho-Social Drivers of Instability

Much of SMA research over the past ten years has focused on the drivers of instability, particularly in the context of countering violent extremism and destabilizing population dynamics. In trying to understand why individuals and groups choose or reject violence, SMA turned to the neuroscience and cognitive psychology communities for insights. Reports submitted in this area particularly explore the neuro-cognitive basis of deterrence and extremism.

#### Competition & Conflict

SMA research also considered the theoretical, strategic, and operational aspects of the competition continuum, with particular focus on gray zone activities. In addition to developing a widely-held, theoretically-based definition of "Gray Zone" activities (or, operations below the level of armed conflict), SMA's work in this area has examined the motivations for actors to engage in "gray activities," how the US should respond to such activities, and the capabilities needed to respond effectively.

#### Cyber

Alongside other studies related to information and influence, SMA has explored topics in the "fifth domain" pertaining to cyber and information warfare, emerging technologies such as machine learning and artificial intelligence (AI), and strategic ambiguity. While cyber considerations have not been a driving factor in SMA studies, its importance for information and influence activities is acknowledged through papers and speaker events at the intersection of the cyber realm and communications theory.

#### **Influence Operations**

All other reports relating to effective communication and persuasion are included in this last category: influence operations. Reports in this section range from managing unintended consequences of messages to understanding target populations to identifying communication techniques and patterns used by adversaries. Reports in this section often grapple with how to best conduct influence operations in an increasingly complex and connected world.

#### **Table of Publications**

The following table is intended to help the reader navigate the dense knowledge ecosystem SMA has produced over the last decade. Hyperlinks to the reports are included in both the table and in the annotated bibliography below. Reports are listed in reverse chronological order. A comprehensive list of key words is listed in Appendix A: Key Words.

Table 1 Prior SMA Work Related to Information and Influence Operations

ID	Date	Title	Messaging	Bio-Psycho-Social	Competition	Cyber	Influence	Russia	PRC	DPRK	Iran	SISI
49	<u>2020</u>	Gaming Gray Zone Tactics: Design Considerations for a Structured Strategic Game			Х							
48	<u>2020</u>	Hybrid War and the Gray Zone: Two Failures of American Strategic Thinking			Х			Х				
47	<u>2020</u>	Media Reporting on Egypt's Economy and Bailout Narratives: The role of Egyptian, Chinese, and Russian Media Narratives in Solving Egypt's Economic Crisis	Х					Х	Х			
46	<u>2020</u>	Rethinking Communication Influence from a Strategic Communication Approach					Х					
45	2019	How Russian Society Challenges Putin's Grand Narrative: Perceptions of Domestic Problems and External Threats after Crimea	Х					Х				
44	<u>2019</u>	Future Military Intelligence: CONOPS and S&T Investment Roadmap 2035-2050 (The Cognitive War)				х	Х					
43	<u>2019</u>	SMA Quick Concepts Series: Global Influence					Х					
42	<u>2019</u>	Leaders of the Chinese Economy: Cognitive and Motivational Analyses					Х		Х			
41	<u>2019</u>	Iranian Media Narrative Perspectives on the US and Global Competition	Х								Х	
40	<u>2019</u>	Using Narratives to Shape Chinese and Russian Behavior						Х	Х			
39	<u>2019</u>	Strategic Communication and Influence: An Unofficial Primer					Х					
38	2019	Trends in Online Foreign Influence Efforts					Х					
37	2018	Comparative Analysis of Kim Family Discourse								Х		
36	<u>2018</u>	<u>Trucks, Knives, Bombs, Whatever: Exploring Pro-</u> <u>Islamic State Instructional Material on Telegram</u>	Х									Х
35	2018	Insights into Kim Jong-un's Cognition Based on His Public Speeches		Х						X		

34	2018	Narratives Before & After the 2018 North Korea-									
34	2018	United States Summit: An Analysis of Chinese									
		and Russian News Media Coverage of Events on	Χ						Χ		
		the Korean Peninsula									
33	2010										
33	<u>2018</u>	Media Narrative Analysis: Iranian, Russian, and	x				Х	X		Х	
		Chinese News Coverage of the Future of Afghanistan	^				^	^		^	
32	2018	Modeling Persuasion through									
32	2018	Human/Machine Coding			Χ						
21	2010										
31	<u>2018</u>	The Influence Machine – Hacking Deterrence			Χ	Χ					
		with Automated Information Operations									
30	<u>2018</u>	Mind Space: Cognition in Space Operations		X		Х	Х	Х			
29	<u>2018</u>	Getting Messages Through: The Cognition of		X					Х		
		Influence with North Korea and East Asia		^					^		
28	<u>2018</u>	What Do Others Think and How Do We Know				Х					
		What They Are Thinking?				^					
27	2017	Discourse Indicators of Gray Zone Activity:					\ <u></u>				
		<u>Crimea</u>		X			X				
26	2016	Discourse Indicators of Gray Zone Activity:		.,			.,				
		Russian-Estonian Relations Case Study		X			X				
25	2016	Discourse Indicators of Gray Zone Activity: South									
		China Sea Case Study		X				Х			
24	2017	Media Visions of the Gray Zone: Contrasting									
		Geopolitical Narratives in Russian and Chinese	X				Х	Х			
		Media									
23	2017	Influence in an Age of Rising Connectedness									
						Х					
22	2017	Integration Report: Gray Zone Conflicts,									
		Challenges, and Opportunities		X							
21	2017	US-DiGIA: The Directory of Discoverable US									
	2017	Government Information Assets				Χ					
20	2017	10 <sup>th</sup> Annual Strategic Multi-Layer Assessment									
20	<u> 2017</u>	(SMA) Conference Report: From Control to									
		Influence? A View of – and Vision for – the				Х					
		Future									
		<u>ratare</u>									
19	2017	From Control to Influence: Cognition in the Gray		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \							
		Zone		X							
18	2016	Outplayed: Regaining Strategic Initiative in the									
		Gray Zone		X							
						L	L	<u> </u>	L		

17	2016	The Strategic Uses of Ambiguity in Cyberspace									
						Х					
16	2016	Assessing and Anticipating Threats to US Security									
		<u>Interests</u>					X				
15	2016	Info Operations in Iraq and Syria	\ <u></u>							,	,
			Х							X	•
14	2016	Counter Information Messaging	Х								
			^								
13	<u>2016</u>	<u>Undermining ISIL's "Virtual Caliphate"</u>	Х							X	,
			^								•
12	2016	Information Dominance: PLA Views of				Х			Х		
		<u>Information Warfare and Cyberwarfare</u>				^			^		
11	<u>2016</u>	Counter-Da'esh Influence Operations: Cognitive					Х			\	,
		Space Narrative Simulation Insights					^			×	`
10	<u>2016</u>	<u>Identifying Predictive Gray Zone Indicators</u>			Х						
		through People's Values			^						
09	2016	Maneuver and Engagement in the Narrative	Х							X	,
		<u>Space</u>	^							_ /	`
08	<u>2016</u>	Bio-Psycho-Social Application to Cognitive		Х							
		<u>Engagement</u>		<							
07	<u>2016</u>	Cognitive Maneuver for the Contemporary and					Х				
		Future Strategic Operating Environment					^				
06	<u>2015</u>	Putin's Information Warfare in Ukraine: Soviet					Х	Х			
		Origins of Russia's Hybrid Warfare					^	^			
05	<u>2014</u>	8th Annual SMA Conference Report: A New									
		Information Paradigm? From Genes to 'Big Data'		Х							
		and Instagram to Persistent									
		SurveillanceImplications for National Security									
04	<u>2014</u>	<u>Leveraging Neuroscientific and</u>									
		Neurotechnological (NeuroS&T) Developments		Х							
		with Focus on Influence									
03	2016	and Deterrence in a Networked World  Topics for Operational Considerations: Insights									
03	<u>2016</u>	from Neurobiology & Neuropsychology on									
		Influence and Extremism—An Operational		Х							
		Perspective									
02	2011	From the Mind to the Feet: Assessing the									$\dashv$
	<u> </u>	Perception-to-Intent Action Dynamic		Χ							
01	2011	Towards a Framework for Dealing with Potential									$\dashv$
		Unintended Consequences of Influence Activities					Х			X	(
$\Box$			1	l	l	l	l	1	1		

## **Annotated Bibliography**

## 49: <u>Gaming Gray Zone Tactics: Design Considerations for a Structured</u> Strategic Game

# Published **2020**

#### Speakers

Dr. Stacie Pettyjohn & Ms. Becca Wasser RAND

#### **BLUF**

This speaker session argues that the gray zone should be conceptualized as a tactic rather than a phase in conflict, and an example of this idea is offered in the framework distinguishing some of Russia's gray zone tactics from one another. The speakers recommend that NATO militaries focus on maintaining deterrence against Russia, and that civilian agencies counter non-violent Russian gray zone tactics, as they are best positioned to do so.

#### **Abstract**

SMA hosted a speaker session presented by Dr. Stacie Pettyjohn (RAND) and Ms. Becca Wasser (RAND) as a part of its SMA EUCOM Speaker Series. To address the different response required for the various types of gray zone tactics, Dr. Pettyjohn and Ms. Wasser created a framework to distinguish some of Russia's gray zone tactics from one another. Two distinct variables are important for distinguishing these tactics: violent versus non-violent intervention and diffused versus focused targets. Diffuse, violent tactics implicitly involve the threat of violence and include Russian efforts to form ties with criminal and paramilitary organizations. Targeted, non-violent tactics leverage the results of "everyday" actions and are employed to achieve a specific nearterm goal. Finally, aggressive and directed short-term tactics have a specific objective and involve the threat or actual use of force. Russia's ability to achieve its objectives through gray zone tactics is largely dependent on the vulnerability of the target country, indicated by state fragility and polarization. NATO should compel, not deter, Russia, as NATO's retaliatory threats against nonviolent gray zone tactics lack credibility. The attribution of gray zone tactics also is not sufficient enough to change Russian behavior and doing so imposes costs on the West. Ms. Wasser advised that NATO improve the resiliency of target nations and counter violent gray zone tactics through deterrence by denial and non-violent gray zone tactics through supporting civilian organizations, which are best positioned to counter non-violent tactics. To conclude, Ms. Wasser stated that 1) the West may be winning the gray zone competition without realizing it, 2) that NATO should focus on strengthening conventional deterrence, and 3) the West should not ignore or overreact to Russian gray zone tactics, but instead recommend a better course of action.

#### **Keywords**

gray zone, gray zone tactics, Russia, NATO, deterrence

## 48: <u>Hybrid War and the Gray Zone: Two Failures of American Strategic</u> Thinking

Published 2020

#### **Editors**

Dr. Donald Stoker Atlas Organization

Dr. Craig Whiteside US Naval War College

#### **BLUF**

The speakers in this session argue that US strategists and decision makers do not know how to think about war, which results in either defeat or "forever wars." They then present four arguments that dispute the use of the terms "hybrid war" and "gray zone," stating that they 1) are bad theory, 2) are based on bad or forgotten history, 3) propagate a dangerous tendency to confuse war and peace, and 4) undermine US political and strategic thinking. The speakers also predict that the US will see less usage of the terms hybridization and gray zone as we return to great power competition.

#### **Abstract**

SMA hosted a speaker session presented by Dr. Donald Stoker (Atlas Organization) and Dr. Craig Whiteside (Naval Postgraduate School) as a part of its SMA General Speaker Series. During their brief, Dr. Stoker and Dr. Whiteside argued that US strategists and decision makers do not know how to think about war, which results in in either defeat or "forever wars." The speakers offered four primary arguments that dispute the use of the terms "hybrid war" and "gray zone." Hybrid war and gray zone: 1) are "bad theory," 2) are based on bad or forgotten history, 3) propagate a dangerous tendency to confuse war and peace, and 4) undermine US political and strategic thinking. Dr. Stoker and Dr. Whiteside then explained that all warfare blends conventional and irregular forces, and war's very nature is to create ambiguity, seize the initiative, and paralyze the enemy. Regarding the gray zone, the speakers stated that there is no space between peace and war, arguing that such a gray zone does not exist. This is "bad theory" because it provides no logical, universally applicable foundation for analysis. It does not clarify; it confuses. Furthermore, they stated that countries can use subversion when they are at war or not. The term gray zone destroys one's understanding of the difference between and war. The result is that US policy and strategy is often built on flawed ideas. The alternative, according to Dr. Whiteside and Dr. Stoker, is to return basic principles of strategic analysis and question any new term, theory, or claim. The speakers explained that to have a concrete basis for analysis, we must identify if the objective is to overthrow the enemy (i.e., unlimited war) or something else (i.e., limited war). They predicted that the US will see less usage of the terms hybridization and gray zone in the future as we return to great power competition. Dr. Stoker and Dr. Whiteside concluded by stating that US decision makers and strategists need to reattach the importance of distinguishing war from peace.

#### **Keywords**

hybrid war, gray zone, basic principles of strategic analysis, fringe war

# 47: Media Reporting on Egypt's Economy and Bailout Narratives: The role of Egyptian, Chinese, and Russian Media Narratives in Solving Egypt's Economic Crisis

# Published 2020

#### **Editors**

Dr. Robert Hinck

Monmouth College

Dr. Marco Ehrl *Kuztown Univ.* 

Mr. William Stefanism

Monmouth College

Dr. Sara Kitsch Monmouth College

Dr. Asya Cooley Oklahoma State University

Dr. Skye Cooley
Oklahoma State University

#### **BLUF**

This study examines Egyptian, Russian, and Chinese media perspectives of the Egyptian economy to determine to what extent a future economic crisis in Egypt is probable, and identification of which great powers would most likely lead bailout efforts should an economic crisis unfold, and it highlights various findings in three major areas: 1) reports on likely bailout partners, 2) the stability of the Egyptian economy, and 3) Russian and Chinese interests in Egypt.

#### **Abstract**

To answer these questions, researchers conducted a strategic mediabased narrative analysis. The study generated key findings in three major areas: reports on likely bailout partners, the stability of the Egyptian economy, and Russian and Chinese interests in Egypt. With regard to reports on likely bailout partners, the study found China views itself as a bailout partner, but Egypt does not see China as such. Egypt views Russia as a bailout partner, but Russia does not view itself as such. Regarding the stability of the Egyptian economy, the report found that 1) Egyptian media reports greater governmental capacity

in managing its economic crisis, although some indicators suggest the increase reflects the need to garner greater buy-in and support from Egyptian populace and 2) Egyptian, Chinese, and Russian media largely indicate that the Egyptian government is capable of successfully managing its economic situation, although references of continued economic crisis factors remain largely consistent over time. Finally, in regards to Russian and Chinese interests in Egypt, the study found that Chinese interests in Egypt take a long-term, strategic view linking its actions in Egypt to its Belt and Road initiative, and Chinese media emphasizes more broadly the benefits of Chinese actions supporting the Egyptian economy and people. Meanwhile, media analysis shows that Russian interests in Egypt take a short-term, tactical view highlighting its commercial interests in energy cooperation, weapon sales, tourism, and development of the Suez Canal.

#### **Keywords**

bailout, economic crisis, Egypt, Russia, China, media, narrative, economy, news coverage, act-purpose narrative, act-scene narrative, scene-act narrative, agent-act narrative, instrument-purpose narrative, bailout partners, interests, indicators, Belt and Road, investment

## 46: <u>Rethinking Communication Influence from a Strategic</u> Communication Approach

Published 2020

Author

Dr. Paul Lieber *USSOCOM* 

#### **BLUF**

This "Invited Perspective" analyzes why it was so easy for Russia to influence the US population, and why the US communication influence strategy was wholly unprepared for such an event.

#### **Abstract**

This monograph built on a March 2019 lecture for the Strategic Multilayer Assessment Speaker Series event: "Strategic Communication and Influence: An Unofficial Primer." Dr. Lieber explored five years of Russian disruption campaigns and sought to understand why it was so easy for Russia to influence the US population to question several critical institutions and undermine Americans' confidence in their a) leadership and election process, 2) science, and 3) the utility of diversity. Additionally, the author sought to understand why the US communication influence strategy was unprepared for Russian disruption. After exploring peer competitor meddling, discussing philosophical challenges to effective communication, and analyzing theoretical roadmaps to predicting behavior, Dr. Lieber outlined several recommendations for how the US can improve its communication influence strategy. First, in the realm of strategy: 1) communication efforts must be aligned, purposeful, and feature a stated and known effect; 2) success should be measured by the consistency of messaging, not frequency and/or verbatim of a message; and 3) communication influence campaigns must be strategically redesigned from the ground up, factoring in a) the message to medium match, b) the timing of message dissemination, c) known and appropriate target audiences, and d) preidentification of desired discussion frames. Second, in terms of organization, communication influence organizations need to be realistic in what they can and cannot do. Third, with regards to alignment, organizations must simultaneously designate a senior strategic communication official to oversee quality assurance for all messaging efforts also to align activities with communication influence peers. Fourth, a true strategic communication approach to communication influence can work magic if its members maximize respective authorities.

#### **Keywords**

strategic communication, influence, communication influence, organization, alignment, authorities, Russia, behavior

# 45: <u>How Russian Society Challenges Putin's Grand Narrative: Perception</u> of Domestic Problems and External Threats After Crimea

# Published 2019

#### Speaker

Dr. Thomas Sherlock United States Military Academy, West Point

#### **BLUF**

This speaker session focuses on Russian perceptions of domestic and external threats after the Crimean annexation. Dr. Sherlock made three main points: 1) there is weak public support in Russia for new imperialism or regional hegemony, 2) Russia's seizure of Crimea increased Russian perceptions of their nation as a world power, 3) there would be little public support for the Kremlin if Russia invaded Ukraine.

He concluded that while the Russian elites are concerned by threats in Russia's near abroad that both the public and elites are supportive of the Kremlin focusing on domestic issues.

#### **Abstract**

SMA hosted a speaker session presented by Dr. Thomas Sherlock (United States Military Academy, West Point) as a part of its SMA EUCOM Speaker Series. During his presentation, Dr. Sherlock discussed a study that draws upon Russian public opinion surveys conducted over the past 2-3 years. He stated that Putin's anti-Western sentiment and desire to restore Russia as a cohesive state with global power status is generally shared among the Russian population and elite. However, a common misconception is that these groups agree with the Kremlin's stance that Russia should be willing to accept socioeconomic stagnation in pursuit of these goals. According to Dr. Sherlock, the Russian population and elite have started to challenge the core identifying narrative of the Kremlin. Dr. Sherlock also discussed the anti-American narrative that Russia portrays. He stated that Russians are "practically patriotic." He also suggested that Russian elites are much more interested in presenting threats to Russia's near abroad than the public is, though they do recognize the danger of provoking a conflict with the West by possessing an aggressive foreign policy. To conclude, Dr. Sherlock stated that both the Russian public and elites are more supportive of the Kremlin focusing on domestic issues than on issues in Russia's near abroad Dr. Sherlock identified three primary findings from his research. First, there is weak public support in Russia for new imperialism or regional hegemony. Second, Russia's seizure of Crimea increased Russian perceptions the nation as a world power. Third, there would be little public support for the Kremlin if Russia invaded Ukraine.

#### **Keywords**

Putin, Russia, Kremlin, grand narrative, Crimea, perceptions, threat perception, Ukraine, NATO, great power narratives, great power, threat-based narratives, foreign policy

# 44: <u>Future Military Intelligence: CONOPS and S&T Investment Roadmap</u> 2035-2050 (The Cognitive War)

Published 2019

Speaker

Mr. Edward Haughland *INSCOM* 

#### **BLUF**

This speaker session discusses a thought-piece focusing on future cognitive warfare scenarios projected between 2035 and 2050, highlighting the four major findings that 1) the intelligence community (IC) and DoD must change from a primarily reactive to proactive posture, 2) information and democratization of technology

has changed the character of warfare, 3) the defense community must change focus from a kinetic war to a cognitive war approach, and 4) immediate investments are needed to enable the success and effectiveness of future intelligence operations.

#### **Abstract**

SMA hosted a speaker session presented by Mr. Edward Haugland of US Army Intelligence and Security Command (INSCOM) as a part of its *SMA General Speaker Series*. During this presentation, Mr. Haugland reviewed his 'thought-piece' entitled, "Future Military Intelligence CONOPS and S&T Investment Roadmap 2035-2050: The Cognitive War." Mr. Haugland highlighted four major findings. The piece employs a macro narrative of concepts and projections of a CONOPS 2035-2050. In his session, Mr. Haughland shared several key insights from his research. First, the IC and the Department of Defense (DoD) must change from a primarily reactive posture to a proactive one. Second, information and the democratization of technology has changed the character of warfare. Third, the defense community's focus must change from a kinetic war approach to a cognitive war approach. Fourth, immediate investments are needed to enable the success and effectiveness of future intelligence operations. To conclude, Mr. Haugland suggested three ways to overcome these hurdles: 1) by overhauling the DoD and IC processes, 2) by refining the risk and reward systems, and 3) by revising the conscription system and talent management.

#### **Keywords**

reactive posture; proactive posture; cognitive warfare; predictive analytics; Open Source Intelligence; CONOPS; Common Operating Picture; Observe, Orient, Decide, Act; Internet of Things; Future Science and Technology; influence operations; future intelligence; gray zone; factory floor; Reward & Reallocation; Incentives; Performance & Protection, multi-domain operations, cognitive domain, AI/ML, projection, intelligence operations, COI, needs/gap, future concept

### 43: SMA Quick Concepts Series: Global Influence

Published 2019

Author

Dr. John Stevenson *NSI* 

#### **BLUF**

This paper defines and discusses the concept of global influence, arguing that it is cultivated through the two key pathways of 1) identity-basis, which relies on coherent and clear-eyed strategic narratives and 2) action-basis, which relies on consistent and coherent American intergovernmental and military-to-military engagement.

#### **Abstract**

Dr. Stevenson's paper used analysis of social psychology concepts to create a two-layered model of consideration and consultation effects for the purpose of understanding global influence. In this model, consideration could be one-sided or reciprocal, based on directionality of influence transmission, and consultation could be derived from (shared) identity or cultivated action. Dr. Stevenson highlighted four observable implications of this model. First, one-sided consideration in the context of shared identity produces influence via soft power. Second, reciprocal consideration in the context of shared identity produces influence via empathy. Third, one-sided consideration in the context of cultivation action produces influence via persuasion. Fourth, and finally, reciprocal consideration in the context of cultivated action produces influence via social capital. In conclusion, Stevenson argued that the most important implication of this conception of influence was that there were two key pathways through which influence can be cultivated: identity-basis and action-basis.

#### **Keywords**

global influence, conceptualizations of power, attraction, empathy, persuasion, social capital, identity-basis, action-basis, power, social psychology

# 42: <u>Leaders of the Chinese Economy: Cognitive and Motivational</u> Analyses

# Published 2019

#### Editors

Dr. Peter Suedfeld, Dr. Lindsy Grunert, & Dr. Bradford Morrison Univ. of British Columbia

#### **BLUF**

This study analyzes the decision-making tendencies of Chinese industrial, technical, economic, and political leaders through assessment of integrative complexity and motivational hierarchy of high-level government and (ostensibly) private enterprise figures. The research indicates that 1) Achievement motivation is high among all four groups of leaders, 2) Power motivation is relatively low among political leaders but high among executives in the three other areas, and 3) Affiliation motivation is very low across all four groups.

#### **Abstract**

In order to gain a quantified, evidence-based picture of decision-making tendencies of Chinese industrial, technical, economic, and political leaders, the researchers assessed the integrative complexity and motivational hierarchy of high-level figures in government and (ostensibly) private enterprise. They selected leaders who have been involved in developing and implementing the global commercial and political strategies of the People's Republic of China. They used thematic content analysis of open-source texts to assess two categories of psychological processes: (1) patterns of cognition that underlie information search and evaluation, flexibility, contextual monitoring and responding, information inclusivity, and perspective-taking bases of planning and strategizing; and (2) the relative strengths of three basic motives that guide those cognitive processes. The measures were related to planning, decisionmaking, goal setting, and relations with other individuals and entities, as well as to strategies for coping with stressful conditions. Excerpts from texts by important figures in the Chinese economy were collected and analyzed. The results showed high Achievement motivation among all four groups of leaders, indicating the desire to excel, progress, and succeed. Power motivation was relatively low among the political leadership, whose concern with influencing and controlling events may have been focused on areas other than the economy (e.g., international relations, domestic unrest). It was quite high among the executives of the other three areas, most notably in the technological sector. The third basic motivation, which is for Affiliation (warm, friendly relations with others), was very low across all groups. These results suggest that Chinese elites will respond flexibly to changing events, modifying policies and strategies to fit new circumstances; will maintain a strong competitive drive and act to exert increasing influence over events and other countries (whether friendly or adversarial); and will show little concern about non-pragmatic (i.e., traditional or emotional) relations with others.

#### **Keywords**

China, decision-making, integrative complexity, motivational hierarchy, thematic content analysis, cognitive analysis, Chinese-American relations, achievement motivation, affiliation motivation, power motivation, motive imagery, economy, technology, space, cyberspace, Chinese economy, Huawei, ZTE

# 41: <u>Iranian Media Narrative Perspectives on the US and Global</u> Competition

# Published 2018

#### **Authors**

Dr. Skye Cooley
Oklahoma State Univ.

Dr. Robert Hinck Monmouth College

Dr. Sara Kitsch Monmouth College

Dr. Asya Cooley Oklahoma State Univ.

#### **BLUF**

This study highlights Iranian news media perspectives on geopolitical dynamics in the Middle East, the US, the global order, and Iran's role in the region, concluding that 1) Iran is presented as a regional, Shia Crescent, and Islamic power, 2) US is presented as anti-Iranian, untrustworthy, and self-interested, 3) the US is shown as determined to bring together an international coalition against Iran with devastating consequences for the Islamic Republic, and 4) Iran is seen as capable of withstanding conflict with the US

#### **Abstract**

In this study, the authors conducted a diplomatic, informational, military and economic (DIME) analysis of 134 Iranian news articles across four native Iranian news media publications from 2014 to 2018. The study

resulted in four key findings. First, Iranian media sees itself as a regional power, center of the axis of resistance in the Shia Crescent, and a legitimate center of Islamic authority. Likewise, Iran, and the regional power bloc it represents, is battle-tested against the US. Second, local media presents the US as anti-Iranian, untrustworthy, and self-interested to the point of recklessness to international community; this is the principle strategy Iranian media conveys to its population in order to delegitimize US claims against Iran as an aggressive international actor. Third, Iranian media shows the US as determined to coalesce together an international faction against Iran substantial enough to force a negotiation of arms reduction and regional influence capabilities in deterioration of the Shia Crescent. Fourth and finally, Iran sees itself as capable of withstanding conflict with the US.

#### **Keywords**

Iran, media narrative, global competition, global order, media, news, perspectives, Shia Crescent

### 40: Using Narratives to Shape Chinese and Russian Behavior

# Published 2019

#### Authors

Mr. Eric Kuznar & Mr. George Popp *NSI* 

#### Editors

Mr. George Popp & Ms. Sarah Canna *NSI* 

#### **BLUF**

This report discusses how the US can shape Russian and Chinese narratives by developing and employing a robust messaging approach incorporating multiple types of goal-oriented narratives that can be circulated across operational systems to convey intended messages to targeted audiences across the globe, although the experts disagree on the exact shape of the US narrative and its ability to shape Chinese and Russian behavior.

#### **Abstract**

This study explored the current problem of how China and Russia use narratives to cast the US as an antagonistic force as part of efforts to support Chinese and Russian pursuits of interests central to their respective global objectives. The authors argued that it is in the US' interest to develop and employ narratives of its own to portray the United States

as a positive global influence and to counter the hostile narratives of global competitors. The report's research methodology consists of qualitative analysis of the opinions of subject matter expert contributors. Contributors largely agreed that the United States will be best-positioned to use narratives to both lend coherence to its military activities and shape Chinese and Russian behaviors if it develops and employs a robust messaging approach that incorporates multiple types of clear, realistic, and goal-oriented narratives that can be circulated across operational systems to convey intended messages to targeted audiences across the globe. There is less agreement, however, as to what exactly the United States' narrative should be and whether any narrative will actually be able to shape Chinese and Russian behavior.

#### **Contributing Authors:**

Dean Cheng (Heritage Foundation), Dr. Skye Cooley (Oklahoma State University), Dr. Nicholas J. Cull (University of Southern California), Dr. John Delury (Yonsei University), Dr. Sean McFate (National Defense University), Dr. Nicholas Michelsen (King's College, London), Dr. Christopher Paul (RAND Corporation), Dr. Laura Roselle (Elon University), Dr. Scott Ruston (Arizona State University), Dr. Jaganath Sankaran (University of Texas at Austin), LTC Maciej Zaborowski (US CENTCOM),

#### **Keywords**

narrative, Russia, China, Russian identity, strategic narrative, incoherence, global competition, media narratives, economic development, international reputation, behavior, cultural protection, influence, US global influence, message

### 39: Strategic Communication and Influence: An Unofficial Primer

Published **2019** Speaker

Dr. Paul Lieber

#### **BLUF**

This speaker session focuses on strategic communication and influence and their intersection and outlined a series of six ideological and six logistical challenges that US decisionmakers face with respect to strategic communication and influence campaigns, as well as six recommendations for action items.

#### **Abstract**

SMA hosted a speaker session presented by Dr. Paul Lieber of Joint Special Operations University (JSOU) as a part of its SMA STRATCOM Speaker Series. Dr. Lieber outlined a series of ideological and logistical challenges that US decision makers face with respect to strategic communication and influence campaigns. He also listed a variety of action items for these decision makers' consideration. He noted six ideological challenges: 1) definition and authority struggles; 2) "strategic communication" as a taboo term.; 3) absence of social science friendly personnel in leadership positions; 4) "hearts and minds" replaced shaping; 5) over-reliance on solutions; and 6) divergent paradigms amongst the interagency. Dr. Lieber also highlighted six logistical challenges: 1) plans that admire the problem via "counter;" 2) incompatibility with peer competitor paradigms; 3) Al/Machine Learning being short on context; 4) lack of data standardization/integration; 5) anti-scientific organizational structures; and 6) the COCOM mindset. Finally, he shared six recommendations for actions items, or "Things to do NOW:" 1) actively assess how data is used and why; 2) re-introduce strategic communication function; 3) re-marry survey to influence; 4) adopt internal "tiger teams" led by social science-friendly leaders; 5) create IA strategic communication/influence cells centered on problem vs. adversary; and 6) insert functions into training/education.

#### **Keywords**

strategic communication, sequencing, complimentary conduits, coordinated communication, influence campaigns, counter-messaging

## 38: Trends in Online Foreign Influence Efforts

Published 2019

Speaker

Dr. Jacob Shapiro *Princeton Univ.* 

#### **BLUF**

This speaker session focuses on trends and findings in foreign influence efforts, outlining defining three criteria for foreign influence efforts of 1) "foreign," 2) "deceptive," and 3) "political" and highlighting five trends in tactics of 1) using bots, 2) using fake campaign accounts, 3) repurposing trending hashtags, 4) stealing information, and 5) trolling.

#### **Abstract**

SMA hosted a speaker session presented by Professor Jacob Shapiro (Princeton University) as a part of its SMA General Speaker Series. As a basis for his presentation, Professor Shapiro outlined three criteria used to define a foreign influence effort: 1) "foreign" (i.e., an attempt by country A to project content in country B), 2) "deceptive" (i.e., masquerading content as organic to country

B), and 3) "political" (i.e., possessing a clearly identifiable objective). He underscored Russia's disproportionately high use of foreign influence efforts (72%) since 2014, drawing particular attention to Project Lakhta and the centrality of the Main Intelligence Directorate of the General Staff (GRU). Professor Shapiro's findings showed five trends in tactics: 1) using bots, 2) using fake campaign accounts, 3) repurposing trending hashtags, 4) stealing information, and 5) trolling. To conclude, Professor Shapiro outlined several difficult challenges that communities studying foreign influence efforts face, while emphasizing the increasing difficulty of detection, Twitter and Facebook's differing ways of approaching detection, and ways in which detection is already improving. The report concluded that Foreign Influence Efforts (FIEs) have targeted countries around the world since 2014.

#### **Keywords**

influence, foreign influence efforts (FIEs), Russia, GRU, message, bots, fake campaigns, propaganda detection, ICT, trends

### 37: Comparative Analysis of Kim Family Discourse

Published 2018

Speaker

Dr. Lawrence Kuznar *NSI* 

#### **BLUF**

This speaker session investigates 1) how the DPRK defines its key national interests/regional objectives in Northeast Asia and the Western Pacific and what are seen to be the major threats to each interest, 2) whether analysis of Kim Jong-un's discourse provides a cognitive assessment, and 3) what are the most effective ways of communicating with Kim Jong-un.

#### **Abstract**

SMA hosted a speaker session presented by Dr. Larry Kuznar (NSI, Inc./Purdue University- Fort Wayne) as a part of its SMA INDOPACOM Speaker Series. For his study, Dr. Kuznar and his team conducted a comparative analysis of the three Kim family leaders to determine whether Kim Jong-un differs from previous leaders in meaningful ways and whether things are likely to change based on his behavioral patterns. Key findings from the research conducted by Dr. Kuznar's team included implications for strategic communication with Kim Jong-un and insights concerning communication with Kim Jong-un, Kim Jong-il, and Kim Il-sung. Implications for strategic communication with Kim Jong-un included: 1) the DPRK's capability (economic and military) as central concerns; 2) his lack of geopolitical awareness and mostly rigid discourse, which indicates a simple worldview and inflexible thinking style; 3) a potential shift toward a more secular and pragmatic worldview with the continuation of Juche philosophy as an important frame; and 4) despite the importance of Juche philosophy, stressing more abstract transcendent themes over older communist and Juche rhetoric will probably be increasingly effective with Kim Jong-un. Insights for communication with Kim Jong-un included: 1) Kim Jong-un lacks broader awareness of global politics; 2) comparatively less emphasis on religious-like concepts and Juche philosophy in relation to his father; 3) a statistical move from the frame of Juche philosophy; 4) continuation of his father's ideological agenda, but with new themes related to economic development and capability; and 5) Kim Jong-un has changed his political discourse very little in the past six years.

#### **Keywords**

Kim Jong Un, Kim family, North Korea, behavioral patterns, discourse analysis, worldview, Juche philosophy, Songbun caste system, Songun, Donju, density, ideology, Communism, perpetual revolution, quasi-religious, emotive themes, the Masses, Kim Il-sung, Kim Jong-il, ideology

## 36: <u>Trucks, Knives, Bombs, Whatever: Exploring Pro-Islamic State</u> Instructional Material on Telegram

# Published 2018

#### Speaker

Mr. Bennett Clifford *George Washington Univ.* 

Ms. Audrey Alexander *George Washington Univ.* 

#### **BLUF**

This speaker session explores 1) how English-speaking online supporters of the Islamic State share instructional material on Telegram and what types of material are frequently disseminated, 2) what dissemination of instructional material explains about the broader use of Telegram by IS supporters, and 3) what is the impact of online instructional material on terrorist learning and attack planning.

#### **Abstract**

Ms. Alexander began by emphasizing the importance of recognizing that organizations have spread ideas by exploiting contemporary media for decades and that this is not a new or shocking approach. She then introduced her "Digital Decay" report, which addressed two primary questions: 1) how have Twitter's counter-extremism policies affected English-language ISIS sympathizers on the platform? and 2) how do ISIS sympathizers on Twitter engage with battles, attacks, and current events? She also identified some key characteristics of ISIS's utilization of various media based on her observations. In conclusion, Ms. Alexander 1) explained why gray media and liminal content deserves attention as well, and 2) emphasized the difficulty of developing a universal strategy to limit ISIS's influence across various media. Mr. Clifford began by outlining three key questions: 1) how do English-speaking online supporters of the Islamic State share instructional material on Telegram, and what types of material are frequently disseminated? 2) what can the dissemination of instructional material explain about the broader use of Telegram by ISIS supporters? and 3) what is the impact of online instructional material on terrorist learning and attack planning? Next, he reviewed three major categories of instructional materials that ISIS disseminates: explosives construction materials, "low-tech" attack materials, and operational and cyber security materials, describing each in detail. In conclusion, Mr. Clifford outlined his three primary observations derived from his research. First, everything goes. Englishlanguage, pro-Islamic State Telegram channel administrators pose a wide array of instructional material from inside and outside the jihadi movement. Second, filesharing is key. Finally, in the realm of impact, techne, and metis, the US should be worried about attack-planning instructional material on Telegram, and OPSEC/cybersecurity manuals are an important concern.

#### **Keywords**

tech, terrorism, ISIL, Twitter, Telegram, message, violent extremism, instructional material, English-language, information

### 35: Insights into Kim Jong-un's Cognition Based on His Public Speeches

# Published 2018

#### **Speakers**

Dr. Lawrence Kuznar *NSI* 

Dr. Peter Suedfeld *UBC* 

Dr. Nicholas Wright *Georgetown Univ.* 

#### **BLUF**

This speaker session presents various findings from six separate discourse analyses of Kim Jong-un's public speeches in order to better understand his cognition.

#### **Abstract**

SMA hosted a speaker session presented by Dr. Larry Kuznar (NSI / Indiana University – Purdue University – Fort Wayne [IPFW]), Dr. Peter Suedfeld (University of British Columbia [UBC]), and Dr. Nick Wright (Intelligent Biology / Georgetown University) as a part of its SMA PACOM Speaker Series. For research methodology, the speakers conducted discourse analyses of 41 public speeches dated from January 2012 to January 2018. There were six separate analyses that

contributed to this effort, each focusing on a different facet of textual analysis: 1) empathy checklist (University of Birmingham), 2) basic emotions (NSI), 3) cognitive complexity (NSI), 4) quantitative discourse analysis (NSI / IPFW), 5) thematic content analysis – integrative complexity and motive imagery (UBC), and 6) discourse of deception. The speakers also shared a number of key findings from their work. First, Juche philosophical framework is the essential scaffolding upon which all values, interests and even tactics are hung, Second, the military is a keystone in this framework. Third, nuclear capability is considered a necessary element for DPRK and therefore regime security, as well as a major point of national pride. Fourth, the recent spike in his mention of nuclear weapons, decreases his emphasis on religious concepts and Juche. Fifth, China is never mentioned in any substantive way, and foreign trade is barely mentioned at all; these may not actually be important to Kim Jong-un and they are antithetical to the Juche principle of an independent DPRK autarky. Sixth, Kim Jong-un is moving away from emphasizing Juche and Identity, although still fundamental to his narrative; status is increasing in importance to him. Seventh, both methods for assessing the complexity of his decision calculus provide the same result -his cognitive complexity is uniformly low throughout his reign. Eighth, when he conducts a test, his Integrative Complexity decreases and his Need for Power increases; testing emboldens him. Ninth, and finally, he uses linguistic patterns consistent with dishonesty.

#### **Keywords**

DPRK, Kim Jong Un, cognition, speeches, empathy checklist, discourse analysis, basic emotions, cognitive complexity, thematic content analysis, discourse of deception, Juche, Songun, language, cognitive mapping, integrative complexity, motive imagery, China, nuclear capability/opportunity, self-interest, national identity, military, status, autonomy

# 34: <u>Narratives Before & After the 2018 North Korea-United States</u> <u>Summit: An Analysis of Chinese and Russian News Media Coverage of</u> Events on the Korean Peninsula

# Published 2018

#### **Editors**

Dr. Skye Cooley
Oklahoma State Univ.

Dr. Robert Hinck *Monmouth College* 

Dr. Ethan Stokes *Univ. of Alabama* 

Dr. Randolph Kluver Oklahoma State Univ.

Mr. Brian Petrotta Oklahoma State Univ.

Ms. Elizabeth Roshelli *Oklahoma State Univ.* 

#### **BLUF**

This analysis investigates 1) what narratives emerge in coverage related to the Korean Peninsula in Russian and Chinese news media, 2) whether structural or messaging variables are different between narratives presented by Russian and Chinese news media, and what insights these differences provide the warfighter, and 3) what expectations of future behavior by international actors potential shifts in narrative by news media can provide the warfighter.

#### **Abstract**

For research methods, this report made use of quantitative and qualitative narrative assessment of Chinese and Russian media sources before and after the 2018 US-North Korea summit. The authors' analysis of Chinese and Russian news presentations on the complete, verifiable and irreversible denuclearization (CVID) of the DPRK indicated that neither the Chinese nor Russians have any real expectation that the DPRK will agree to future denuclearization terms, or procedures, in the short term. The research highlighted several key findings. First, the US lost its narrative initiative following the Trump-Kim summit, making future achievement of US goals on the Korean Peninsula less likely. Second, Post-summit, Russian and Chinese narratives describe the dispute as

largely resolved, making substantive DPRK CVID less likely. Third, the Trump-Kim summit legitimized and normalized the Kim Jung-un regime. Fourth, the US concessions made during Trump-Kim summit narratively constrain future US policy and credibility. Fifth, and finally, future CVID demands by the US will be difficult to resonate within the framework of the narratives established in the news media of these nations following the Trump-Kim summit.

#### **Keywords**

North Korea, China, Russia, Trump-Kim Summit, media, news media, denuclearization, CVID, narrative, Trump, Kim Jong Un, narrative analysis, ROK, narrative shifts, narrative, influence, Korean Peninsula, messaging, interests, incentive, resolution

# 33: <u>Media Narrative Analysis: Iranian, Russian, and Chinese News</u> <u>Coverage of the Future of Afghanistan</u>

# Published 2018

#### **Authors**

Dr. Skye Cooley
Oklahoma State Univ.

Dr. Robert Hinck *Monmouth College* 

#### **BLUF**

This project analyzes Russian, Chinese, and Iranian media narratives regarding the stability of Afghanistan and argues that the three media narratives all suggest declining US influence and need for a fresh approach in the country, even though the narratives differ insofar as 1) Iran emphasizes regional economic and political security against Western powers, 2) China discusses regional investment, and 3) Russia uses Afghanistan to make a case against the US and its global leadership.

#### **Abstract**

This project analyzed Chinese, Russian, and Iranian media narratives concerning interests in, and future prospects of, Afghanistan stability through three phases: Phase I (May-June, 2018; 79 articles), Phase II, (July-August, 2018; 124 articles), Phase III (October-September, 2018; 180 articles). Across these three phases, the analysis revealed several findings regarding consistent narrative patterns. First, Chinese, Russian, and Iranian media present their interests in Afghanistan in realpolitik terms: stability is only desired in Afghanistan in so much as it augments their respective, individual, influence in the region. Second, investment in Afghanistan is proposed to occur through multilateral and regional ties with neighboring nations, often seen as alternative means to stabilize Afghanistan outside of US influence. Third, US Afghan policy is portrayed as ineffective, both historically and under the Trump administration; there is consensus among media that a US withdrawal is likely. Moreover, US presence in Afghanistan is shown as the main driver of instability and serving only US interests. Fourth, no long-term vision of an independent, capable Afghanistan government exists; likewise, there is political desire to substantially get involved in stabilization attempts aimed at improving Afghani governance. Fifth, and finally, Iran is most interested in investing in Afghanistan as augmentation of their influence and to counter US interests.

#### **Keywords**

Afghanistan, news, media, media narratives, China, Russia, Iran, narrative patterns, realpolitik, US Afghan policy, US influence, investment, Taliban, multilateral, terrorism, security concerns, issue narrative, national narrative, grand bargain, negotiation, Belt and Road, narrative, India, Pakistan

## 32: Modeling Persuasion through Human/Machine Coding

# Published 2018

### Speakers

Dr. Vincent Ng *Univ.* of Texas at Dallas

Dr. Monica Rankin *Univ. of Texas at Dallas* 

#### **BLUF**

This speaker session explores a model designed to understand effective persuasion/influence campaigns by using human and machine coding, highlighted broader implications of the project, and explains the model's levels of 1) propaganda devices, 2) persuasion themes, and 3) content-specific characteristics, all through the lens of post-WWII Latin America.

#### **Abstract**

SMA hosted a speaker session presented by Dr. Monica Rankin (University of Texas at Dallas) and Dr. Vincent Ng (University of Texas at Dallas) as a part of its SMA General Speaker Series. Dr. Rankin began the presentation by stating the primary goal of the project: to create a template for understanding effective persuasion/influence campaigns, using a combination of human and machine coding. This model will ideally allow machines to learn from human inputs and humans to learn from machine outputs. She then defined "persuasion" and emphasized the importance of understanding persuasion in the context of international affairs. Next, Dr. Rankin highlighted some broader implications of the project and explained the various levels used in their model to understand influence messaging. These levels included seven common propaganda devices, five specific persuasion themes, and seven content-specific characteristics, with Latin America during World War II as the focus. Dr. Ng then discussed the active learning algorithms that are used to determine whether a human or a machine should code a particular document. He also spoke about the neural models the project team used to effectively examine both images and text. Dr. Rankin concluded the presentation by discussing the project's data set, which contained every issue of En Guardia, a magazine published during World War II whose goal was to convince Latin America to side with the Allies. She identified the propaganda tactics utilized by the magazine, discussed how its strategy changed over time, and highlighted the primary differences between one of its first and one of its last editions.

#### **Keywords**

persuasion, human/machine coding, diplomacy, persuasion campaigns, influence campaigns, persuasion messaging, influence messaging, machine models, influence, messaging, combat persuasion, combat messaging, propaganda

# 31: <u>The Influence Machine – Hacking Deterrence with Automated</u> Information Operations

Published 2018

Speaker

MAJ Christopher Telley Naval Postgraduate School

#### **BLUF**

This podcast discussed the convergence of automated influence and information operations and gaps in US defense capability and development within these domains. The podcast also highlighted that 1) every person online is within range of an Influence Machine, 2) the exponential capacity of Al-driven influence operations poses a huge strategic risk, 3) automated influence may preclude a

targeted democracy from fighting a campaign, and 4) private industry will drive the AI arms race.

#### **Abstract**

In this podcast, MAJ Christopher Telley (Naval Postgraduate School) discussed the convergence of automated influence and information operations, as well as gaps in the defense community's capability and development within these domains. During the exclusive Q&A portion of the podcast, MAJ Telley further explored challenges and developments in information and influence operations that the US military is encountering. Telley also shared four key findings. First, every person, online, is also within range of an Influence Machine. Second, the exponential capacity of Al-driven influence operations pose a greater strategic risk than similar application of the technology. Third, though automated influence can't win a campaign, it may preclude a targeted democracy from fighting one. Fourth, regardless of competitor nation behaviors or USG response, private industry will drive this arms race, all while Google refuses to participate in Al warfare.

#### **Keywords**

automated influence, information operations, influence operations

## 30: Mind Space: Cognition in Space Operations

Published 2018

Editor

Dr. Nicholas Wright *Georgetown Univ.* 

#### **BLUF**

This study 1) explores the role of neuroscience and cognition in space operations in impacting human decision-making, and 2) identifies key features of space operations requiring key emphasis and examines their cognitive foundations to describe implications for space policy. The author presents a number of key findings regarding deterrence, gray zone activity, and West Pacific security in space operations.

#### **Abstract**

Firstly, Dr. Wright applied the latest neuroscience and cognitive work to understand how humans really make decisions. Second, the author identified key features of space operations that require distinctive emphases compared to other domains, and he examined their cognitive foundations to describe implications for space policy. Deterrence and escalation management are examined in Part I. Grey Zone conflict is examined in Part II. The current space epoch is the "Grey Zone Entangled Space Age", and space is an ideal forum for Grey Zone activities in which the US must

have the tools to compete. West Pacific security is examined in Part III with a focus on the PRC and Near-term Sino-US scenarios. Wright made a number of key findings in his work. First, influence—not just control—is a principal means by which US policymakers cause intended effects on key adversaries in space, across the spectrum of conflict from Grey Zone to limited war up to and including the nuclear level. Second, space is ideal for Grey Zone conflict—more than normal competition and less than war—and Grey Zone strategies require different emphases from peace or war. Third, ambiguity and difficult risk assessment pervade the space environment, due to challenges of attribution, damage assessment, dual use, high classification, and reversible actions. Fourth, humans pay large costs to reject perceived unfairness, and this complicates the perceived legitimacy of potential US responses to adversary actions in space. Fifth, and finally, extended deterrence and ally perceptions are central to US success in near-term escalation scenarios involving space with Russia or China.

#### **Keywords**

space, deterrence, escalation management, gray zone conflict, cognition, cognitive foundations, ambiguity, space power, space control, offensive space control, defensive space control, space influence/deterrence, space epochs, cognitive bias, "Checklist for Empathy," China, asymmetric space dependency, extended influence, Five Multiples of the Gray Zone, cross-cultural differences, risk, risk assessment, influence, control, behavior, perception, motivation, space operations

## 29: <u>Getting Messages Through: The Cognition of Influence with North</u> Korea and East Asia

Published 2018

Speaker

Dr. Nicholas Wright *Georgetown Univ.* 

#### **BLUF**

The speaker session explores what motivates North Korea and key regional actors, as well as what kind of strategic confrontations they face.

#### **Abstract**

SMA hosted a speaker session presented by Dr. Nicholas Wright (Intelligent Biology/Georgetown University) as a part of its SMA INDOPACOM Speaker Series. Dr. Wright began his presentation by posing

two key questions: 1) what motivates North Korea and key regional actors? and 2) what type of strategic confrontation do they face? He then explained that fear, fairness, and unpredictability all drive these actors' behaviors. He also stated that the US must understand that the situation on the Korean Peninsula is an example of a gray zone conflict. Dr. Wright also briefly presented his "checklist for empathy," as well as Dr. Larry Kuznar's (NSI) insights into Kim Jong-un's cognition from his public speeches. He proceeded to explain what North Korea fears, how North Korea uses surprise and unexpectedness as tools, and how cultural lenses and human commonalities affect regional dynamics. Dr. Wright concluded by explaining why the situation on the Korean Peninsula should be construed as a gray zone challenge and offering several recommendations for US decision makers.

#### **Keywords**

gray zone, cognitive dimensions, North Korea, Kim Jong Un, East Asia, China, South Korea, Japan, fear of personal death, regime continuance, self-interest, escalation management, denuclearization, deterrence, context-dependent cognitive processes, context-independent cognitive processes, unpredictability, Five Multiples of the gray zone

# 28: What Do Others Think and How Do We Know What They Are Thinking?

Published 2018 Editor Ms. Mariah Yager *NSI* 

#### **BLUF**

This white paper aims to determine: 1) how we find and influence the right people to achieve strategic goals, 2) which behaviors are critical to overall success; 3) how we understand perceptions about governance and worldviews within their own cultural settings; 4) what the benefits and analytic pitfalls of self-reporting methodologies, and how self-reported data can be compared—and combined—with findings from other

sources; and 5) what methods are available to understand strategic populations.

#### **Abstract**

This white paper dealt with broad topic of assessing options to gain a better understanding of the subjective world of populations we need to interface with and relate to. This White Paper was intended to provide recommendations for planning methodologies, technological approaches, and required expertise. Key findings from this report include: 1) technology suites to detect and exert influence are of paramount importance in a world where kinetic and non-kinetic effects interact to produce outcomes; 2) the ability to detect and analyze stories in progress, forecast their effects, formulate and enact alternate stories in a human-in-the-loop fashion, and assess the behavioral impact of their counter-narrative strategy; 3) the ability to measure impact based on in-depth understanding of knowledge, attitudes, beliefs, intentions, and behaviors of a population; and 4) adoption of an "outside-in" mindset, which makes the audience's decision-making process the focus of the influence strategy.

Contributing Authors: Brig Gen Alexus G. Grynkewich (DDGO, J39), Dr. Hriar "Doc" Cabayan (JS J39), Mr. Robert C. Jones (SOCOM), Col. Scott K. Thomson (Office of the Undersecretary of Defense (Policy)), Dr. Spencer B. Meredith III (NDU), LTC (Dr.) Gregory S. Seese (JHU-APL), LTC (Dr.) Rafael E. Linera (USASOC), Mr. Erinn McQuagge (Northop Grumman), Ms. Patricia DeGennaro (TRADOC G2), Mr. Randy Munch (TRADOC G2), Dr. Diane DiEuliis (NDU), Dr. James Giordano (Georgetown), Dr. Ian McCulloh (John Hopkins), Ms. Laurie McCulloh (Fielding), Dr. Jason Spitaletta (JHU-APL), Dr. Nicholas D. Wright (Univ. Birmingham, UK), Dr. Margeret Hall (UNO), Dr. Gina Ligon (UNO), Ms. Clara Braun (UNO), Dr. Laura Steckman (MITRE), Mr. Clark McCauley (Bryn Mawr), Ms. Sophia Moskalenko (Bryn Mawr), Mr. Tom McCauley (Univ. Rochester), Mr. Dan Foy (Gallup), Mr. Chris Stewart (Gallup), Dr. Linda Durnell (Fielding), Dr. Garry Hare (Fielding), Dr. Gwyneth Sutherlin (Geographic Services), Mr. Mark Polyak (Ipsos Public

Affairs), Dr. David C. Ellis (Joint Special Operations Univ.), Dr. Katie Ziemer (Ipsos Public Affairs), Mr. Howard Simkin (USASOC G9), and Dr. William D. Casebeer (Lockheed Martin ATL)

#### **Keywords**

PSYOPs, behavior, assessment, measure of effectiveness (MOE), strategic assessment, supporting PSYOP objectives (SPO), target audiences, influence and engagement strategy, neurocognitive mechanisms, self-disclosure, metacognition, social media, VEO, sociotechnical space, meta-opinions, surveys, internet of things, Logic of Appropriateness, future warfare, future operating environment (FOE), blockchain, influence, population

# 27: <u>Discourse Indicators of Gray Zone Activity: Crimean Annexation</u> Analysis Case Study

## Published 2017

#### **Editors**

Dr. Lawrence Kuznar, Mr. George Popp, & Ms. Nicole Peterson NSI

#### BLUF

This report analyzes the discourse providing indicators of gray zone activity pertaining to Crimea made in speeches from Vladimir Putin, Crimean leaders and government officials, and Ukrainian President Viktor Yanukovych and presents various findings on indicators and warnings, the predominant concerns of regional actors, and the use of emotional language.

#### **Abstract**

The increasing use of emotive themes and rhetorical devices (that amplify a message's emotional effect) provide indicators of gray zone activities in speeches made by Eurasian regional leaders prior to and during the annexation of Crimea. Putin's leading indicators, those of Crimean leaders and the Russian-supported President of Ukraine, Viktor Yanukovych, are presented separately. With regard to Russian government indicators and warnings, the report found that indicators were focused on Putin and were as follows: 1) as a general pattern, Putin is more restrained in his language than most Western leaders; 2) the rarity of these indicators increases the ability to detect them as statistical "blips" in his language use; 3) when Putin mentions key emotive issues, they occur suddenly as a "blip" in his general discourse in advance of operations., but he is disciplined in subsequently silencing himself during apparent planning and execution phases; 4) however, once his goal is achieved, he relaxes his restraint and releases a rhetorical flourish of concerns and emotional language (a "brag"); 5) after a rhetorical flourish, Putin again restrains his discourse when planning and executing operations to achieve his next strategic goal; 6) the blip patterns that may be detected are manifest in emotional themes such as Pride, Protection, Unity, Strength, and Russian Superiority, and political themes such as Russian Security, mentioning Adversaries, Russian Energy, and the Ceasefire; 7) Putin exhibits a sustained and increasing apparent concern with Russian Energy Resources and the Threat of Nazism, consistent with earlier studies; and 8) Putin is demonstrating an increasing concern with Turkey, which may have direct implications for his intentions in Syria. The primary findings regarding Crimean

leaders and government include detectable blips approximately a month and a half before the annexation in emotive themes that include: 1) Fear of Extremism, Failure of the Ukrainian government (an enemy), desire for Stability, Independence, Legitimacy of Crimean cause, Unity of Crimeans, Separatism, Sovereignty for Crimea, a sarcastic claim to be open to Cooperation, and use of the rhetorical device of Accusation' and 2) a curious "blip and brag" pattern in the mention of the ingroup (Crimea), their friend (Russia) and primary enemy (Ukraine). With regard to Russian-supported President of Ukraine Viktor Yanukovych, there were no detectable leading indicators for the Russian-supported Ukrainian President Viktor Yanukovych, but this may be due to the fact that his speeches ended four months before the annexation of Crimea, and perhaps more relevantly, Yanukovych may have had more pressing concerns as his hold on power was failing at this time. Finally, the predominant concerns of regional actors were as follows: 1) the pervasive concerns of the Putin government were Economics and Trade, not expansion, Russian imperialism, or national pride; 2) the pro-Russian President of Ukraine, Viktor Yanukovych, expressed views identical to those of the Putin government, indicating his ideological alignment, if not direct control, by the Kremlin.

#### **Keywords**

Putin, Russia, Crimea, discourse analysis, speeches, Ukraine, Yanukovych, emotive theme, rhetorical device, emotional themes, political themes

# 26: <u>Discourse Indicators of Gray Zone Activity: Russian-Estonian</u> Relations Case Study

# Published 2016

#### **Editors**

Dr. Lawrence Kuznar, Mr. George Popp, & Ms. Nicole Peterson NSI

#### BLUF

This report analyzes the discourse providing indicators of gray zone activity in speeches from the Russian government, ethnic Russian-Estonians, and the Estonian government and presents various findings on indicators and warnings, the predominant concerns of regional actors, and the use of emotional language.

#### **Abstract**

Research methods included both thematic analysis and discourse analysis of 37 speeches by Estonian leaders, 10 speeches by the Putin government, and 6 speeches by Russian Estonian leaders conducted over the time periods of 2005-2007 and 2009-2015. The increasing use of emotive themes and rhetorical devices (that amplify a message's emotional effect) provided indicators of gray zone activities in speeches made by Eurasian regional leaders and has the potential to provide leading indicators and reveal key issues and concerns. The report resulted in several findings pertaining to indicators and warnings, predominant concerns of regional actors, and the use of emotional language. With regard to indicators and warnings, the findings were as follows: 1) Putin exhibits a sustained concern over Europe and the threat of Nazism, consistent with earlier studies; and 2) the overall sentiment between the Putin and Estonian governments demonstrates increasingly negative relations between the two countries. Findings pertaining to the predominant concerns of regional actors were: 1) the Putin government predictably stresses the plight of Russian minorities in Estonia,

and the need for Cooperation in its discourses on Estonia; 2) ethnic Russian-Estonians emphasizes their ethnic Identity; and 3) the Estonian government stresses the need for Cooperation. Finally, concerning the use of emotional language, the report found that the Estonian government used nearly five times the amount of emotional language (emotional themes and rhetorical devices) used by the Putin government.

#### **Keywords**

Estonia, Russia, Putin, gray zone, discourse analysis, rhetorical devices, emotional language, Russian-Estonians, Russian minorities, identity, cooperation, indicators, cyberattack, Nazism, cooperation, identity, emotive theme, rhetorical device

### 25: Discourse Indicators of Gray Zone Activity: South China Sea

Published **2016** 

#### **Editors**

Dr. Lawrence Kuznar, Mr. George Popp, & Ms. Nicole Peterson *NSI* 

#### **BLUF**

This report analyzes the discourse providing indicators of gray zone activity in the South China Sea in speeches from the Chinese, Philippine, and Vietnamese governments and presents various findings on indicators and warnings, the predominant concerns of regional actors, and the use of emotional language.

#### **Abstract**

This study is a discourse analysis of emotive themes and rhetorical devices in speeches made by Chinese, Philippine, and Vietnamese

government officials during peak times of conflict in the South China Sea from 2002 to 2016. Research methods included both thematic analysis and discourse analysis of 24 speeches by Chinese leaders, 9 speeches by Filipino leaders, and 12 speeches by Vietnamese leaders spanning the time period of 2002-2016. The leading indicators and warnings for the Chinese, Philippine, and Vietnamese governments were presented separately, as well as findings regarding how their use of language reflects predominant national concerns. With regard to indicators and warnings, 1) the specific themes that indicated Chinese gray zone activity included Conspiracy, Self-defense, Equality and Rights, Gray Zone Activities, and Domestic Development; 2) Criminal/Illegal, Borders/Territory, Crime, Oil/Gas, Materiel, Protests, Friendship, and China were the primary indicators for the Philippine gray zone activity; and 3) Aggressor/Aggression, Legitimacy, Economy and Trade, UN, and Lexicalization indicated Vietnamese gray activity. The predominant concerns of regional actors were as follows: 1) the Chinese, Philippine, and Vietnamese governments share a mutual concern for their borders, their territories, and their own nation's prosperity; 2) China also outwardly reveals their preoccupations with peace, stability, sovereignty, cooperation, and the South China Sea; 3) the Philippines, like the Chinese, also display a strong concern about the South China Sea, cooperation, China, and sovereignty and also have a strong interest in conflict, equality and rights, their economy and trade, and formal agreements; and 4) Vietnam, like the Philippines, is predominately concerned with conflict as well as peace, like the Chinese, and security. Finally, regarding the use of emotional language, the analysis found that: 1) the Vietnamese used over twice as much moderate to extremely negative language as the Chinese did when discussing South China Sea matters and the countries

involved; and 2) leading discursive indicators indicate that they feel most threatened by Chinese actions in the South China Sea.

#### **Keywords**

China, Philippines, Vietnam, South China Sea, discourse analysis, message, gray zone, gray zone event, emotional language, indicators, security, cooperation, conspiracy, economics/trade, stability, borders/territory, sovereignty, conflict, emotive theme, rhetorical device

# 24: <u>Media Visions of the Gray Zone: Contrasting Geopolitical Narratives</u> in Russian and Chinese Media

Published 2017

#### **Authors**

Dr. Robert Hinck Monmouth College

Dr. Randolph Kluver Texas *A&M Univ.* 

#### **BLUF**

This study examines media messaging strategies in Russian and Chinese language media and argues that Chinese media trended towards narratives of a functional, intact global order that would benefit from China's power, while Russian media viewed the global order as broken by the West and in need of Russian power to keep corruption and Western interests in check.

#### **Abstract**

The purpose of this effort was to contribute to the Strategic Multilayer messaging strategies Russian **Analysis** examining in language media, in order to uncover the role of media narratives in the development of potential conflict scenarios, narrative trajectories that might minimize or maximize the potential for conflict, and the role of high impact episodes in evolving media discourse. The study was built upon two prior year-long studies of geopolitical narratives in Chinese and Russian media conducted by the research team, and the research team used the conclusions of those previous studies to provide a starting point for this project. The research team conducted comprehensive studies of national media to uncover shifting messaging strategies, narratives, and metaphors that imply, precipitate, or minimize conflict. Drawing upon close to 50 different Chinese and Russian sources, the researchers identified thousands of news items that contributed to the final analysis. The researchers monitored general news trends and narratives in Russian and Chinese media and conducted specific issue data pulls in Chinese and Russian. Overall, this study revealed significant differences between both the system (global order) level narratives, as well as specific issue narratives. Chinese media tended towards narratives of a basically functioning and intact global order, which would be benefitted by recognition of China's good intentions and renewed economic and cultural power. Russian media tended towards narratives of a "broken" order, one manipulated by the US and other Western nations to their own benefit. In this set of narratives, Russia was an honest broker, seeking to limit the corruption of the global order, and to put a check on Western interests. These narratives were brought down to specific issues as well, with a large amount of consistency between the system and the issue level narratives.

#### **Keywords**

media, messaging, media messaging, Russia, China, media, conflict scenarios, narrative trajectories, narratives, US influence, gray zone, media gray zone (MGZ), global narratives, media portrayals, Russian election manipulation, Duterte, competition, gray space

### 23: Influence in an Age of Rising Connectedness

## Published **2017**

#### **Editors**

Mr. Weston Aviles *NSI* 

Ms. Sarah Canna

Mr. Sam Rhem SRC

#### **BLUF**

This white paper examines and discusses implications from factors and forces that may necessitate an explicit focus on influence and its potential national, regional, and global effects.

#### **Abstract**

This white paper explored trends in forces and factors exerting influence, such as increased activism by non-state actors, technology, and recent lessons learned, additionally presenting possible implications for how such factors may necessitate an explicit DoD focus on "influence" rather than "control," as well as how influence could exert effects on national, regional, and global levels over the next several decades. It assessed these

revolutionary changes from political, sociological, biological, and technical perspectives. This white paper made eight key findings. First, today's national and military leaders have grown up in an environment where the objective was to defeat the adversary. Second, strategy is inherently about changing the behavior of relevant actors in support of national interests. Third, capabilities to inform, influence, and persuade are necessary both for national security success and as a cost-effective toolset relative to physical military power. Fourth, influence and control are two ways to exert power over others' decisions, where control removes an actor's ability to choose. Fifth, control is dependent on actual or at least perceived power—political, economic, military, demographic, and other. Influence is the product of an even more varied and changing set of variables. Sixth, neurocognitive science is providing increasingly more detailed understanding of processes of influence, decision-making, and behavioral action. Seventh, combatting misinformation and disinformation online will require a scientific approach grounded in empirically validated theory. Eighth and finally, military commanders and senior leaders must have a basic understanding of cognitive influence in order to make decisions affecting the gray zone and human populations in areas of ongoing military operations.

#### **Contributing Authors:**

Brig. Gen. Alexus Grynkewich (Deputy Director Global Operations, Joint Staff), Allison Astorino-Courtois (NSI), David Broniatowski (George Washington University), Hriar "Doc" Cabayan (Joint Staff, J-39, Strategic Multilayer Assessment), Erik Dahl (Naval Postgraduate School), Charles Eassa (Strategic Capabilities Office), Bill Edwards (Special Operations Northern Command), Robert Elder (George Mason University), James Giordano (Georgetown University), Gia Harrigan (Department of Homeland Security, Science and Technology Directorate), Regina Joseph (Pytho), Gina Ligon (University of Nebraska, Omaha), Corey Lofdahl (Systems of Systems Analytics), Ian McCulloh (Johns Hopkins University/Applied Physics Lab), Spencer Meredith III (National Defense

University), Christophe Morin (Fielding University), Brad Morrison (University of British Columbia), Timothy Moughon (National Counterterrorism Center), Chris Paul (RAND), Valerie Reyna (Cornell University), Nawar Shora (Transportation Security Administration), Val Sitterle (Georgia Tech Research Institute), Peter Suedfeld (University of British Columbia), Scott Thomson (Office of the Under Secretary of Defense for Policy), Robert Toguchi (US Special Operations Command), Todd Veazie (National Counterterrorism Center), Nicholas Wright (University of Birmingham, UK)

#### **Keywords**

domestic information environment, content and access barriers, super-synthesizers, domestic information landscape, information, influence, capability, operations, neuroscience, neurocognitive, persuasion

# 22: <u>Integration Report: Gray Zone Conflicts, Challenges, and</u> Opportunities

Published 2017 Editor Dr. Belinda Bragg *NSI* 

#### **BLUF**

This integration report seeks to understand 1) the nature of gray zone conflict, 2) what motivates actors to engage in gray zone activities, 3) how the US should respond to gray zone activities, and 4) what capabilities the US needs to respond to gray zone activities.

#### **Abstract**

This integration report provided a synthesis of several team projects performed in support of a USSOCOM effort "to determine how the USG can identify, diagnose, and assess indirect strategies, and develop response options against associated types of gray zone conflicts." The key results of the effort fall into the following four areas: 1) what is the nature of gray zone conflict? 2) what motivates actors to engage in gray zone activities, 3) how should the US respond to gray zone activities, and 4) what capabilities does the US need to respond effectively to gray zone activities. With regards to the nature of gray zone conflict, the report found that: 1) there is no single condition that can identify an action as gray, independent of actor or understanding of the broader strategic context; 2) we need to think on multiple timescales, across multiple arenas (e.g. political, social, economic), and understand and engage with multiple social levels (state, group, individual; 3) populations are the key dimension in gray zone conflict; and 4) norm violations help define the threshold between ordinary competition and the gray zone. Regarding what motivates actors to engage in gray zone activities, the report found that: 1) successful US deterrence has not eliminated the motivations of other actors to further their own interests; 2) acting in the gray zone is an effective low risk, low cost strategy that has proven difficult for the US and partner nations to counter, and for vulnerable states to defend against; and 3) the US military places primacy on physical maneuver, and our adversaries know this. The report further found that the US should respond to gray zone activity as follows: 1) incorporate the human/cognitive domain; 2) develop a clear, compelling strategic narrative; 3) the scope and timing of US response matters; and 4) the focus now should be less on defining specific actions as gray zone threats, and more on how to leverage all instruments of national power to respond to them. Finally, in terms of what capabilities the US needs to respond effectively to gray zone activities, the report found: 1) human/cognitive domain information & expertise, as gray zone strategies exploit multiple instruments of power, and operating in this environment requires information across all of these instruments, and 2) the scope of gray zone activities will make information requirements overwhelming without models to guide search and interpretation.

#### **Keywords**

messaging, influence, cognitive maneuver, information, information environment, disinformation, fake news

# 21: <u>US-DiGIA: The Directory of Discoverable US Government Information</u> Assets

# Published 2017

#### **Editors**

Dr. Belinda Bragg, Dr. Sabrina Pagano, & Dr. John Stevenson *NSI* 

#### **BLUF**

This report aims to determine 1) what national security and foreign policy related information the USG currently collects and holds, 2) who (which organizations) collects and holds that information, and 3) where our information assets are focused geographically.

#### **Abstract**

The US military is challenged to accomplish more, across a greater variety of domains, while facing a constrained budget environment.

There are two central implications of this: first, many of the most intractable security problems the US faces require a whole of government approach. Second, in a complex and evolving international environment characterized by new and often ambiguous threats, information itself is a critical asset. If USSOCOM and others were able to leverage these existing extant sources of information, data and expertise (i.e. information assets) held by the USG, the cost and time savings from avoiding duplication of effort would be potentially immense. In an effort to enable this, the NSI team "mapped" the USG information terrain, cataloguing all discoverable (unclassified, published, and referenced or held online) information assets relevant to national security and foreign policy held across the non-DoD and non-ODNI USG organizations. This effort resulted in the Directory of Discoverable US Government Information Assets (US-DiGIA), which provides a tool that enables users to search for and locate open source USG information assets, and possible points of contact for interagency collaboration.

#### **Keywords**

information assets, information control, information terrain, discoverable information assets, gray zone, gray

# 20: <u>10<sup>th</sup> Annual Strategic Multi-Layer Assessment (SMA) Conference</u> Report: From Control to Influence? A View of – and Vision for – the Future

### Published **2017** Editors

Mr. George Popp, Ms. Sarah Canna, & Ms. Nicole Peterson NSI

#### **BLUF**

This conference considered how the US and its allies can more effectively counter the influence hostile actors exert through multiple elements of power and discussed how influence could affect national, regional, and global levels over the next 30 years.

#### Abstract

The Strategic Multi-Layer Assessment (SMA) office hosted the 10th Annual SMA Conference on 25-26 April 2017 at Joint Base Andrews. This year's conference, formally titled "From Control to Influence? A View

of—and Vision for—the Future," brought together a multidisciplinary group of participants to consider how the US and its allies can more effectively counter the influence that recently reemerging, capable states (such as China and Russia) and non-state actors (such as ISIS) exert on their neighbors and/or third parties through multiple elements of power. The rise of Anti-Access Area Denial capabilities and the economic ascendance of China lead some to argue that we are moving toward becoming a more pluralized, multipolar world in which military and economic sources of power are widely distributed. Technologies (e.g., the Internet and rapid means of mass migration) are making nation states increasingly more porous, and a resurgence of nationalism and other forms of ethnic or religious identity politics has solidified some states and weakened others. The continuance of these factors may change the way that the US, its allies, and its adversaries consider and prioritize influence, both within the state and across interstate borders. This conference examined these trends and explored possible implications for how such factors may necessitate an explicit focus upon "influence" rather than "control" and how influence could exert effects on national, regional, and global levels over the next 30 years. Many of the conference's panels touched on the human dimension of the challenges and opportunities the United States Government (USG) faces in the 21st century. Warfare has always reflected new developments in society. Given the empowerment of individuals fueled by the information revolution, this has several implications for how the USG understands and interacts with populations (not just leaders). First, physical might is not going to always achieve strategic aims. We must use a soft power/influence/information strategy. Second, perceptions matter. Third, Target Audience Analysis (TAA) should not just be a Military Information Support Operations (MISO) process. Fourth, and finally people are not persuaded by facts and logic. Conference participants further suggested that the USG needs a new set of rules that are more adaptive to new and evolving environments.

#### **Keywords**

control, influence, Russia, China, ISIL, changing character of conflict, islands pathway, orbits pathway, communities pathway, cognitive space, informational power, communication strategy, information warfare, warfare doctrine, neuroscience, persuasion, neurocognitive, information power, decision-making, paradigm, social media dimension, US-DiGIA, gray-relevant information

## 19: From Control to Influence: Cognition in the Grey Zone

## Published **2017** Editor

Dr. Nicholas D. Wright *Univ. of Birmingham* 

#### **BLUF**

This paper discusses the "Five Multiples," drawn from neuroscience and the psychology of human decision-making, to help US policymakers produce intended and avoid unintended effects in the Grey Zone.

#### **Abstract**

This four-part study applies the neuroscience and psychology of human decision-making to help US policymakers produce intended and avoid unintended effects in the Grey Zone. Part I provides evidence-based recommendations to make the most of current thinking on techniques for influencing populations and States and contains chapters describing audience analysis, how to fashion messages, and describing messengers to deliver those messages. For empirical evidence, Part I drew from practitioners; the academic fields of psychology, business, security studies and international relations; the commercial world; notable recent reports on behavior change; and searches of academic databases and online resources. The strength of evidence for key concepts was rated as Strong, Moderate, Low, Nil or Harmful. Part II focuses on cognitive dimensions of four key aspects of grey zone conflict, including chapters examining risk and ambiguity; the closely bound human motivations related to fairness, legitimacy, status and honor; how international norms change; and cognitive aspects of deterrence and escalation management in the Grey Zone. Part III examines cyber in the Grey Zone. Chapters in this section 1) ask if cyber presents particular challenges in the Grey Zone, and, if so, what these mean for the US; and 2) examine Chinese and Russian cyber Grey Zone activities against audiences outside their borders at both the state and population levels. Part IV examines the importance of measuring influence, what to measure, measurement methods, and finally measuring influence online.

#### **Keywords**

gray zone, Five Multiples, messages, cognition, cognitive factors, key competitors, state competitors, asymmetric strategies, influence, audience behavior, grouping, ambiguity, message, narrative, information, risk, norm, cyber, Russia, China

## 18: Outplayed: Regaining Strategic Initiative in the Gray Zone

Published 2016

Speaker

Mr. Nathan Freier SSI

#### **BLUF**

This study examines the gray zone challenge through the lens of China, Russia, Iran, the MENA region, and the US and offers findings and recommendations in the areas of 1) policy and strategy and 2) operational plans and military capabilities in order to provide senior defense leadership with touchstones for deeper examination.

#### **Abstract**

This study examined contemporary gray zone competition and conflict, including "hybrid warfare" and identified their specific implications for defense and joint concepts, operations, and capabilities. This was an integrated effort by the Army War College. Research methodology consisted of four phases: 1) a framing and literature review, 2) research/roundtables, 3) report writing, and 4) roll-out/engagement. The effort resulted in key findings and recommendations in 1) policy and strategy and 2) operational plans and military capabilities. In the realm of policy and strategy, the research showed that 1) there is no common perception of the nature, character, or hazard associated with the gray zone or its individual threats and challenges; 2) there is significant asymmetry in risk perceptions between the United States, its partners, and their principal gray zone adversaries and competitors.; and 3) there is neither an animating grand strategy nor 'campaign-like' charter to guide US defense efforts against specific gray zone challenges. Regarding operational plans and military capabilities, the authors find that: 1) combatant commander's presumptive future gray zone responsibilities do not align with their current authorities; 2) the current US/NATO joint phasing model is inadequate to seize and maintain initiative in the gray zone; and 3) US concepts for the design and operational employment of force and forces is not well adapted to persistent gray zone competition and conflict.

#### **Keywords**

gray zone, gray zone competition, action-inaction risk dilemma, combatant commands, hybridity, risk-confusion, menace to defense/military convention, hybrid warfare

## 17: The Strategic Uses of Ambiguity in Cyberspace

Published 2016

Author

Dr. Martin Libicki United States Naval Academy

#### **BLUF**

This piece discusses strategic ambiguity in cyberspace and argues that cyberwar's many tactical ambiguities lend force to a strategy built on strategic ambiguities.

#### **Abstract**

In this piece, Dr. Martin Libicki discussed strategic ambiguity in cyberspace. His research methodology consisted of historical case studies such as

Israeli-Iranian cyberwar and US policy towards Taiwanese independence. Libicki's work highlighted five key uses of ambiguity in cyberattacks. First, cyberattacks may be used by a victim of small-scale aggression to indicate its displeasure with less risk of escalation than a physical

response would entail. Second, a state rich in cyber warriors may also use the threat of cyberwar to deter the potential target against support proxy war fighters. Third, cyberattacks can be used by one state to affect the outcome of conflict in another state without having to make any sort of visible commitment, even an implied one. Fourth, cyberattacks do not need to be directed towards adversaries. Fifth, ambiguity may be useful in declaratory policy that indicates how a state would respond to a cyberattack. In sum, Libicki concludes that cyberwar's many tactical ambiguities lend force to a strategy built on strategic ambiguities, but the lack of accountability presents a downside to strategic ambiguity.

#### **Keywords**

Strategic ambiguity, cyberattack, cyberwar, cyberspace, Israel, Iran

# 16: <u>Assessing and Anticipating Threats to US Security Interests: A Bio-Psycho-Social Science Approach for Understanding the Emergence of and Mitigating Violence and Terrorism</u>

## Published 2016 Editors

Dr. James Giordano Georgetown Univ.

Mr. Sam Rhem SRC

Mr. George Popp

#### **BLUF**

This paper analyzes how biopsychosocial variables and a biopsychosocial approach are important to understanding aggression and violence and informing and articulating national security, intelligence, and defense efforts to analyze, deter, and/or prevent its incitement and occurrence.

#### **Abstract**

This paper was a Strategic Multi-Layer (SMA) Periodic Publication. It represented the work of intra- and extramural subject matter experts (SMEs) from multiple disciplines, convened to provide views and insights to define and further develop a biopsychosocial approach to understanding, assessing, and influencing the cognitions and behaviors

of individuals and groups that are devising, recruiting, training, and implementing organized aggression and violence. In light of current national and international security concerns, a major focus of this report was upon those bio-psychosocial factors that are influential to, and influenced by the activities of the group known as Islamic State of Iraq and the Levant— ISIL (or Daesh/Da'ish). It provided a working view to the ways that bio-psychosocial variables—and a bio-psychosocial approach—are important to understanding aggression and violence, and informing and articulating national security, intelligence, and defense efforts to analyze, deter, and/or prevent its incitement and occurrence.

#### **Contributing Authors:**

Contributing Authors: GEN Joseph Votel (Commander USSOCOM), Ms. Sarah Canna (NSI, Inc.), Dr. William Casebeer (Lockheed Martin), Ms. Celeste Chen (Georgetown University), Dr. Diane DiEuliis (NDU), Dr. Dana P. Eyre (SoSA), Ms. Laurie Fenstermacher (AFRL), Dr. James Giordano (Georgetown University), Dr. Jerri Lynn Hogg (Fielding Graduate University), Dr. Larry Kuznar (IPFW & NSI), Dr. Gina Ligon (UNO), LTC Rafael Linera (USASOC), SFC Matthew Martin (USASOC),

Dr. Clark McCauley (Bryn Mawr), Mr. Michael McRoberts (Department of Defense), Dr. Christophe Morin (Fielding Graduate University), Mr. Brad Morrison (UBC), Dr. Sophia Moskalenko (Bryn Mawr), CPT Robby Otwell (USASOC), Dr. Paul Rogers (Bradford University), Dr. Victoria L. Romero (IST Research), MAJ Gregory Seese (USASOC), Dr. Pamela Rutledge (Fielding Graduate University), Dr. Jason Spitaletta (JS/J7 & JHU/APL), MAJ Shawn Stangle (USASOC), Dr. Peter Suedfeld (UBC), Dr. Nicholas D. Wright (University of Birmingham & CEIP), Dr. Rachel Wurzman (University of Pennsylvania)

#### **Keywords**

biopsychosocial, ISIL/Daesh, neuro-cognitive techniques, neuro-ecology, narratives, aggression, emotions, human behavior, neuro-cognitive processes, radicalization, counter-radicalization, VEOs, terrorism, neuroscience, moral cognition, cognitive models, cognitive behavioral therapy, cognitive, cognitive processing, hostility, narrative, emotion, psychology, psychological

## 15: Info Operations in Iraq and Syria

Published **2016** 

Editor

Dr. Jason Spitaletta JHU/APL

#### **BLUF**

This publication seeks to understand what the coalition must do in the information environment to achieve its objectives in Iraq and Syria and how it can deny adversaries the ability to achieve theirs.

#### **Abstract**

This SMA Reachback distilled inputs from a variety of contributors as part of an effort to improve CENTCOM's Joint Intelligence Preparation of the

Operational Environment (JIPOE) as part of achieving US and coalition objectives against Da'esh in Iraq and Syria. The authors used Giordano's Access, Assess, Engage (AAE) framework to categorize these recommendations. This report dove into specific recommendations using this framework. On the topic of Access, users should determine the accessibility of a target audience; i.e. they should identify how a particular audience may be reached through various media. With respect to Assessment, the author recommends that users employ the Strange model of center of gravity (COG) analysis to identify critical capabilities, critical requirements (CR) and associated critical vulnerabilities (CV) of the threat. This type of functional decomposition could identify cognitive aspects of the threat that are exploitable through the information dimension. On Engagement, CENTCOM should consider the combination of informational and physical powers in concert with members of the interagency to drive CENTCOM actions through an operational narrative. Moreover, it should leverage existing MISO programs. The report concluded that CENTCOM may improve cognitive engagement by producing a broader, more expansive joint intelligence preparation of the operational environment (JIPOE) and that an expanded JIPOE (Joint Intelligence Preparation of the Operational Environment) could potentially identify the behaviors of target audiences necessary to achieve US objectives, to develop possible psychological effects and leverage operations as a cognitive scheme of maneuver that could lead to synchronizing actions and messages to achieve coalition objectives.

#### **Contributing Authors:**

LTC Xavier Colon (J39 Joint Staff), LTC Rafael Linera Rivera, Ph. D (USASOC), SFC Matthew Martin, Dr. Ian McCulloh (JHU Applied Physics Lab), CPT Christopher O'Brien, MAJ Robert D. Payne III, MAJ Gregory Seese, Ph. D, SGM Sohail A. Shaikh, Dr. Jason Spitaletta (Maj, USMCR), LTC Brian Steed (US Army Command and General Staff College), Dr. Gwyneth Sutherlin (Geographic Services, Inc.)., Dr. Robert Taguchi (US Army Special Operations Command)

#### **Keywords**

information operations, Iraq, Syria, information environment, virtual Caliphate, access, influence, MISO, Dark Web, ISIL, virtual caliphate, CENTCOM, message, cognitive

### 14: Counter Information Messaging

Published 2016 Editor

Ms. Sarah Canna NSI

#### **BLUF**

This SMA Reachback analyzes what USCENTCOM and the global counter-ISIL coalition are missing from counter-messaging efforts in the information domain.

#### **Abstract**

In this SMA Reachback, a team of scholars led by Sarah Canna evaluated CENTCOM and global counter-ISIL coalition messaging in three separate

components: the content, the medium, and the messenger. The authors identified three major problems. First, with regards to content, there is a lack of differentiated messaging, entertainment value, non-differentiation from inexpert messaging. Second, the medium lacks multiple access points to messaging based on local preferences. Third, the messenger lacks local, credible partners. The subject matter experts proposed four solutions to these problems: 1) narrow the coalition's say/do gap, 2) emphasize the Daesh say/do gap, 3) prepare anticipatory messaging, and 4) convene regional & local actors.

#### **Contributing Authors:**

Dr. Hassan Abbas (National Defense University), Hamilton Bean (START), Alejandro J. Beutel (START), Chris Blakeley, Jr. (George Mason University), Dr. John Bornmann (MITRE), Dr. Kurt Braddock, Emma L. Briant (George Washington University), Dr. Sara Cobb (George Mason University), Dr. Amenda Nell Edgar (University of Memphis), Alexis Everington (Madison Springfield, Inc.), SSG (ret.) Eric Grenlin, (George Mason University), Ms. Jessica M. Huckabey (IDA), Harold J. Ingram (Australian National University), Dr. Lawrence A. Kuznar (NSI), Mr. Michael Lewis (USMC Command and Staff College), Ms. Angie Mallory (Iowa State University), LTC Colonel Angelica Martinez, Dr. Diane Maye (Embry-Riddle Aeronautical University), Dr. P.M. Picucci (IDA), Dr. Scott W. Ruston (Arizona State University), Mr. Mubin Shaikh, Dr. Jason Spitaletta (JHU/APL), MAJ Patrick B. Taylor, Mr. Peter Welby (Centre on Religion & Geopolitics), Dr. Amy Zalman (Strategic Narrative Institute LLC)

#### **Keywords**

USCENTCOM, ISIL, messaging, counter-ISIL messaging, information operations, countermessaging, extremism, *nasheed*, CVE, counter narrative, alternative narrative, MISO, Public Affairs, narrative landscape, Iraq

## 13: Undermining ISIL's "Virtual Caliphate"

Published 2016

Editor

Ms. Sarah Canna *NSI* 

#### **BLUF**

This write-up seeks to understand the strategic framework for undermining ISIL's "Virtual Caliphate."

#### **Abstract**

Contributors to this report offered several broad perspectives on how to best undermine ISIL's virtual caliphate. Dr. Hassan Abbas, a professor at National Defense University, suggested that the most powerful thing the

coalition can do is to support the development of a legitimate, credible Sunni Muslim voice such as the Organization of Islamic Countries (OIC)—to provide a counterweight to ISIS. Furthermore, Muslim collaboration on a larger scale (e.g., economic, educational, etc.) is likely to be very well received globally, particularly by young Muslims. This would also help counter the narrative that Muslims are weak and have been humiliated by the West, which drives support for ISIS. Dr. Kuznar suggested five lines of effort that focus on increasing pressure on ISIS as it transitions from the physical to virtual caliphate to reduce its chance of lasting success: 1) continue to defeat ISIS militarily to discredit them and to force them to force a new narrative, 2) continue to target top ISIS leadership, especially ideologues who are responsible for narrative generation, 3) work with and enable credible alternative voices in Islamic world that can divert vulnerable recruits away from violent jihadist movements and inspiration 4) beware of alternate jihadists capturing ISIS's market share of the virtual Caliphate as ISIS is further discredited, and 5) plan for cooperation with DHS and allies to mitigate persistent effects of lingering ISIS messaging in cyberspace. Finally, MAJ Patrick Taylor, 7th Military Information Support Battalion, USASOC, suggested that a new framework for undermining ISIS's virtual caliphate is not needed. He argued that Psychological Operations is uniquely positioned to operate in the virtual battlespace using Cyber Enabled Special Warfare (CE-SW). He suggested thinking of the virtual domain as contested borderland filled with neighboring states, tribes, and communities with various competing interests. Successful operations require developing relationships with online digital natives to enable the USG and its allies to compete for functional capability in the information environment. In conclusion, the report argued that ISIS's shift from physical to virtual caliphate is extremely dangerous as it is a threat that will continue in perpetuity even after ISIS, the organization, is defeated.

#### **Contributing Authors:**

Hassan Abbas (National Defense University), Dr. Lawrence Kuznar (NSI), MAJ Patrick B. Taylor (USASOC)

#### **Keywords**

social media, information operations, propaganda, ISIL, ISIS, virtual caliphate, Daesh, Adnani, message, messaging, cyber

# 12: <u>Information Dominance: PLA Views of Information Warfare and</u> Cyberwarfare

Published 2016 Speaker

Mr. Dean Cheng Heritage Foundation

#### **BLUF**

This SMA Speaker Series event addresses PLA views of information warfare and cyberwarfare and argues that 1) the Chinese concept of cyber operations is embedded in larger doctrine, 2) human factor and physical destruction also play important roles in the Chinese concept of information operations, and 3) the PLA's core objective is to be able to better employ information in all aspects of warfare, in order to establish "information dominance."

#### **Abstract**

As part of the SMA Speaker Series, Mr. Dean Cheng spoke on PLA views of information warfare and cyberwarfare. The speaker drew on his research into the theory, history, and practice of PLA information warfare and cyberwarfare. Cheng addressed areas including the evolution of PLA thought, elements of information and high technology warfare, cyber operations, and PLA reform. His presentation had three key takeaways. First, the Chinese concept of cyber operations is embedded in larger doctrine, which is rooted in the importance of information in modern warfare needed to establish "information dominance." Second, the Chinese concept of information operations is not just technical of cyber operations, as both the human factor and physical destruction also play important roles. Finally, the core objective is to be able to better employ information in all aspects of warfare, in order to establish "information dominance."

#### **Keywords**

information warfare, PLA, informationization, information, Information Age, information dominance, information deterrence, information operations, military information security, cyber

## 11: <u>Counter-Da'esh Influence Operations: Cognitive Space Narrative</u> Simulation Insight

# Published 2016

#### **Editors**

LT. Col. Rafael Linera *USASOC* 

Maj. Gregory Seese *USASOC* 

Ms. Sarah Canna

Mr. Sam Rhem SRC

#### **BLUF**

This ~100-person simulation run on ICONSnet serves as a test bed for messaging techniques and a training opportunity for PSYOP operators, with the objective of enhancing PSYOPs training and message formation for Counter-Da'esh influence operations.

#### **Abstract**

At the request of Joint Staff/J-39, the SMA program, in coordination with United States Army Special Operations Command (USASOC) and the Department of Homeland Security (DHS), participated in a second Counter-Da'esh Messaging Simulation that brought together nearly 100 Psychological Operation (PSYOP) operators, USG and international observers, interagency representatives, population experts from Iraq and North Africa, Da'esh experts, universities, and think tanks. This

exercise served as both a test bed for messaging techniques and a training opportunity for PSYOP operators. The simulation was run on a synchronous, virtual, and distributed platform called ICONSnet. Several insights from the simulation suggest means of enhancing PSYOP training and message formation: 1) develop a high level strategy that aligns with operation objectives, which is flexible enough to allow PSYOP operators agility to maneuver in the narrative space; 2) set clear objectives for narrative campaigns conducted in support of overall strategy; 3) in advance of a narrative campaign, prepare a reservoir of tested, well developed messaging aimed specifically at target populations; 4) develop messages in coordination with cultural and technical experts to take advantage of multidisciplinary insights from the fields of neuroscience, political science, modeling, and marketing, etc.; 5) identify strategies for responding in real time to messaging that may be particularly effective or ineffective; test the effectiveness of messaging and continually refine the PSYOP training process in safe, simulated environments before fielding when possible. The report produced a number of insights for PSYOPS and for degrading Da'esh message effectiveness. PSYOPS should: 1) Develop a high level strategy that aligns with operation objectives, which is flexible enough to allow PSYOP operators agility to maneuver in the narrative space; 2) set clear objectives for narrative campaigns conducted in support of overall strategy; 3) in advance of a narrative campaign, prepare a reservoir of tested, well developed messaging aimed specifically at target populations; 4) Develop messages in coordination with cultural and technical experts to take advantage of multidisciplinary insights from the fields of neuroscience, political science, modeling, and marketing, etc.; 5) identify strategies for responding in real time to messaging that may be particularly effective or ineffective; and 6) test the effectiveness of messaging and continually refine the PSYOP training process in safe, simulated environments before fielding when possible. With regard to degrading Da'esh message effectiveness, in an environment devoid of trust, the population teams often rejected USG messaging as lacking a credible voice. They suggested that USG messaging would only been seen as credible is if it were reinforced through action by Coalition forces. Instead, they preferred to hear counter-Da'esh messaging from local religious and cultural leaders. A surprising number of population segments

were open to USG's counter-Da'esh messaging in principle but wanted to engage in a deeper conversation about how to effect change.

#### **Contributing Authors:**

Brigadier General Charles Moore (Joint Staff J-39 DDGO), Dr. Allison Astorino-Courtois (NSI), Ms. Sarah Canna (NSI), Ms. Patricia DeGennaro (TRADOC G-27), Mr. Devin Ellis (University of Maryland, ICONS), Dr. Garry Hare (Fielding Graduate University), Ms. Georgia Harrigan (DHS), Dr. Jerri Lynn Hogg (Fielding Graduate University), Mr. Adam Jonas (TRADOC G-27), Mr. David Koelle (Charles River Analytics), Mr. Jimmy Krakar (TRADOC G-27), SFC Adam Liette (USASOC), Dr. Gina Ligon (UNO), LTC Rafael Linera (USASOC), Ms. Angie Mallory (Iowa State University), SFC Matthew Martin (USASOC), Dr. Kay Mereish (DHS), Dr. Christophe Morin (Fielding Graduate University), Major Peter J. Reiley, Ph.D. (SOCOM), Dr. Pam Rutledge (Fielding Graduate University), MAJ Gregory Seese (USASOC), Dr. Susan Szmania (DHS), MAJ Patrick Taylor (USASOC), Dr. Jon Wilkenfeld (University of Maryland, ICONS), Dr. Rachel Wurzman (University of Pennsylvania)

#### **Keywords**

counter-ISIL/counter-Daesh, messaging, influence operations, simulation, PSYOP, ICONSnet

### 10: Identifying Predictive Gray Zone Indicators through People's Values

Published **2016** 

Author

Ms. Christine MacNulty *Applied Futures Inc.* 

#### **BLUF**

This work provided analysis of gray zone indicators of ISIL, Russia, China, and their leaders through the lens of their values and discusses how the US might get ahead of the game in the Gray Zone through understanding the values of other countries and their leaders, as well as how those values are likely to play out as behavior.

#### **Abstract**

The author used the concept of values to understand why actors take the actions that they do. Doing so can reveal actor motivations, which can in turn, inform appropriate responses. MacNulty identified the values of ISIL, China and Russia, and those of their leaders; additionally, she discusses how the US might get ahead of the game in the Gray Zone not only in ISIL, China and Russia, but other countries of potential interest, through understanding their values, those of their leaders, and how those values are likely to play out as behavior.

#### **Keywords**

gray zone, gray zone indicators, Maslow's Hierarchy of Needs, sustenance, self-actualization, sustenance-driven, outer directeds, inner directeds, "Danger Zone," motivation, values

## 09: Maneuver and Engagement in the Narrative Space

Published 2016 Editor Randall Munch TRADOC G27

#### **BLUF**

This paper focuses on aspects of maneuver and engagement in the narrative space and argues that a US-led, multinational coalition could significantly degrade ISIL's ability to influence others by maneuvering and engaging in the narrative space in synchronization with combat operations.

#### **Abstract**

This paper was produced in support of the Strategic Multi-layer Assessment (SMA) of the Islamic State of Iraq and the Levant (ISIL) led by Joint Staff J39 in support of the Special Operations Command Central (SOCCENT). The paper leveraged and melds the latest thinking of academic and operational subject matter experts in fields of organizational and social dynamics, network analysis, psychology, information operations and narrative development, social media analysis, and doctrine development related to aspects of maneuver and engagement in the narrative space. The report concluded that a US-led, multinational coalition could significantly degrade ISIL's ability to influence others by maneuvering and engaging in the narrative space, provided that the US and her allies make a long-term commitment and execute a coordinated, integrated, and synchronized effort rooted in an in-depth understanding of the operating environment (OE) and how the narrative would best resonate within the host nation populace and the region.

#### **Contributing Authors:**

Brigadier General Charles L. Moore, Jr., Deputy Director, Global Operations (J39); Lieutenant Colonel Brian Steed, US Army Command and General Staff College; Master Sergeant Sohail Shaikh, US Army Asymmetric Warfare Group; Dr. Dana Eyre, SOSA; Dr. Ian McCulloh, Johns Hopkins University Applied Physics Lab; Dr. Jason Spitaletta, Joint Staff J7 Deputy Director for Joint and Coalition Warfighting; Mr. Randall Munch, TRADOC G27; Mr. Chris Worret, TRADOC G27

#### **Keywords**

ISIL, counter-ISIL, narrative, counter-narrative operations, information operations, narrative competition, insurgent narratives, engagement, strategic communication, "influence diagram," army design methodology (ADM), narrative network model, networks, social network, cognitive terrain, IPB, JIPOE, narrative impact

### 08: Bio-Psycho-Social Application to Cognitive Engagement

# Published 2016

#### Editors

Dr. Jason Spitaletta

JHU-APL

Mr. Sam Rhem SRC

#### **BLUF**

This white paper discussed a number of approaches to the operationalization of scientific approaches, emphasizing that of cognitive engagement in a wide variety of environments.

#### **Abstract**

The underlying concept of this paper is how bio-psycho-social approaches to cognitive engagement may be put to use to collect, analyze, and/or apply information to meet a tactical, operational, or strategic end. This

White Paper focuses on the proverbial "rubber meets the road" approaches of behavioral operations in the human domain.

The volume focuses primary on Military Information Support Operations (MISO), formerly Psychological Operations (PSYOP) as it is the activity that can most benefit from (and reciprocally impact) cognitive engagement. However, IO core capabilities such as Military Deception (MILDEC) and Computer Network Operations (CNO) information related capabilities such as counterintelligence (CI) could also benefit from bio-psycho-social applications to cognitive engagement.

The contemporary operating environment is growing increasingly contentious; however, the vast majority of those contentions do not necessarily require the use of lethal force. Instead, nuanced understanding of the nature of conflict and the peoples engaged are required to remain competitive. Cognitive engagement entails understanding the individual nodes with the human domain as such and developing appropriate methods for interacting with them. This White Paper is meant not only to continue the dialogue between the academic and operational communities but also to explore more deeply how to apply knowledge gained through bio-psycho-social research to cognitive engagement.

#### **Contributing Authors:**

LTG Kenneth Tovo (Commander USASOC), LTC Rafael Linera (USASOC), MAJ Gregory Seese (USASOC), SFC Matthew Martin (USASOC), Nathan Vanderberg, (USASOC), Dr. James Giordano (Georgetown University), Patricia DeGennaro (TRADOC), Adam B. Jonas, (TRADOC), Christopher Worret (TRADOC), Randall P. Munch (TRADOC), Dr. Jason Spitaletta (JS/J7 & JHU/APL), Dr. Sara Savage (University of Cambridge), Dr. Ian McCulloh (Johns Hopkins University), Peter Lejeune (International Institute for Non-Proliferation Studies), Dr. Laura Steckman (Marine Corps Information Operations Center), Shmuel Bar (Samuel Neaman Institute for National Policy Research), Angie R. Mallory (Iowa State University), Dr. Robert Thomson (Army Cyber Institute, United States Military Academy), Dr. Dana S. LaFon (DoD), Gabriel A. Whalen (DoD), CPT Christopher O'Brien (USASOC), Dr. Shelly Bumphus (NIU), Dr. Victoria L. Romero (IST Research), Dr. Paul J. Zak (Center for Neuroeconomics Studies, Claremont Graduate University), Dr. Rachel

Wurzman (University of Pennsylvania), Spencer Gerrol (SPARK Experience), EJ Bliner (ForecastFwd), Dr. Samiah E. Baroni (NIU), Dr. Brian Holmes (NIU), and Max Greenlee (NIU)

#### **Keywords**

cognitive operations, information operations, biopsychosocial, cognitive behavioral therapy, integrative complexity, motive imagery, cognitive engagement, gray zone, cognitive maneuver, Human Factors Analysis, social networks, social network analysis, degree, eigenvector centrality, betweenness centrality, Key Player centrality, Girvan-Newman Community Detection, individual, cyber, neuroscience, Russia, ISIL, situational, social engineering, persuasion, message, emotion

# 07: <u>Cognitive Maneuver for the Contemporary and Future Strategic</u> Operating Environment

Published 2016

Speaker

Col. (Ret.) Robert Warburg *USASOC* 

#### **BLUF**

This briefing presents several insights to rethinking approaches to conflict and highlights the multiple plans of maneuver, with particular emphasis on cognitive maneuver and its associated campaigns.

#### **Abstract**

Col (Ret.) Robert Warburg conducted a briefing entitled, "Cognitive Maneuver for the Contemporary and Future Strategic Operating Environment." Warburg presented several insights as part of rethinking approaches to conflict, including how 1) power is shifting below and beyond the nation-state, 2) the rapid pace of technological change, and 3) the current power struggle among and within many Middle Eastern and North African states. Warburg also highlighted the multiple plans of maneuvering, drawing particular attention to cognitive maneuver, including associated campaigns. He concluded by speculating as to whether we 1) were potentially looking at a wholly new approach to maneuvering synthesizing domains and functions and 2) if we should be asking where we should maneuver instead of what we maneuver. Warburg additionally pointed to the transcendence of a new thought paradigm of Multi-domain Maneuver (MDM) as a means of pointing to where we should maneuver.

#### **Keywords**

cognitive maneuver, Multi-Domain Maneuver, cognitive maneuvering campaigns, power, Silent Quest, operational challenge, human domain, operational time, influence

# 06: Putin's Information Warfare in Ukraine: Soviet Origins of Russia's Hybrid Warfare

Published **2015** 

Author

Dr. Maria Snegovaya *Columbia* 

#### **BLUF**

This report highlights Russia's effective use of "reflexive control" techniques in Ukraine since 2014 and the West's need to understand and counter them in order to succeed in hybrid warfare with Russia.

#### **Abstract**

In this report for the Institute for the Study of War (ISW), Snegovaya highlighted how Russia has been using an advanced form of hybrid

warfare in Ukraine since early 2014 that relies heavily on an element of information warfare that the Russians call "reflexive control." Reflexive control causes a stronger adversary voluntarily to choose the actions most advantageous to Russian objectives by shaping the adversary's perceptions of the situation decisively. Russia's reflexive control in Ukraine has included, 1) denial and deception operations to conceal or obfuscate the presence of Russian forces in Ukraine, 2) concealing Moscow's goals and objectives in the conflict, which sows fear in some and allows others to persuade themselves that the Kremlin's aims are limited and ultimately acceptable, 3) retaining superficially plausible legality for Russia's actions by denying Moscow's involvement in the conflict, 4) simultaneously threatening the West with military power, and 5) the deployment of a vast and complex global effort to shape the narrative about the Ukraine conflict through formal and social media.

#### **Keywords**

Russia, Putin, Ukraine, Soviet, hybrid warfare, information warfare, reflexive control, information strategies, information openness, disinformation, informational cover

05: 8th Annual SMA Conference Report: A New Information Paradigm?
From Genes to 'Big Data' and Instagram to Persistent
Surveillance...Implications for National Security

Published 2014

Authors:

Ms. Sarah Canna

Mr. George Popp NSI

#### **BLUF**

This Conference aims to examine the implications of the information/network age, including 1) its key dynamics, 2) the impact these dynamics have on national security-related topics, and 3) what changes in USG modes of planning, operation, policy development, and military capabilities are needed to mitigate information challenges while simultaneously recognizing and seizing opportunities.

#### **Abstract**

The intent of the Conference was to examine the implications of the information/network age. Conference speakers addressed these opportunities and challenges by providing various perspectives from disciplines including neuroscience, behavioral and social sciences, and operational strategy. Emphasis was placed on the need to interweave these various

disciplines and perspectives. As in previous years, the conference sought to address the needs of the geographical commands. Representatives from the commands discussed their pressing needs and key operational requirements. One keynote speaker, Lieutenant General Ed Cardon, stated that he believes we are in a new global paradigm brought about by the information/technical revolution, and thus threats and vulnerabilities are increasing, often in high complexity. The second keynote speaker, Admiral Michael Rogers, stated that in the digital age, the DoD has to be an agile organization capable of quickly building communities of interest in response to wideranging, unanticipated crises. Panel One examined complexity, interdependence, and emergence in an interconnected information age. Panel Two discussed the information age, networks, and national security. Panel Three explored patterns of conflict and warfare in the information age. Panel Four asked representatives from the Joint and Staff Commanders to discuss how the information revolution is shaping their worlds. Panel Five discussed the interactions of big data, neuroscience, and national security. Panel Six examined how to understand social systems in phase 0 through human geography, big data, micro information, and the reconnaissance, surveillance, intelligence (RSI) paradigm. Panel Seven explored the implications for US influence and deterrence capability of the nearly instantaneous availability of both large and micro data. Panel Eight discussed what is in store for the Pacific Region and specifically US-China relations amidst the information revolution. Finally, Panel Nine asked representatives from the commands to discuss what they learned at the conference, what they will be taking back from the conference, and where they anticipate needing further assistance. In conclusion, Col. Chuck Eassa shared several challenges he drew as takeaways: 1) how to help commanders, their staffs (particularly information operations staff) solve emerging challenges under pressure, in a crisis, and without the benefit of the experience and talent present at the conference; 2) how other competing narratives are changing as commanders and their staffs take action; 3) how the information environment evolves over time as the adversary's tactics change and we engage in information activities, 4) how we message to different demographics, and 5) how we do it in near real time.

#### **Keywords**

information age, information technology, big data, neuroscience, national security

# 04: <u>Leveraging Neuroscientific and Neurotechnological (NeuroS&T)</u> <u>Developments with Focus on Influence and Deterrence in a Networked</u> World.

# Published 2014

#### **Editors**

Dr. Hriar Cabayan *J-39 Joint Staff* 

Dr. William Casebeer DARPA

Dr. Diane DiEuliis HHS

Dr. James Giordano Georgetown University

Dr. Nicholas Dr. Wright Carnegie Endowment for International Peace

#### **BLUF**

This volume discusses numerous ways that neuroscience can be incorporated into, and used within, USG influence and deterrence operations in today's complex security environment.

#### **Abstract**

This volume focused on possible ways that insights from the neurosciences could be incorporated into, and used within, US approaches and ability to conduct optimized influence and deterrence operations for the purpose of maintaining global stability. The paper is a follow-on to a previously published white paper on the topic of aggression. The report outlined concepts of modern deterrence, and identified characteristics unique neurodeterrence. Relatedly, contributors discussed neuroeconomics, noting that its study can provide unique insights to underlying mechanisms of human decision-making and behavior. Further interrogation on the topic of human behavior continues with an inquiry into the mechanisms of decision making, and its implications for effective deterrence. Contributors also drew a

linkage between the psychology of revenge and the evolution of deterrence. Attention was also paid to the importance of narratives, personal perspectives within the context of influence. The report also established connections between social neuroscience and neuroeconomics and human behavior, as well as emotions. Implications for policymakers, groups, and technologies were also discussed in this volume.

#### **Contributing Authors:**

Brig. Gen. Tim Fay (Joint Staff), Dr. Jorge Barraza (Claremont Graduate University), Dr. Roland Benedikter (University of California, Santa Barbara), Dr. William Casebeer (DARPA), Dr. Jeffrey Collmann (Georgetown), Dr. Nicole Cooper (Univ. of Penn), Dr. Diane DiEuliis (HHS), Dr. Emily Falk (Univ. of Penn), Dr. Kevin FitzGerald (Georgetown), Dr. James Giordano (Georgetown), Dr. Scott Heuttel (Duke), Mr. Hunter Hustus (USAF), Dr. Clark McCauley (Bryn Mawr), Dr. Rose McDermott (Brown), Dr. Ed Robbins (USAF), Dr. Victoria Romero (Charles River Analytics), Maj. Jason Spitaletta (JHU/APL), Dr. Rochelle E. Tractenberg (Georgetown), Dr. Nicholas D. Wright (Carnegie Endowment.

#### **Keywords**

cognitive sciences, neuroscientific, neurotechnological, neurobiology, evolutionary, influence and deterrence operations, human behavior, decision-making, neuroeconomics, neurodeterrence, narratives, narrative transportation, CBCT

# 03: <u>Topics for Operational Considerations: Insights from Neurobiology & Neuropsychology on Influence and Extremism —An Operational Perspective</u>

# Published 2016 Editors

Col. Marty Reynolds *JS/J-3/DDGO* 

Lt. Col David Lyle *USAF* 

#### **BLUF**

This report examines the unique behavioral and neurobiological factors that underlie political extremism enhanced by interaction in the cyber realm, addressing how cyber-based communication technology (CBCT)'s complex systems, cyberpsychology, and cyberneurobiology affect how we plan and execute military operations to counter VEOs.

#### **Abstract**

This report provided the operational and policy communities with a deeper understanding of the unique behavioral and neurobiological factors underlying political extremism enhanced by interaction in the cyber realm.

The research produced several key insights. First, modern information technology is empowering violent extremist organizations (VEOs) by providing cheap and anonymous forums to target large audiences, and advances in Cyber-Based Communication Technology (CBCT) will revolutionize how the DoD operates in cyberspace and will heighten challenges to Military Information Support Operations, or MISO (formerly psychological operations or PSYOP). Second, communication technologies are means, not ends – they shape social worlds by connecting people in distinct ways, but it is the social world itself that creates outcomes. Third, complex systems concepts provide theoretical frameworks and insights important to designing tailored counter violent extremist organizations (VEO) intervention strategies. Fourth, and finally, emerging research in cyberpsychology and cyberneurobiology can be integrated with exiting PSYOP/MISO processes to create both a set of individualized influence tactics and guide their implementation.

#### **Contributing Authors:**

Maj. Gen John Shanahan (JS/J-3/DDGO), Col Marty Reynolds (JS/J-3/DDGO), Lt Col David Lyle (USAF), Ms. Abigail Desjardins (NSI), Maj Dave Blair (Georgetown University), Maj Jason Spitaletta (USMCR), Dr. Panayotis A. Yannakogeorgos (Air Force Research Institute), Dr. Hriar Cabayan (OSD)

#### **Keywords**

influence and information activities, information environment, extremism, VEO, radicalization, counter-radicalization, neurobiology, neuropsychology, cyberpsychology, cyberneurobiology, cyberspace, PSYOPs, MISO, internet, cyber based communications technologies (CBCT)

# 02: <u>From the Mind to the Feet: Assessing the Perception-to-Intent-to-</u>Action Dynamic

# Published 2011

#### **Authors**

Dr. Lawrence Kuznar, Dr. Allison Astorino-Courtois, & Ms. Sarah Canna NSI

#### **BLUF**

This volume addresses 1) the concept of actor intent, 2) how intent can be measured, and 3) the relationship of intent to behavior.

#### **Abstract**

The volume addresses what is meant by intent, how intent can be measured, and the relationship of intent to behavior. The twelve authors provided operational perspectives from the

fields of military, intelligence, and law enforcement, as well as academic perspectives from the fields of anthropology, social psychology, decision science, international politics, social cognitive neuroscience, survey science, and communications. The essays highlighted three key observations. First, despite near-universal agreement among academics, analysts, and operators that intent is essential, there exists no coherent body of research designed to address intent. Second, measuring intent requires multidisciplinary approaches involving psychology, neuroscience, decision theory, anthropology, and other social science disciplines, such as political science and sociology, that can establish the social context in which intents form. Finally, there is a need for continued basic research to address the origin of intent and its relation to behavior and to develop complex models that capture how humans form intent and that can be used to analyze the masses of data required to gauge the intents of individuals and groups.

#### **Contributing Authors:**

Kathleen L. Kiernan, Daniel J. Mabrey, Harry A. Foster, Gary Schaub, Jr., John W. Bodnar, Lawrence A. Kuznar, Margaret G. Hermann, Keren Yarhi-Milo, Sabrina J. Pagano, Abigail J.C. Chapman, Thomas Rieger, Toby Bolden, Elisa Jayne Bienenstock, Allison Astorino-Courtois

#### **Keywords**

intent, psychology, cognitive neuroscience, adversary intent, deterrence, threat, capability, perception, behavior

## 01: <u>Towards a Framework for Dealing with Potential Unintended</u> Consequences of Influence Activities.

# Published **2011** Editors

Dr. Scott Helfstein Combating Terrorism Center, West Point

Ms. Sarah Canna NSI

#### **BLUF**

This paper discusses the relative effectiveness of various USG actions to influence violent extremist organizations (VEOs), and specifically how to manage unintended negative consequences. Specifically, the paper seeks to understand the secondary effects of US government efforts to influence VEOs.

#### **Abstract**

The purpose of this project was to gain a better understanding of how United States Government (USG) actions influence VEOs. It consisted of a review of theoretical hypotheses on the effects and consequences of

influence operations targeting VEOs. Hypotheses were evaluated through empirical interrogation, namely through two data sources that explore unintended consequences of influence actions. Influence actions operations are defined and framed within the VEO context.

#### **Contributing Authors:**

Gary Ackerman, Victor Asal, Paul K. Davis, Karl DeRouen, Scott Helfstein, Jeffrey Knopf, Melissa McAdam, Amy Pate, Lauren Pinson, Karl Rethemeyer, John Sawyer, Joseph Young

#### **Keywords**

influence operations, influence actions, VEO, terrorism, START, Davis Influence Spectrum, insurgency, counterinsurgency, unintended consequences, operational planning

### **Appendix A: Key Words**

access

achievement motivation

action-basis

action-inaction risk dilemma

act-purpose narrative

act-scene narrative

Adnani

adversary intent

affiliation motivation

Afghanistan

agent-act narrative

aggression

AI/ML (artificial intelligence/machine learning)

alignment

alternative narrative

ambiguity

army design methodology (ADM)

asymmetric space dependency

asymmetric strategies

attraction

audience behavior

authorities

automated influence

autonomy

bailout

bailout partners

basic emotions

basic principles of strategic analysis

behavior

behavior assessment

Belt and Road Initiative

betweenness centrality

big data

biopsychosocial

blockchain

borders/territory

bots

capability

**CENTCOM** 

changing character of conflict

"Checklist for Empathy"

China

Chinese economy

Chinese-American relations

cognition

cognitive

cognitive analysis

cognitive behavioral therapy

cognitive bias

cognitive complexity

cognitive dimensions

cognitive engagement

cognitive factors

cognitive foundations

cognitive maneuver

cognitive maneuvering campaigns

cognitive mapping

cognitive models

cognitive neuroscience

cognitive operations

cognitive processing

cognitive sciences

cognitive space

cognitive terrain

cognitive warfare

COI

combat messaging

combat persuasion

combatant commands

**Common Operating Picture** 

communication influence

communication strategy

communities pathway

competition

complimentary conduits

conceptualizations of power

conflict

conflict scenarios

CONOPS (concept of operations)

conspiracy

content and access barriers

context-dependent cognitive processes

context-independent cognitive processes

control

cooperation

coordinated communication

counternarrative

counterinsurgency

counter-ISIL

counter-ISIL messaging

countermessaging

counternarrative operations

counterradicalization

Crimea

cross-cultural differences

cultural protection

CVE (countering violent extremism)

CVID (complete, verifiable, irreversible denuclearization)

cyber

cyberattack

cyber based communications technologies (CBCT)

cyberneurobiology

cyberneuropscyhology

cyberspace

cyberwar

Daesh

"Danger Zone"

Dark Web

**Davis Influence Spectrum** 

decision-making

defensive space control

degree

denuclearization

deterrence

dimension

diplomacy

discourse analysis

discourse of deception

discoverable information assets

disinformation

domestic information environment

domestic information landscape

DPRK (Democratic People's Republic of Korea)

Duterte

East Asia

economic crisis

economic development

economics/trade

economy

Egypt

eigenvector centrality

emotion

emotional language

emotional themes

emotive theme

empathy

empathy checklist

engagement

English-language

escalation management

Estonia

evolutionary

extended influence

extremism

factory floor

fake campaigns

fake news

fear of personal death

Five Multiples

foreign influence efforts (FIEs)

foreign policy

fringe war

future concept

future intelligence

future operating environment (FOE)

future science and technology

future warfare

Girvan-Newman Community Detection

global competition

global influence

global narratives

global order

grand bargain

grand narrative

gray space

gray zone

gray zone competition

gray zone conflict

gray zone event

gray zone indicators

gray-relevant information

great power

great power narratives

grouping

GRU (Russia's Main Intelligence Directorate of the General Staff)

hostility

Huawei

human behavior

human domain

**Human Factors Analysis** 

human/machine coding

hybrid war

hybridity

**ICONSnet** 

**ICTidentity** 

identity-basis

incentive

incoherence

India

indicators

individual

influence

influence actions

influence and deterrence operations

influence and engagement strategy

influence and information activities

influence campaigns

influence diagram

influence messaging

influence operations

information

Information Age

informational cover

information assets

information control

information cover

information deterrence

information dominance

information environment

informationization

information openness

information operations

information power

information strategies

information technology

information terrain

information warfare

informational power

inner directeds

instructional material

instrument-purpose narrative

insurgency

insurgent narratives

integrative complexity

intelligence operations

intent

interests

international reputation

internet of things

investment

IPB (intelligence preparation of the battlefield)

Iran

Iraq

ISIL/ISIS

islands pathway

Israel

issue narrative

Japan

JIPOE

Juche

key competitors

Key Player centrality

Kim Jong Un

Korean Peninsula

Kremlin

language

Logic of Appropriateness

machine models

Maslow's Hierarchy of Needs

measure of effectiveness (MOE)

media

media gray zone

media messaging

media narrative

media portrayals

menace to defense/military convention

message

messaging

metacognition

meta-opinions, surveys

military information security

military status

MISO (military information support operations)

moral cognition

motivation

motivational hierarchy

motive imagery

Multi-Domain Maneuver (MDM)

multi-domain operations

multilateral

narrative

narrative analysis

narrative competition

narrative impact

narrative landscape

narrative network model

narrative patterns

narrative shifts

narrative trajectories

narrative transportation

narratives

nasheed

national identity

national narrative

national security

NATO

Nazism

needs/gap

negotiation

networks

neurobiology

neurocognitive

neurocognitive mechanisms

neurocognitive processes

neurocognitive techniques

neurodeterrence

neuroecology

neuroeconomics

neuropsychology

neuroscience

neuroscientific

neurotechnological

news

news coverage

news media

norms

North Korea

nuclear capability/opportunity

Observe, Orient, Decide, Act (OODA)

offensive space control

Open Source Intelligence

operational challenge

operational planning

operational time

operations

orbits pathway

organization

outer directeds

Pakistan

paradigm

perception

performance & protection

perspectives

persuasion

persuasion campaigns

persuasion messaging

**Philippines** 

PLA

political themes

population

power

power motivation

predictive analytics

proactive posture

projection

propaganda

propaganda detection

psychological

psychology

PSYOP (psychological operations)

**Public Affairs** 

Putin

radicalization

reactive posture

realpolitik

reflexive control

regime continuance

resolution

**Reward & Reallocation** 

rhetorical device

risk

risk assessment

risk-confusion

ROK (Republic of Korea)

Russia

Russian election manipulation

Russian identity

Russian minorities

**Russian-Estonians** 

scene-act narrative

security

security concerns

self-actualization

self-disclosure

self-interest

sequencing

Shia Crescent

Silent Quest

simulation

situational

social capital

social engineering

social media

social network analysis

social networks

social psychology

sociotechnical space

Songun

South China Sea

South Korea

sovereignty

Soviet

space

space control

space epochs

space influence/deterrence

space operations

space power

speeches

stability

START (Universit of Maryland's National Consortium for the Study of Terrorism and Responses to Terrorism)

state competitors

strategic ambiguity

strategic assessment

strategic communication

strategic narrative

super-synthesizers

supporting PSYOP objectives (SPO)

sustenance

sustenance-driven

Syria

Taliban

target audiences

technology

Telegram

terrorism

thematic content analysis

threat

threat perception

threat-based narratives

trends

Trump

Trump-Kim Summit

**Twitter** 

Ukraine

unintended consequences

unpredictability

**US Afghan policy** 

US global influence

US influence

**USCENTCOM** 

US-DiGIA (The Directory of Discoverable US Government Information Assets)

values
VEO (violent extremist organization)
Vietnam
violent extremism
virtual caliphate
warfare doctrine
Yanukovych
ZTE