

Counter-Da'esh Influence Operations Cognitive Space Narrative Simulation Insights



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Foreword: Brig Gen Moore, Joint Staff, Deputy Director for Global Operations (DDGO)

When planning to deal with any adversary or potential adversaries, it is essential to understand who they are, how they function, their strengths and vulnerabilities, and why they oppose us. Events over the course of the last year and a half highlight the importance of those factors as they relate to the Islamic State of Iraq and the Levant (ISIL or Da'esh). One of Da'esh's obvious strengths is its ability to propagate tailored messages that resonate with its audiences. If the US Government and our allies are to counter Da'esh effectively, we must attack this center of gravity.

The Joint Staff J-39 Strategic Multilayer Assessment (SMA) branch has been evaluating options in "Cognitive Space" to conduct Information Operations to disrupt Da'esh's ability to command and control forces, neutralize its ability to maintain or increase moral, political, and financial support as well as recruit foreign fighters. This SMA effort continues to identify methods to psychologically isolate Da'esh leaders from one another and their respective constituencies inside and outside of the organization. Furthermore, this SMA effort has been assessing the value of "integrated neuro-cognitive-narrative maneuver" approaches to develop messages and actions that are more likely to have intended effects and less likely to have undesirable unintended or collateral effects, as well as to evaluate message delivery methods more effectively and efficiently by developing campaigns that achieve undercutting effects.

The cornerstone of the effort was the execution of a simulation facilitated by the University of Maryland ICONS team, which sought to

- a. support the Psychological Operations (PSYOP) community in meeting training requirements in ways that reinforce the PSYOP process and enhance counter-Da'esh messaging.
- b. support the PSYOP community in integrating neuro-cognitive and social science concepts to refine counter-Da'esh message content and increase the effectiveness of the Information Operations (IO) campaign.
- c. assist the PSYOP community with understanding the operational environment (OE) and the human networks operating in the OE: friendly, threat, and neutral. Possible examples include providing a (Political, Military, Economic, Social, Information, and Infrastructure) PMESII-framed OE analysis and center of gravity analysis.

This white paper is a compilation of the key findings from the simulation.

Executive Summary: Ms. Sarah Canna, NSI

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Overview

At the request of Joint Staff/J-39, the Strategic Multilayer Assessment (SMA) program,¹ in coordination with United States Army Special Operations Command (USASOC) and the Department of Homeland Security (DHS), participated in a second² 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, designed and managed by the University of Maryland (see Chapter 6: Designing a PSYOP Wargame). ICONSnet was designed to advance participants' understanding of complex problems and strengthen their ability to make decisions, navigate crises, think strategically, and negotiate collaboratively. This platform was selected for the following, critical reasons.

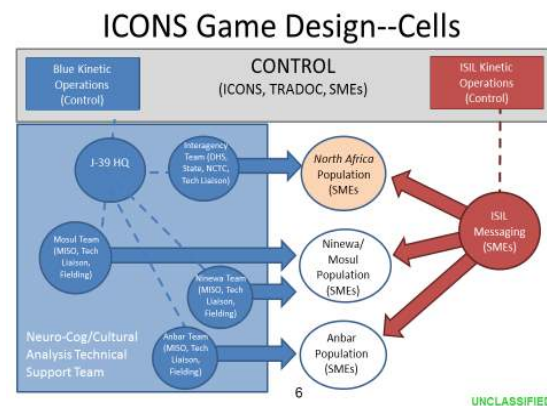
- **Online, distributed platform:** ran across a dozen time zones, three continents, and with over ninety participants



Figure 2 Distribution of Participants

challenged USG's operational tempo

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Figure 1 Team and Activity Structure

- **Operationally relevant:** provided an infrequent opportunity to test the effectiveness of USG messaging
 - **Regional expertise:** allowed 30 regional experts to provide real-time feedback from the perspective of various population segments
 - **Realistic:** supported the integration of audio, video, imagery, and other types of formats so that messaging came to the target audiences through the appropriate means or messengers
 - **Synchronous:** provide live feedback that

¹ Strategic Multi-Layer 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/J-39 DDGO and executed by ASD(R&E)/EC&P/RRTO.

² The first simulation was held in December 2015.

Key Takeaways

Compared to the December 2015 Counter-Da'esh Messaging simulation,

"This time the anti-ISIL side was doing it right. Volume of messaging? I know my wrist was cramping up!" – Mubin Shaikh, Red (Da'esh) team member, former Salafist activist, participant in both December 2015 and April 2016 simulations

This was a simulated environment, but preliminary results suggested lessons not only for PSYOP training but also for increasing the impact of messaging in forward operations. These results are described below.

The pre-simulation preparation and consequent volume of messaging that the Blue team was able to deploy during the April 2016 simulation appeared to confound Da'esh team efforts to deliver its own messaging and forced it into a reactive position vis-à-vis interacting with the White teams. What emerged from this simulation was the realization that an increased operational tempo within the narrative space, combined with embedded, virtual expertise from a cadre of multidisciplinary experts, appeared to increase the effectiveness³ of DoD messaging in the simulated narrative space.

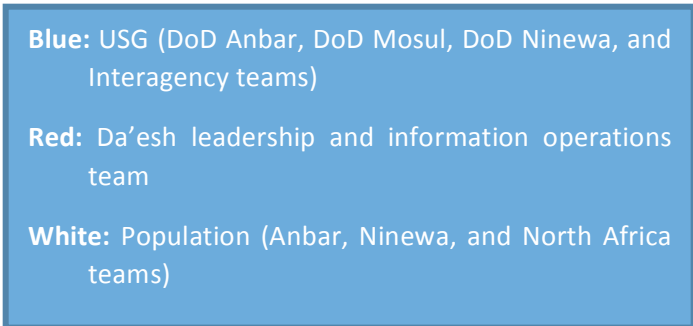


Figure 3. Description of "Blue, White, and Red" Teams

Enhancing PYSOP Training & Effectiveness

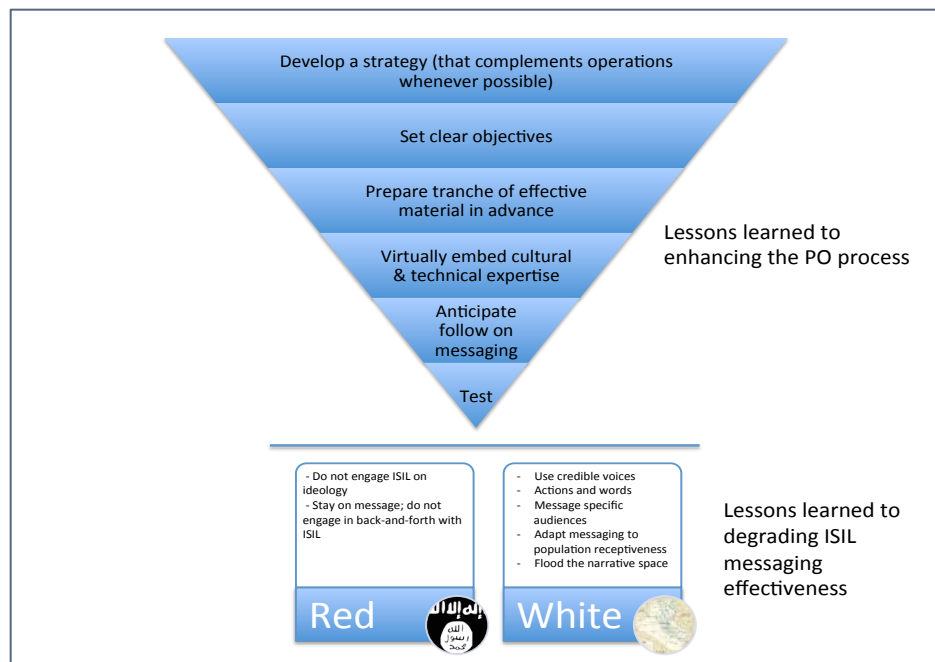


Figure 4 Counter Da'esh Messaging Simulation Lessons Learned

Several insights from the simulation suggest means of enhancing PSYOP training and message formation (visualized in the top part of Figure 4).

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

³ Message effectiveness was measured qualitatively through daily after-action surveys to White team members.

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
6. Test the effectiveness of messaging and continually refine the PSYOP training process in safe, simulated environments before fielding when possible

Degrading Da'esh Message Effectiveness

Several generalizations emerged from the simulation regarding the effectiveness of various kinds of messaging between the USG, Da'esh, and population teams.⁴ 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 be seen as credible 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.

This exercise illustrated the benefit of using virtual, simulation platforms for testing not only message effectiveness, but also PO training and operational effectiveness.

⁴ Blue Team: There were four Blue Teams: Blue Anbar, Blue Ninewa, Blue Mosul, and Interagency.

Red: team representing Da'esh leadership and information operations

White: There were three white teams: Anbar (violent Salafists, passive Salafists, politically neutral, Sunni Tribalists, and NeoBaathists); Ninewa/Mosul (violent Salafists, passive Salafists, politically neutral, Sunni Tribalists, and NeoBaathists, Iraqi Kurds); North Africa (only the population at risk of radicalization)

Chapter 1: Pre-Planning Process: LTC Rafael Linera, MAJ Gregory Seese, MAJ Patrick Taylor, and SFC Adam Liette, USASOC; & Drs. Pam Rutledge, Jerri Lynn Hogg, and Garry Hare, Fielding Graduate University; & Ms. Angie Mallory, Iowa State University

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This was a ground-breaking simulation that employed proven PSYOP doctrine combined with the latest 21st century social, behavioral, cognitive, and neuroscience models and applied them to neutralize, overcome, and ultimately dominate the narrative space—in real time.

Key components that contributed to simulation planning and execution were the

1. development of real life scenarios that was conducive to PSYOP planning, analysis, and collective efforts.
2. measurable goals and objectives that provided the behavioral framework and initial strategy for simulation participants.
3. detailed list of target audience vulnerabilities and susceptibilities (grievances, motivations in context to the situation and conditions). The reason for providing this upfront was to keep the simulation narrative development focused. The simulation was not meant to be a PSYOP planning or a target audience analysis exercise.
4. collegiate academic support to the teams focused on not only cultural advisement, but also on the social/behavior sciences aspects of influence. While PSYOP has traditionally had Master's degree and Ph.D. level cultural advisement support in the form of the Strategic Studies Detachment (SSD) in the 4th and 8th PSYOP Groups, these professionals typically lack a background in the social/behavioral sciences and are not able to provide the type of support needed for the influence of behavior.
5. field testing of Series level objectives requiring participants to break down their messages into what the Target Audiences needs to 'know,' 'believe,' 'feel,' and 'do' provided detailed left/right limits for message approval that was conducive to real-time messaging. In traditional doctrine, only the general theme is approved and each individual message must go back through a lengthy approval process that is time consuming and hinders the neutralization and overcoming of enemy/adversarial messages and actions. Not only did this methodology result in better narratives (it assisted participants to ensure they tied vulnerabilities/susceptibilities into messaging), but it also allowed them to develop a variety of messages all tied into the pre-approved series level objectives (thus not requiring re-approval of each message).

Recommendations:

1. Integrate Series level objectives into PSYOP doctrine to improve the quality of narratives and to facilitate rapid real-time messaging, allowing teams to not only neutralize adversarial propaganda, but to seize the initiative and control and dominate the narratives in the cognitive battlespace.

2. Provide additional funding for the 4th and 8th Group Strategic Studies Detachments (SSD) and—in addition to the cultural experts—include Ph.D.-level social/neuro-cognitive/behavioral scientists.

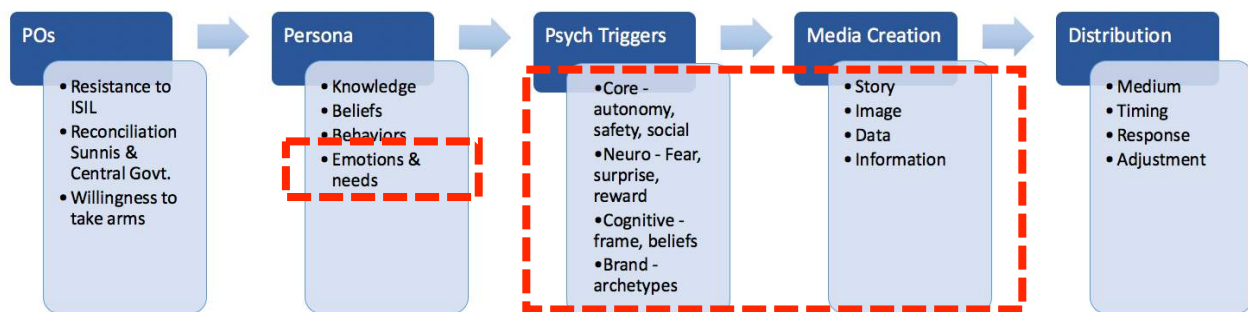
3. Invest in educational opportunities for PSYOP non-commissioned officers (NCOs) and officers with an emphasis on the social, behavioral, cognitive, and neurosciences.

Blue Team Anbar

Pre-planning improved strategic and real time messaging. Pre-planned content allowed for multi-level assaults—strategic long-term narratives and responsive messaging. Specifically, it

1. ensured integration of psychological drivers into commander’s intent. The ‘Brand Psychology’ and ‘Audience Engagement’ approach combined with PSYOP processes established parameters for the real-time messaging.
2. increased ability to counter enemy “noise” in social space, freeing up practitioners to more easily monitor current communication while maintaining a robust presence.
3. enabled rapid testing, adjusting, eliminating, or amplifying in the field to promote successful messaging and more efficiently deploy resources.
4. encouraged innovative narrative strategies that model desired behaviors through edu-entertainment⁵ rather than “selling.” This documented approach effectively shifts beliefs and promotes behavior change.

Blue Team Anbar had three primary pre-planning goals: 1) to integrate PSYOP messaging process with the media psychology that is the foundation for Fielding’s brand psychology and audience engagement curriculum (See flow chart); 2) to create media strategies, tactics, and preliminary media assets within the approved scenario parameters; and 3) to establish working relationships among PSYOP practitioners, Fielding’s media psychologists, and the technical liaisons. These relationships were necessary to expand the PSYOP messaging process to include pre-approved narrative channels that allowed for real time message creation that could be rapidly tested in the field.



Integration of media psychology into PSYOP messaging process by extending persona development into emotions and needs, and using psychological theory as a framework for media development, design, and distribution decisions.

⁵ “Entertainment Education for Behavior Change....examines and teaches ways in which education can be subtly but effectively worked into both new and time-honored genres of entertainment to foster positive behavior change and life improvement... [as it focuses on the] ability to understand the ingredients of successful entertainment (emotions, empathy, efficacy, and empowerment) and how these ingredients can be employed to enhance social and personal health and life skills.” Ref:

<http://ocw.jhsph.edu/index.cfm/go/viewCourse/course/EntertainmentEducation/coursePage/index/>

Results and Best Practices:


The initial results were promising. Team members had good relationships due to the embedding process. However, communication was hampered by PSYOP members' conflicting demands that resulting in limited availability. Uneven contact hampered integration of Fielding framework into PSYOP process resulting in a narrower message lane and less developed strategy throughout the simulation.

Blue Team Ninewa

In the pre-planning process, Blue Team Ninewa's objectives were to 1) develop personas based the target audience to inform PSYOP messaging process; 2) use positive psychology (strength-based psychological approach enabling individuals and communities to be empowered) to inform the strategy in media design; 3) collaborate with technical liaisons to assess environmental and cultural conditions influencing the target audience (TA) and potential message success; and 4) coordinate with PSYOP practitioners, Fielding's media psychologists, and the technical liaisons to create a best practices approach supporting PSYOP in field.

The Situation:	Da'esh is in control; Sunni Arab minority have struggled to adapt to their loss of power within the new Iraq.
TA:	Civic, religious, tribal leaders
Knowledge Objectives:	<ol style="list-style-type: none"> 1. Worsening conditions (corruption, significant cost of living increases, basic living needs not met (electricity, food/water, etc). 2. Kidnapping/indoctrination of children to be used as future fighters in Da'esh controlled areas. 3. Undermining of traditional tribal state and the old Iraq Da'esh excesses and extremism, stolen oil revenue) for those in Da'esh controlled areas
Belief Objectives:	<ol style="list-style-type: none"> 1. Liberating tribal fighters will help reestablish community morale 2. We know there's going to be change; and with Da'esh gone, we'll be able to create our own future as opposed to them dictating it for us. 3. We know what's best for us; Our community knows what's best for our community, not outsiders like Da'esh. 4. Fully supporting an uprising against Da'esh will rejuvenate Ninewa with a sense of victory and national unison; instill a sense of community morale and victory to our people 5. Supporting tribal fighters will provide a great service to the longevity, sustainability, and positive future for our nation

Desired Outcome:	<ol style="list-style-type: none"> 1) Regain social order and control as main influencer 2) Oust Da'esh. 3) restore human dignity.
Themes:	Community, family, authenticity
Metaphoric image:	

 <p>PICTURE</p>	<p>Age: 55 Sex: M Location: Ninewa Daily activity: community events, praying Religion: Islam Education: Post bachelor, Masters level Frustrations/Problem: lost influence, fear for the community, money to survive Needs: basic community resources (food, water, shelter), safety. Goal: regain social order Social status/income: Middle class</p>
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Integration of media psychology and brand psychology into PSYOP messaging process by creating personas with identified knowledge objectives, belief objectives, and desired outcomes using psychological theory as a framework for message development

Fielding's media psychologists worked together in researching TA in detail to capture the complexity of the Ninewa population to draft personas. The persona drafts were then submitted to technical liaisons, Blue Ninewa PSYOP members, and PSYOP control (USASOC G39) for feedback and approval to proceed. Drafted storyline and script for TA personas were created and submitted for approval. Media for six radio episodes along with announcements, handbills, and posters were produced. A launch plan was generated. PSYOP control, Fielding's media psychologists, and team-embedded TA analysts worked well and fluidly together.

Blue Team Mosul

The bulk of the pre-simulation planning was conducted by the Narrative Fusion Cell (NFC) with Operational Design and Target Audience Analysis being conducted with the input from the additional

members of the team. Narratives for each of the Target Audiences were submitted to USASOC G39 to provide the left and right limits of our strategy. During the simulation, the PSYOP Team Leader largely controlled messaging with significant input from the team regarding timing, phrasing of the narrative, and response to the White and Red cells injects. As the simulation was updated, daily battle rhythms and changes to the operational design were provided to all the team members prior to execution. To ensure continuity of the narrative and continued movement to the objective, Team Mosul staged 20-30 messages in the draft folder to allow for faster review by the team and subsequent dissemination.

Lessons Learned

The first lesson learned is the essential task of planning and pre-positioning messaging to keep the team on target during the hectic environment that is present during real-time messaging. Second, it is imperative that the messaging is adapted as the narrative develops to continue to move to the desired behavior. This can be informed by decision points placed throughout the design of the engagement strategy. Red and White Cell members were quick to disprove visual products, pointing out that they “looked western” or “had picture of the Shia.” In contrast, text-only narratives allowed for quicker adaption to the situation and mitigated information fratricide. A third lesson learned was the need to own the narrative space through repetition and mass messaging. This caused information overload, which effectively shut Red cell members out of the conversation. Fourth, we also observed that directly counter-messaging Red cell members could be ineffective as it results in an echo chamber with no resolution. Rather, messaging should be directed towards the TA in order to own the battle space and increase the effectiveness of the engagement. Finally, PSYOP typically is conducted to influence the TA to conduct physical activities, which have no measures of effectiveness in the narrative space. Rather, our engagement would have been more effective had the TA been encouraged to conduct activities within this dimension, hereby increasing the number of impact indicators that were observed during the simulation.⁶

Blue Mosul PSYOP Team Leader’s Reflections

Certainly, the simulation was one of the most difficult exercises that I have ever participated in, both due to the complexity of the information environment and the speed at which the narrative developed. It challenged me and required skills learned through DOD (to include MILDEC, EWIC, ACOPC, POQC, SLC, and three MIST rotations) in addition to professional education (MBA in Marketing, Media Psychology). The simulation is the model for the fusion of operations, intelligence, and academia, and would be a valuable validation exercise for advanced capabilities/operational cells prior to employment in theater.

We have talked internally here at the NFC about how we would replicate this strategy in real life if given the authority to do so in the PACOM AOR. This was a valuable exercise that challenged our team and required all the professional and academic training that we had received during our careers. I recommend that this simulation continue in order to prove the concept of real-time messaging by

⁶ Remarks from USASOC G39: Many of the team-members emphasized that we needed to enable the TA to act. Suggest tailoring future exercises to not only prevent action, but rather, that the TA’s indicate their action in the narrative space. On the other hand, while suggesting to create some behaviors that are conducted within the narrative space, they must eventually spill over into the real world. Suggest (in the future) having a wargaming session of just online behaviors.

PSYOP forces and to validate advanced education received by service members, such as the graduate certificate program and the capabilities of operational cells prior to employment in theatre.

Value of the Media Psychology Certificate Program

The certificate was invaluable to my ability to influence the narrative space. The two main points that I utilized were the use of transmedia and persona development. My engagement strategy was directly based on transmedia: understanding that a narrative can have a greater impact on the TA if it is supplemented through multiple conduits. Rather than working independently, all forms of media complement one another and have a greater level of influence when used concurrently. I replicated this approach during the simulation by posting narrative injects using social media, television, radio, SMS, key communicators, etc. During my pre-mission planning, I took the raw information gathered during target audience analysis to develop a persona (which I called the TA profile to avoid confusion with other utilizations of "persona") of each of the TAs to better understand their life, vulnerabilities, and their reactions to the messaging strategy.

Chapter 2: Develop Strategy: LTC Rafael Linera, MAJ Gregory Seese, MAJ Patrick Taylor, and SFC Adam Liette, USASOC, & Drs. Garry Hare, Pam Rutledge & Jerri-Lynn Hogg, Fielding Graduate University

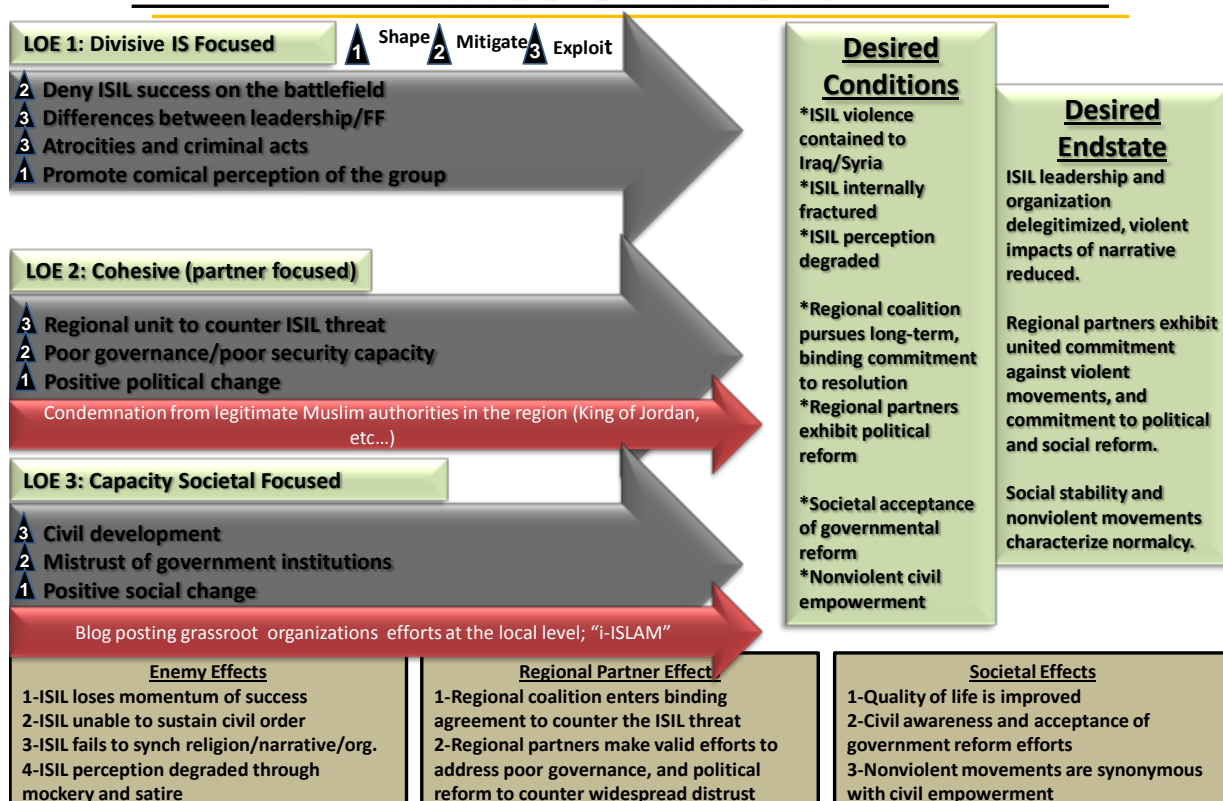
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Strategy Development Process

Having lines of efforts at the high operational/low strategic level with end states was essential for enabling local narratives to be developed that were based on the operational environment, both in the physical and cognitive realms, and at the local level.



Lines of Effort



The overarching operational design accounts for our three major target audience groups: potential supporters, adversary, and “free rider” (neutral). The lines of effort are specifically constructed to be mutually supportive and allow the generation of local movements and support.

The lines of effort closely follow social movement theory and utilize elements of the “psychology of social change.” These elements and goals allowed the inherent phasing of local activities based on a Special Warfare construct. The design assumed that at the local level, the situation would be different by degree. A rigid phasing and structure would inhibit the ability of the local units to accomplish the overall objective. Examples are Blue Team Mosul’s enemy focus, and Blue Team Ninewa’s cohesive focus

in the initial phase to create “narrative and cognitive maneuver space,” setting a condition for the generation on ground movement like the FOM.

Reflecting Comments

In the words of CS Lewis, “Don't use words too big for the subject. Don't say infinitely when you mean very; otherwise you'll have no word left when you want to talk about something really infinite.”⁷ Words have true power only when linked together effectively into a narrative. Narratives create a story and framework that the human mind can understand in order to break down cognitive barriers. This narrative, in short, creates interest and in his seminal work, *The Logic of Collective Action*, Mancur Olson⁸ discusses the simple fact that “without an interest, there is no group.” This group interest is essential in narrative design. Narratives are transformative and have power, often using existing narratives to challenge dominant paradigms. It is essential to begin reframing and changing stories in the dominant culture to create more political possibility for social movements.

This understanding led to a few key points about strategic narrative design: 1) think holistically, 2) respect history, 3) appreciate context, 4) tell a story, 4) enlist collective values, 5) generate analogies, and 6) invite audience engagement.⁹ These parameters allowed for the development of lines of efforts at the high operational/low strategic level with end states, which was essential in enabling local narratives to be developed based on the operational environment in both the physical and cognitive realms at the local level. This approach to strategic narrative development supported and enhanced our maneuverability in the cognitive space.

Blue Team Anbar

Strategy Development Process

- Developed message template based on Brand Psychology & Audience Engagement curriculum
- Researched TA, initial scenarios, and drafted 16 potential narrative threads for multi-pronged messaging approach
- Submitted draft to technical liaisons, Blue Anbar PSYOP members, & Control for feedback and approval to proceed
- Produced media for eight of 16 potential threads, with launch plan

Strategy development happened in two stages: 1) preplanning of personas and narrative themes and 2) using the themes to guide real time messaging in response to scenario changes, interjects, and message flows.

Blue Team Anbar invested approximately 80 hours in developing narrative strategies that linked the PSYOP process with media psychology. This was evident in the persona development, the range of narrative strategies, and the media designed to triggers beliefs and emotions that lead to desired behaviors.

⁷ C.S. Lewis, *The Collected Works of CS Lewis*.

⁸ Mancur Olson, *Logic of Collective Action: Public Goods and the Theory of Groups* Rev. ed. (Cambridge, MA: Harvard University Press, 1971).

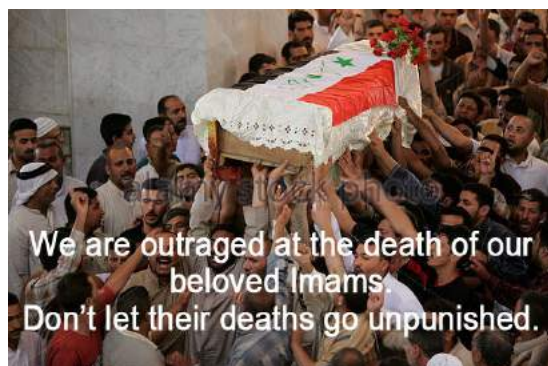
⁹ <http://strategic-narrative.net/> by Amy Zalman, 04 MAY 2016.

Blue Team Anbar researched and developed four personas based on the initial scenarios and drafted 16 potential narrative threads for a multi-pronged messaging approach. These were submitted to the technical liaisons for feedback and to control for approval. Based on feedback from the technical liaison and Control, Fielding members developed a range of visual, text, and video assets using eight of the 16 approved narrative threads.

Each thread targeted different emotional drivers to achieve the stated SPOs. A detailed release schedule accompanied the media designed for Day 1 to assure strategic continuity and coherence. This approach can be replicated in the field by estimating the messaging window surrounding the primary objective and operation timing.

Pre-planning facilitated the ability to adapt to radical scenario changes, allowing the team to quickly design and produce media that fit the initial narratives, adjusted for the radical shift in scenario for Blue Anbar.

Pre-planned content allowed for multi-level assaults—strategic long-term narratives and responsive messaging.



Examples of messaging prepared to challenge Da'esh image on Day 3 in response to scenario shift that put Da'esh in control of Ramadi, creating jobs and handing out money.

Developing a strategic plan with multiple narrative threads ensured the integration of psychological drivers into the commander's intent. We applied the Brand Psychology and Audience Engagement approach to the PSYOP processes in order to create parameters for the narrative channels submitted to Control for approval. This provided thematic guidelines for both the prepared and real-time messaging. The PSYOP tendency to focus on near-term measurable objectives can mean that longer-term narrative approaches are overlooked

A critical element of narrative combat is to have the ability to counter enemy "noise" in the narrative space. Releasing preplanned media assets freed practitioners to monitor the communication flows while maintaining a robust presence.

Multiple narrative threads and prepared assets enabled rapid testing so that practitioners in the field can quickly decide what works and what does not, and more efficiently deploy resources.

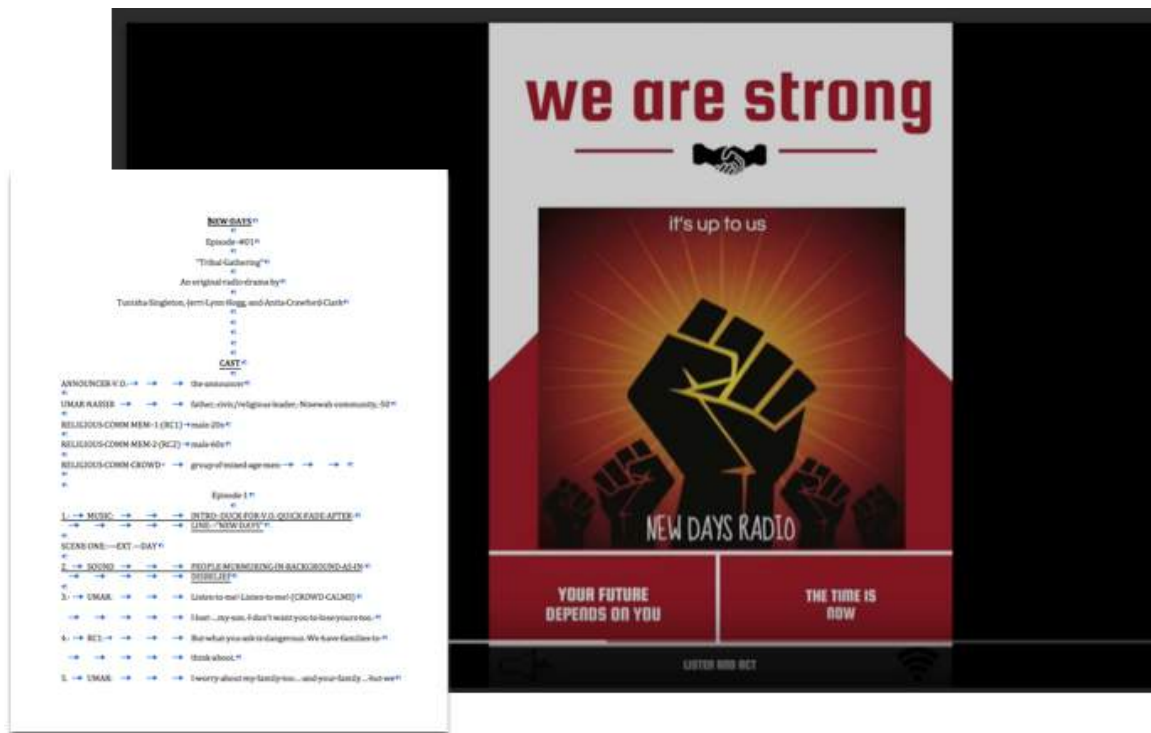
Preplanning encouraged more innovative narrative strategies, such as edu-entertainment and targeting supporting audiences, such as village women, rather than repetitively “selling” the same message to the same audience.

Blue Team Ninewa

Strategy Development Process

- Developed message template based on Brand Psychology & Audience Engagement curriculum
- Researched TA in detail to capture complexity of Ninewa population
- Submitted persona drafts to technical liaisons, Blue Ninewa PSYOP members, and Control for feedback and approval to proceed
- Drafted storyline and script for TA personas. Produced media for six radio episodes, plus announcements with launch plan

Strategy focused around forcing Da’esh from Ninewa and convincing the Ninewa population they must organize and rise up against Da’esh. The strategy was enacted by conveying a vision for the Ninewa population of a New Day they could create. The messaging tools were primarily based on a six-episode radio series featuring various members of the Ninewa population discussing how the future depends on them, that they are strong, that it is a New Day, and the time is now to organize against Da’esh.

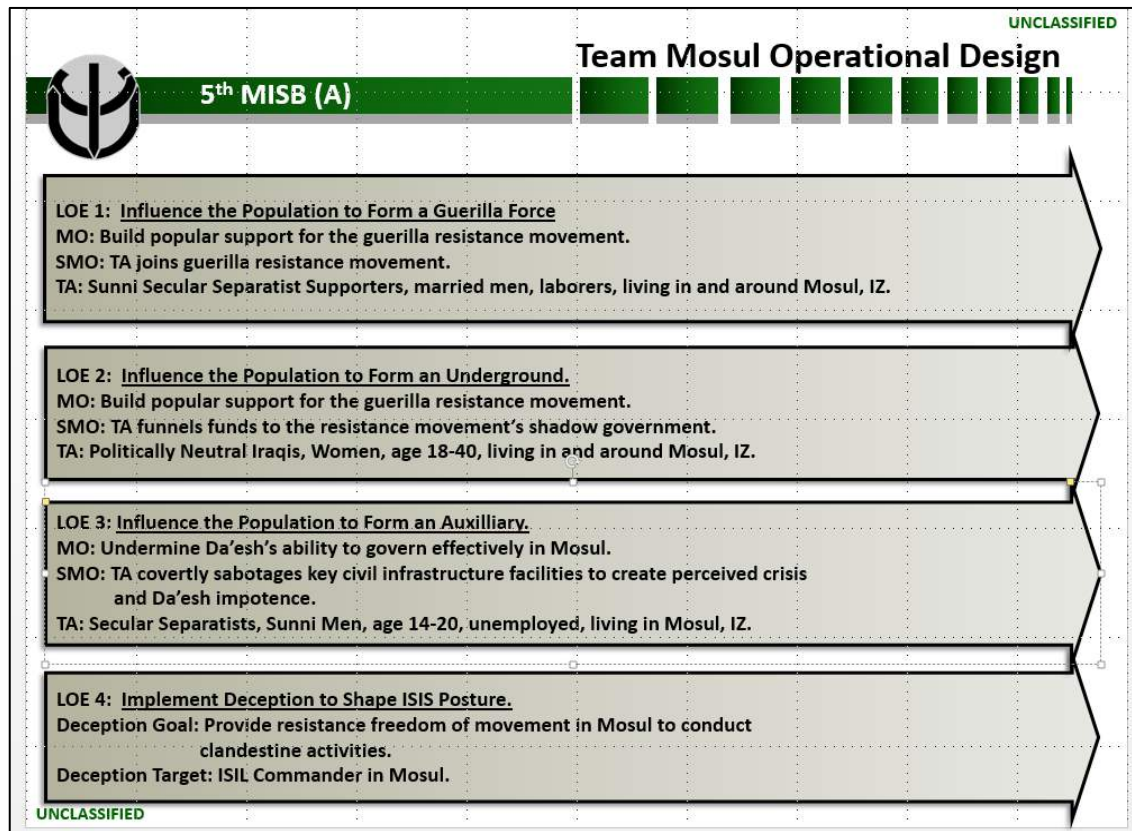


Blue Team Ninewa invested approximately 100 hours in developing target audience personas based the various contingencies of the Ninewa population, developing radio scripts, producing radio media, supporting announcements of the radio shows, and creating posters linked to the radio show and the New Day vision. All messaging was linked to the PSYOP process as well as media psychology theory and applications. PSYOP control reviewed all media and messaging completed in the preplanning.

Blue Team Mosul

Operational Design

The objective for Blue Team Mosul was to foment an uprising against the Da'esh occupation in Mosul, Iraq. To accomplish this scenario, the team devised an operational design that would task different segments of the population in order to form the three necessary components for unconventional warfare while simultaneously incorporating a deception strategy to influence Da'esh's posture.



Mosul Operation Design and Lines of Efforts

In order to implement this strategy, we incorporated four separate lines of effort to influence the population to form a guerilla force, an underground, and an auxiliary, with the deception effort occurring in the later stages of the simulation. Broadly speaking, our target audiences for these efforts were married men forming the guerilla force, married women as the underground, and unemployed teenage men as the auxiliary. These target audiences were chosen based on their ability to perform the desired behavior given the current situation within Mosul.


Persona Development

Blue Team Mosul also implemented persona development during the target audience analysis process to gain a better understanding of the TA, their vulnerabilities and motivations, and the anticipated response to narrative injects. The process of persona development also humanizes the target audience (TA), allowing the team to empathize with their plight and generate more effective strategies to counter the influence that Da'esh is able to maintain over their lives and minds. The target audience analysis

worksheets that were developed in support of the exercise were lengthy, in-depth documents that routinely exceeded twelve pages in length. As a result, the key facts, conditions, and vulnerabilities that were significant to the engagement strategy were often tedious to find and a true understanding of the various TAs difficult for all team members to immediately understand.

Mohammed Mosul

My name is Mohammed. I am a 30 years old Sunni Muslim, living in Mosul, Iraq with my wife and 3 children. My life has been marred with war, having lived through the days of the terrorism from our Islamic brothers and the US occupation of Iraq. Being of age during the early days of the war, I was forced into service, receiving training from the Iraqi Army and the foreign coalition invaders to help fight the terrorist groups. One of the happiest days of my life was when I was able to put aside my uniform and return to Mosul to start a family.



Back home, I began to work for my father as a merchant and quickly met my first wife. We were married shortly after and had our oldest son. I continued to work hard, and, despite the continued war, provided for my family and eventually being able to support a second wife. By this time, my family had grown with the addition of two daughters. Shortly after, the US pulled their forces from Mosul and control of the area was handed to the Iraqi government. Thus would begin another dark period, as the Shia apostates and their corrupt government officials stole the wealth from the people of Mosul and forced us to live under their decrees. To this day, I despise the treatment that we received from the Shia devils and would rather live under US occupation than return to those times.

Then came what we thought was our day of liberation: our Sunni brothers from the Islamic State, fresh from their conquest over the evil Assad in Syria, drove the Shia from our fair city and returned justice to our world. With jubilation we greeted them, even helping them when needed. We were told that we had nothing to fear as we were now blessed to live under the new Islamic Caliphate with the law to be applied based on the Sharia and the teachings of Mohammed (Peace Be Upon Him). IS quickly gained control and applied a new rule of law, helped us establish security for our new life living according to our faith.

Then, almost overnight, we awoke from our dream of peace to a new terror. Daesh harshly applied penalties to those that were caught breaking any aspect of the law. For the first time in my life, I was required to grow a beard and my wives covered from head to toe at all times.

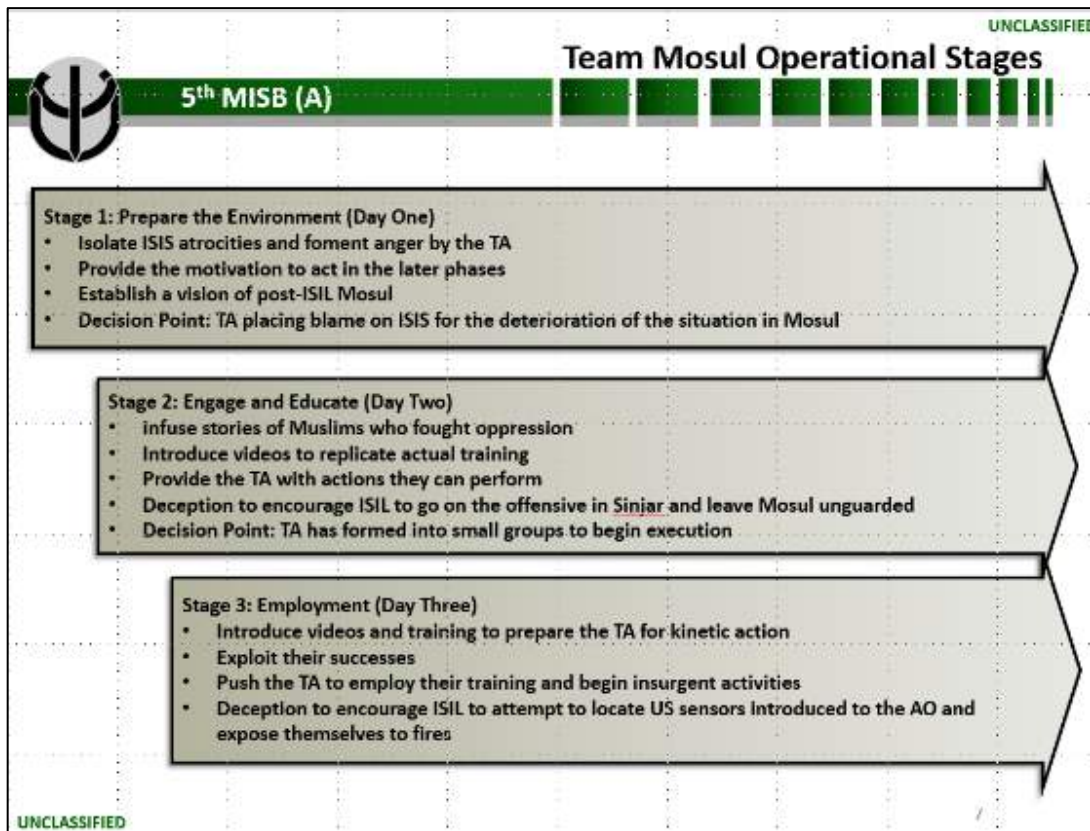
Target Audience Profile Example

To develop the personas, which were renamed into “TA Profiles” by the PSYOP team to avoid confusion with other uses of the word “persona,” information derived from target audience analysis was used to create the narrative for one member of the TA. Background information filled in the gaps in the TA’s life story through assumptions, historical facts, and information about the TA from the Technical Team. Team Mosul observed that this extra step in the planning process was highly effective in understanding the human element of the TA, allowing for better and more effective messaging during the exercise in addition to providing an analysis-derived product that could be quickly read and understood by other team members and higher headquarters. This facilitates greater team-driven development of the narrative injects that are essential to changing the behavior of the TA.

Once the target audience analysis and persona development was complete, the team began planning for the engagement strategy during the simulation. Through a FRAGO issued from the USASOC G39, the team was given the desired outcomes for each of the regions that are currently under Da’esh influence. By enabling the team to design their strategy within the construct of series-level objectives, this provided complete freedom of maneuver throughout the narrative space to influence the target audiences into performing the desired behaviors that would result in accomplishment of the end state.

For Mosul, this required the Blue team to develop a strategy that would encourage a popular uprising and revolt against the occupation. Nesting our efforts under the umbrella construct of unconventional

warfare (UW), the strategy would encompass three separate lines of effort to form the guerilla force, underground, and auxiliary components of a UW operation. Understanding that these three elements have differing activities in UW, a deliberate delineation was made to target three different target audiences to act as members of their respective UW component. Broadly speaking, the three primary target audiences that were developed for the campaign were: married men as the guerilla force, married women as the underground, and unemployed teenage men as the auxiliary. These three target audiences were selected primarily on their ability to conduct their respective UW activities given the restrictions that were placed upon them by Da’esh in Mosul.



Mosul Operation Stages

To form the stages of the strategy, Blue Team Mosul took the deliberate approach of segmenting the strategy into three distinct stages, which would occur on each of the three days of the simulation. Using the same tactics that are employed by violent extremist organizations (VEOs) during their recruitment process, the stages were staggered to (1) build upon existing vulnerabilities and grievances by the target audience, (2) engage and educate the target audience on activities that they can conduct to resist Da’esh occupation, and (3) encourage adoption of the activities in the narrative and physical space. Expanding upon the personas that were developed during the target audience analysis phase, the team sought to predict the response that the TA would have to the various narrative injects in order to shape the dissemination plan. The predictions made during the planning process turned out to be accurate, as the TA began to seek information about what they could do to resist the Da’esh occupation, rather than simply being compelled to act proactively.

Lessons Learned

While the engagement strategy was effective, it would have been more powerful had behaviors been suggested that were less kinetic and more accessible to the TA (see 198 Methods of Nonviolent Action for a consolidated list of protest and persuasion activities) in addition to facilitating a decrease in fear of retaliation by Da'esh forces. The staging of these narratives was such that the TA would be gradually introduced with increasingly more difficult activities that would build to outright revolt against Da'esh. In addition, most of the behaviors that were encouraged through messaging took place in the physical realm, which could not be measured or observed in the narrative space. Going forward, counter-narrative messaging needs to encourage a series of behaviors that can be executed in the narrative space, such as countering Da'esh propaganda, organizing groups online, or posting pro-Iraqi/resistance propaganda. The effect of owning the narrative space cannot be understated, as we have seen the effect of Da'esh controlling the narrative battle space during their rise to power.



198 Methods of Nonviolent Action

Take Aways

1. The result of the planning process was the development of the series narrative, which was sent to USASOC G39 (PSYOP control, simulation J39 and Headquarters Element) for approval and de-confliction.

2. **Once a narrative was approved, the team would have their left and right limits, within which they had total control and authority to adapt their narrative injects** to continue to move towards the desired end state.

3. This was essential to **allowing flexibility and adaptation** when the White cell members would respond to injects with questions or concerns regarding the desired behavior. Rephrasing or **a complete rework of the narrative injects would become critical and would not have been possible had authority been required for each individual dissemination.**

4. In addition to encouraging the TA to perform activities that actively counter Da'esh control of Mosul, the **team implemented a series of deception narratives into the operational design, with the deception goal of providing the TA with freedom of movement to conduct their activities in the city.**

a. **Through a war-gaming session with the other members of the team, the deception concept was refined to be rooted in believable events on the ground, with cultural experts providing feedback on Da'esh's strategy should the narrative be true.**

b. This was reworked several times—with contingency plans in place should the situation change or Da'esh not respond in a way that was anticipated. **Similar to the TA, this strategy would have been more effective had deception been focused on achieving deception goals in the narrative space, such as baiting Red cell role players into contradicting themselves or changing their narrative.**

Chapter 3: Execute your Strategy: LTC Rafael Linera, MAJ Gregory Seese, MAJ Patrick Taylor, and SFC Adam Liette, USASOC; Drs. Pam Rutledge, Christophe Morin, Jerri Lynn Hogg, and Garry Hare, Fielding Graduate University; & Ms. Angie Mallory, Iowa State University

Blue Team Anbar

Blue Team Anbar had mixed success integrating all team members, which highlighted several important factors for successfully engaging an audience and holding the narrative space.

Multi-disciplinary teams are critical. Reach back to unseen experts does not work. Our experience of communication breakdowns showed that goodwill is not enough to bridge the gap. Integration of cultural, psychological, and media production expertise is essential for authentic and specific messaging strategies from inception of primary narrative threads to actual media creation. The hesitation to involve experts at an early stage is destructive to success and team cohesion. Communication training can also address the differences between civilian and military communication styles, expectations, respect, and trust.

Embedded experts are critical. Technical Team integration is essential to enhance authenticity and specificity from inception of primary narrative threads to actual media creation. Team integration would benefit from communication training to address any military vs. civilian behavioral patterns and improve collaboration.

Da'esh's brand exists at multiple levels. Engaging a specific target audience and maintaining control of the narrative space is frequently not the same thing. This underscores the need for multi-prong message approach and more nuanced target audiences.

Messaging is a chess game. PSYOP practitioners would benefit from learning skills that help them think strategically rather than reactively beyond the first move. Relevant skills include 1) developing and protecting a brand narrative; 2) identifying psychological drivers of audience engagement beyond grievances such as affiliation, meaning, power, fear, identity, emotion, and instinct; and 3) strategic message planning—choice of medium, anticipating response, defending messages, counter-messaging, and strategic timing.



Example of media created to inspire hope. When trust has been lost, these need to be accompanied by concrete evidence.

A clear future vision is needed to anchor message strategies no matter what the PSYOP objective is. Disrupting the narrative space and motivating behavior change means painting a compelling and emotional picture of a desirable future to compete with Da'esh's brand story of a utopian caliphate. Messaging that undermined Da'esh's brand did not fill the vacuum of uncertainty because it lacked specifics and proof. Behavior change comes from being able to "see" the future. The need remains for a clear vision corroborated

by action to encourage the optimism and beliefs that lead to willingness to act.

Simulation Benefits

- 1) Allowed us to identify process issues that can be resolved with greater familiarity with ICONS platform
- 2) Highlighted the importance of getting the right medium-message fit
- 3) Emphasized the need for a deep understanding of the TA to create authentic narratives
- 4) Highlighted the necessity of better clarification of team expectations regarding roles, interaction, access, and participation

Simulation Challenges

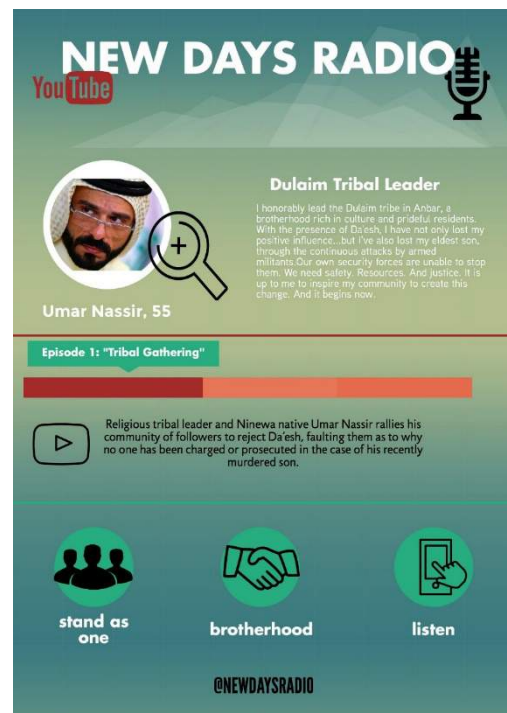
- 1) Difficulty achieving consistent integration between various team components
- 2) Limited ability to promise resources necessary to create a positive vision of the future—particularly in Day 3 when Anbar scenario shift had Da'esh providing much needed services
- 3) Direct focus on measurable objectives means longer-term narrative approaches are over-looked

Blue Team Ninewa

Blue Team Ninewa had a proactive technical liaison that provided a range of information and ideas from concept strategy to media production. *Pre-planning meetings between Fielding's media psychologist and the technical liaison (and later in the process the PSYOP members) added to the fluidity and response time while in simulation.* The team was truly able to act as a group engaging the audience.

Maintained narrative focus is critical. The focus on a positive future vision appeared to get good traction during the simulation. Media was created and rolled out on schedule with the specific vision to the community working together to oust Da'esh. Messaging followed to support the created media argument (creating a New Day—positive vision) and stayed on message while also linking to message. *Preplanning and scheduling provided a good foundation, freeing up team members to monitor and react to other messages in real time while still holding the narrative space.*

Team integration is important. Time was spent in the preplanning period to learn team members' strengths and expertise as well as to design specific tasks that best supported their knowledge and proficiencies. There were a few challenges in achieving integration among various team components due to change in schedule and personal family emergency of some of the PSYOP members. *Having a multi-disciplinary team*—as well as time for team members to become adept in collaboration—



Example of media created to announce the radio episode while also supporting the vision of a New

strengthened team effectiveness and efficiency.

Long-term vision needs to be actionable. In *pre-planning*, the message was specifically focused on *empowerment*. All media (radio, recorded radio for social media posting, announcements, and posters) were specifically designed around the message.

The real-time responses in the simulation need to be continually linked to the vision of empowerment and the ability of the community to create a 'New Day' narrative strategy. During the simulation, it became clear that the New Day narrative strategy, while effective, fell short due to the inability to provide actionable steps with concrete resources.

Simulation Benefits

- 1) Proactive technical liaison provided a range of information and ideas from concept to media production
- 2) Maintained narrative focus on positive future vision, which appeared to get good traction
- 3) Preplanning and scheduling provided good foundation, freeing up team to monitor and react to other messages in real time

Simulation Challenges

- 1) Difficulty achieving integration among various team components
- 2) Focus on empowerment was limited by inability to provide actionable steps with concrete resources

Recommendation

Create messages containing actionable steps to follow and support vision messaging: When the messages garner attention and interest, it is essential to have an outline of next steps (behaviors) that can be messaged for action.

Blue Team Mosul

The strategy was executed in three stages, each taking place on a separate day of the simulation. Stage one was designed to prepare the environment by highlighting the atrocities that Da'esh had committed during their two-year occupation and directing the anger of the TA towards Da'esh. Stage two was designed to engage and educate the TA by inserting messaging that would remotely train the TA in



Sample Print Product Disseminated During Simulation

various skills, such as weapons use, tradecraft, and clandestine communication. Deception was introduced in this stage, with the goal of encouraging Da'esh to resume offensive operations outside of Mosul, leaving the TA with freedom of movement in the city. Day three was the employment stage, where the TA was introduced to tactics such as battle drills and pushed to join the resistance force currently active in Mosul. Deception was continued in this stage, with the goal of encouraging Da'esh fighters to search for US geo-sensors that had been

introduced to the simulation and expose themselves to fire.

Team Mosul entered into the simulation with a fairly good idea about what to anticipate and how the narrative would be constructed. Quickly, the Red and White cell members were able to confuse the team through rapid engagement and rebuttals of the dissemination points. As a result, the team spent a significant amount of time trying react to the various messages, but found they were unable to keep up with their messaging. Quickly, we discovered that the products that were created prior to the simulation became irrelevant, as the emerging information and perceptions of the TA rendered many of our messages inoperable. This was expounded by the ability of both Red and White cell members to point out any mistakes that were made in the use of imagery and wording on the products.

In addition, direct counter-messaging to Red cell members, trying to disprove their arguments, was at best ineffective and may have even exposed our ignorance to the influence that Islam had on the TA. By the observation of the team leader, there were no successful instances of directly counter-messaging the Da'esh role players, as engagements would result in an effect similar to an echo chamber and required significant time to continue the conversation with little to no hope of resolution. However, as was done during the planning of the strategy, the team decided to use this strategy against Red cell during subsequent engagements. By inundating the narrative space with repeated messaging, we were able to replicate the same confusion and over-stimulation that we had experienced on day one. As a result, domination of the narrative space occurred and the team was able to diminish the noise from Red cell role players.



ICONS Dissemination Example

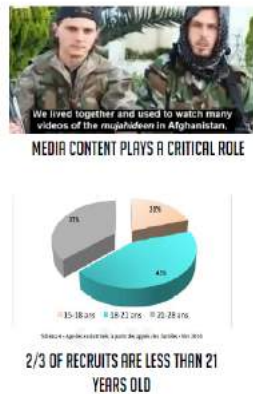
To adapt to the information environment, the team focused on messages that could be quickly edited to meet the needs of the TA as opposed to pre-positioned PDFs of print products. The ICONS platform contained a draft folder, into which narrative injects could be pre-positioned to allow for more rapid engagement with the environment, input from the technical team stored, and used to keep the team on track to achieving their strategic objectives. This was largely accomplished through describing the product that was to be disseminated in the text box, similar to line nine of the product/action worksheet, and pushing it out as quickly as possible. In a real-life scenario, the team anticipates that greater assets, to include cultural experts and 25-series personnel, would be essential to quickly turn

these concepts into products. However, the power of narrative-only injects cannot be undersold, especially when considering the cultural relevance and influence that story telling can have on the target audiences. Finally, while other groups planned the dissemination of their products based on timelines, Blue Team Mosul did so based on internal decision points that were planned prior to each engagement. Essentially, once we observed impact indicators that would conclude that the TA accepted the narrative injects, the strategy would continue to the next objective.

The final consideration that was noted with regards to strategy execution was the development of the scenario as a result of narrative injects and situational updates in the physical space. As the scenario was designed to take place over a period of months, this often required extensive adaptations to ensure that the strategy took into consideration the changes on the ground. To assure that the team would be able to achieve information dominance during the second and third day of the simulation, greater planning had to be conducted in between the engagements. The intelligence briefings were released the night before each engagement, allowing for the development of an order of battle and strategic messages were adapted to take advantage of developments and mitigate unintended consequences. The development of the Free Officer's Movement, a separatist group operating to counter Da'esh control in Mosul, was leveraged to provide the TA with a group that they would be able to organize around. Further potential rifts were exposed that lent themselves to deception to keep the Red cell participants confused and on the defensive. This deliberate approach was advantageous to allow the team leader to maintain control over the execution of the narrative strategy and ensure that messaging is tailored to meet the growing needs and desires of the TA.

Headquarters Anti-Da'esh Recruiting Efforts

TWO THIRD OF RECRUITS ARE LESS THAN 21 YEARS OLD



WHAT MESSAGES WORK ON TEENAGERS AND WHY?

- Visual warnings work better than text
- Adolescent are more likely to engage early-maturing subcortical structures than adults which respond better and faster to emotional messages
- Fear and threat-based messages tend to work more than humor



Recruits are joining Da'esh by the thousands around the world. They are young, impressionable, and driven by powerful motives. Only messages that are architected to trigger specific responses in targets can deliver results.

RECOMMENDED NARRATIVE STRATEGIES

	FACT-BASED	FEAR-BASED	HUMOR-BASED
Dominant Neurological process	Cognitive	Instinctive	Affective
Message specs	Numbers, logic, cognitive effort	Reject, disgust	Smile, laughter
PAIN (see next slides for details)	To be Powerless To be worthless To be rejected	To be Powerless To be worthless To be rejected	To be Powerless To be worthless To be rejected

A first round of such messages was designed to explore the emotional, visual, and cognitive boundaries of counterpropaganda campaigns—all within the approved narratives. These were divided in three major groups: FACT-BASED, FEAR-BASED, and HUMOR-BASED. Among these categories, they were tailored to hit topics such as COMMUNITY, ADVENTURE, REVENGE, and SEXUAL FRUSTRATION.

Given the relative young age of the target audience (teenagers, adolescents), it is very likely that fear-based messages will have the strongest impact. We are currently conducting the forensics on the messages that attained more traction to inform such hypothesis.

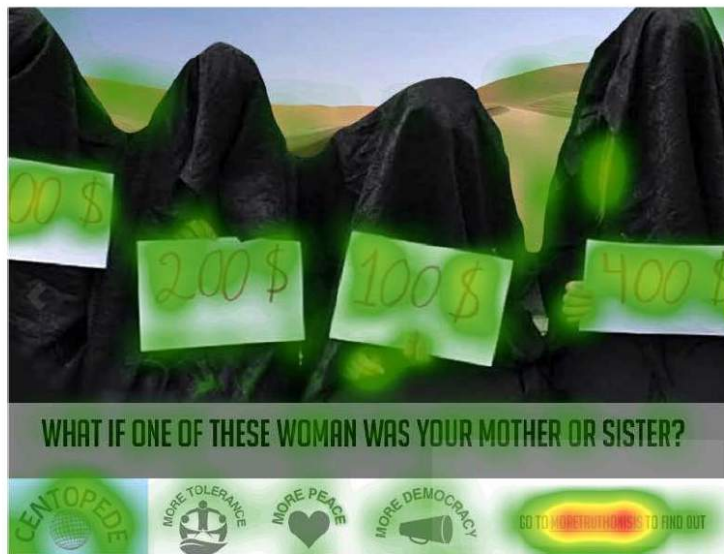
Predictive Eye Tracking of Each Message

Predictive eye tracking—a proof-of-concept demo of the some of the most valuable technologies that have appeared in the last few years to predict the effect of messages on the brain—served to pretest (neurotesting phase) products prior to their dissemination. Based on its execution, this kind of research methodology requires a rapid, nimble, and competent team of experts (a Special Operations team composed of professional neuroscientists).

Predictive eye tracking was utilized for each message. See example below.



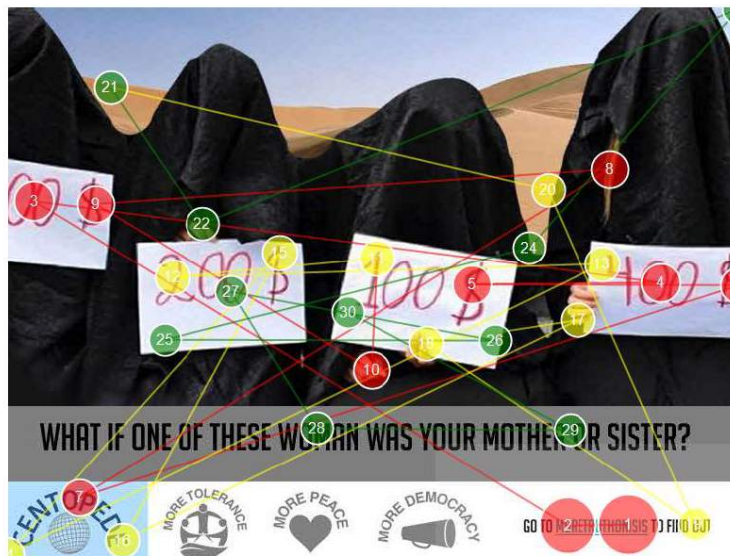
Predictive eye tracking simulates human vision and creates measurement reports that predict what a real human would be most likely to look at. The reports closely resemble a five seconds eye tracking session of 40 subjects.



The Attention Heat Map (AHP) displays the most attractive elements of the image in the form of "hot" and "cold" spots. The AHP report shows how areas of an image attract the attention. The heat map colors range from green through yellow to red. The colors are representing low (green), medium and high levels of attention (red), respectively. Areas with no color imply that this area will be ignored.



The Opacity Map (OP) removes areas that are not attractive and only visually displays what your viewers may perceive during the first few seconds of visual inspection. The most transparent areas are those that attract more attention. Use the OP report to identify which areas are being perceived and which are being ignored.



The Gaze Plot (GP) report visualizes the scan paths and order between elements inside the image. A GP report is also referred to as a scanpath report. It is made of a series of short stops (called fixations) and fast movements of an eye (called saccades). Fixations are marked with circles along with a number that state the order in which the eyes move between fixations. The first fixation is marked with the number (1). On average, fixations last for around 200 milliseconds (ms) during the reading of linguistic text, and 350 ms during the viewing of a scene. There are up to 30 fixations in the report, representing up to 7.5 seconds gaze path. (250ms x 30 = 7.5 seconds)

Predictive eye tracking is helpful during early stages of the creative development process but does not provide the reliability and depth of true eye tracking research.

Recommendation: Post-Simulation Testing

We recommend testing a selection of the messages that ran during the simulation using a suite of neurosensors to record autonomic and cognitive activity. Media Neuroscience focused companies such as SalesBrain have demonstrated that capturing neurodata below subjects' level of awareness contribute critical insights that can explain and predict the effect of messages on the brain.

Fielding Graduate University Reflection

Applying neuroscience tools and methods to pre-produced visual media can identify emotional triggers within message; however,

1. pre-produced media has limited value in real world settings—rapid communication is of high value.
2. a narrative and an individual message is not the same thing. J39's approval of the narrative should enable PSYOP to operate within it.
3. communication strategy needs to wrap back to the intelligence briefings. The most effective communication relates to observable events on the ground.
4. deception can be very effective and enables PSYOP to take and keep the initiative. Here too, the most effective messages need to be rooted in real or believable events on the ground.
5. ideological messages are pretty much a waste of time. Localized media (tribes, neighborhoods, etc.) are far more effective. Keep in mind that these messages will travel beyond the intended audience. Use this as strategy.
6. effective communication is both strategic and creative. The best way to train PSYOP practitioners is hands-on—put them in the communications environment, evaluate, and support as needed.

Iowa State University Reflections

Knowledge of pre-existing local narratives improves ability to tailor content in order to attach it to preexisting TA values. In addition to exploring what narratives get traction with the target populations, this simulation provided a window into what narratives already exists in these locations. While a proactive stance was stressed in order to overwhelm the Red team's bulk of messaging, it was vital to remain conscious that, just like kinetic forces butt up against one another, so the narratives we send encounter pre-existing narratives—narratives that are particular to small regions and populations and shift dynamically with local and world events.

One strong narrative already thriving in the region is that the Imams are the most valuable asset in the region because the people's hearts trust them to be above all the other mayhem. Blue team narratives had an opportunity to earn more credibility with the populations by acknowledging where the TA's value and trust already rested, rather than risk appearing to push an agenda.

Narratives must be actionable. It is important to reinforce the populations' existing narrative where it aligns with mission goals by initiating or facilitating actions, and by preparing the TA for action. The moment of strongest intent to act comes in the first moments of articulation of belief. The populations—especially in Ninewa—turned towards the Blue team's message. They were ready to act. That moment will pass if not capitalized on. For Blue team narratives to keep the ground they gained, they must be paired with actions or facilitate actions.

Points for further consideration:

- How can we facilitate protection of the Imams?
- Da'esh excelled at acting in concert with their own messaging and even framing the events they had no control over in a way that worked for their mission. It was repeatedly evident that this is an area where the Blue team's strategies can afford to grow.
- Narrative advantage requires resonance with the TA; current events can be used as evidence that backs up the narrative, but only if the narratives are couched in the context of actions and events every time.

Chapter 4: Maneuvering the Narrative Space—Understanding Relationships and Networks: Ms. Patricia DeGennaro and Mr. Adam B. Jonas, TRADOC G27 Operational Environment Training Support Center patricia.degennaro.ctr@mail.mil; adam.b.jonas.ctr@mail.mil

Any good speaker understands that you must know your audience and gauge how it is reacting to your message. Think about who they are, where they came from, and how they may respond to your speech or the message you are trying to send. Finally, how do you know if you were successful in your delivery? You note when heads nod, people laugh, stay silent, look sleepy or engaged. In person you can see, hear, and feel the pulse of the room. There is, however, a difference when the room is dark, all you can see and hear are the voices in your head, and you cannot always see immediate reaction. The art of influencing a person to take action, think differently, and question basic beliefs is not easy. Any attempt to do so requires avid preparation, study, and strategic operational thinking, engaging the cognitive, if you will, in order to attempt to convince others and lead them to the desired outcome.

In the most recent ICONS simulation, *Maneuvering in the Narrative Space*, approximately one hundred participants attempted to stage online interaction with Da’esh or IS as it is also known. This simulation put east against west, soldier against civilian, and natural tendencies, reactions, and bias against the human elements of the operating environment. An environment that could not be viewed by tangibles, but instead engaged players mentally so they had to go beyond the physical terrain and understand the human one, in other words culture, behavior, thought processes, and historical narratives that informed perceived realities in the information environment.

The challenge in identifying not only threats in the environment, but friendly and neutral elements ensued. Responding to each also found players in a conundrum. How should I respond? To whom should I respond? Should I respond or ignore? Is my strategy and management of it working? These are all questions that must be strategically considered in order to influence the target, which in this case is a person’s behavior.

Specific Elements of Learning

Without going into detail about the simulation, teams found that there were times when they were confused, overwhelmed, paralyzed, and engaged. These are all human responses to a cognitive

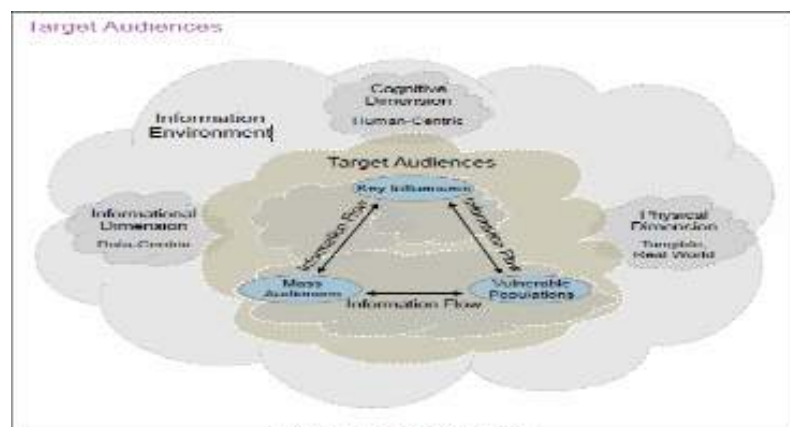
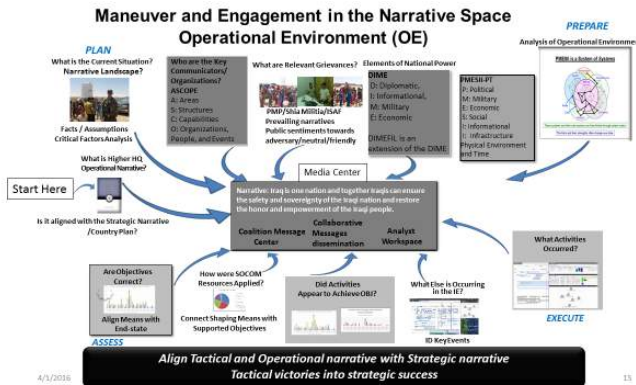


Figure 1-2. Target Audiences

challenge. To avoid some of these physical responses, teams prepared by understanding the Master Narrative, the Mission, and the audience(s) and understanding that there was more than one player in the information environment (IO). As seen, in the Joint Publication 3-13, Information Operations figure to the left, the IO is complex and encompasses a host of factors that must be considered in planning,

preparing, executing, and assessing the various dimensions.

After careful analysis and consideration of the environment, the teams went through the message planning exercise allowing them to identify what action they must influence in order to succeed with the mission within the context of a master narrative explained in detail in Chapter 5.



As noted in other chapters of this paper, the three-day simulation provided exceptional learning opportunities to the Blue teams. Some key takeaways in preparation were 1) messaging must be aligned with the overall master narrative coming from the command center of operations; 2) identifying the conduit used to disseminate a message could be the main difference in successful effects; and 3) developing a clear strategy for each

audience is essential. Different TAs hear, process, and perceive messages differently.

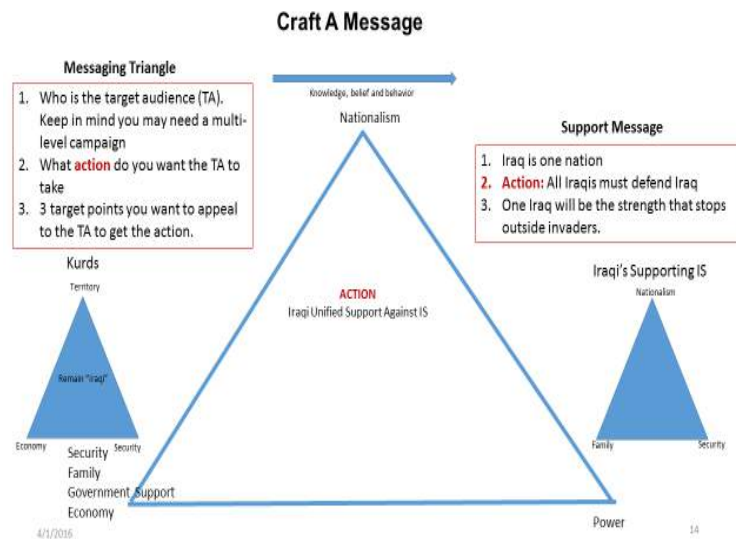
Bringing these lessons into the simulation from the beginning allowed Blue to prepare, adapt, and restructure targeting. Additionally, it allowed groups to identify and move to leverage friendly and neutral actors as well as those in the threat category.

Post simulation assessment:

The TRADOC G27 OE TSC provided two experts to assist in the simulation. Post simulation, parties had an exceptional opportunity to evaluate their participation. Our G27 team used social network analysis software in post simulation assessment, giving parties the ability to map their moves in an after action assessment. Further, participants were able to visualize consequences, or lack thereof, in its messaging.

Social network analysis (SNA) is a toolkit of statistical methods grounded in social science theory. SNA has exploded in popularity within the social sciences and in the popular press. SNA courses are taught within the DoD at TRADOC, Naval Postgraduate School (NPS), and West Point giving the group an opportunity to use it here.

This SNA focuses on what insights teams can gain from the communication network that emerged during each round of the ICONS exercise and which actors occupied certain positions within the network. SNA, a tool already being used to identify key players on the battlefield, could also help Blue discern White, Grey, and Red teams in the narrative space to target and tailor messaging.



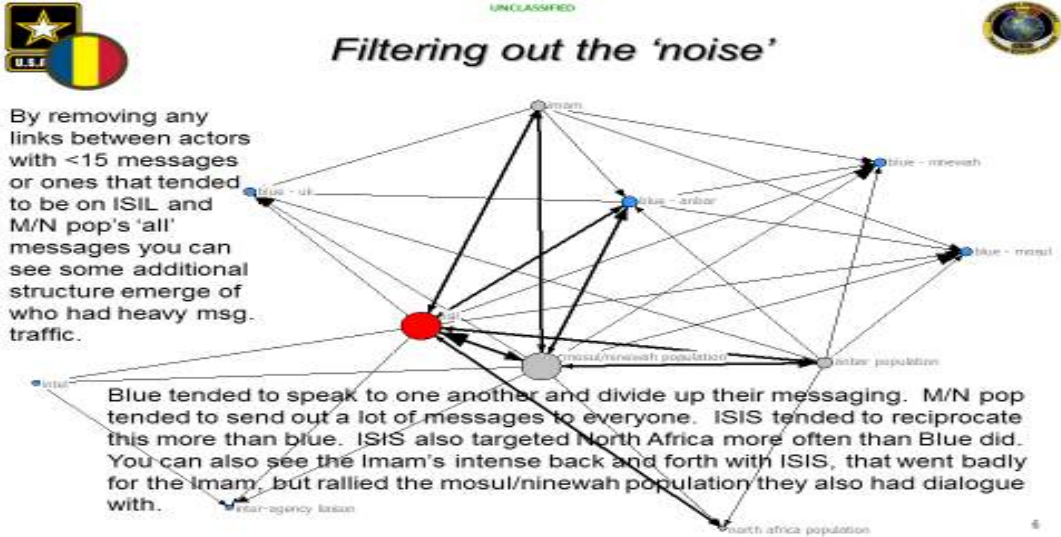


Figure 3 Slide Three

Slide 4 – Shows several of the most significant message chains that lasted over 7 messages. Red indicates the first message in the chain. Arrows indicate 'response to.' Size indicates how many responses within 'two steps' (e.g., response to responses of the message).

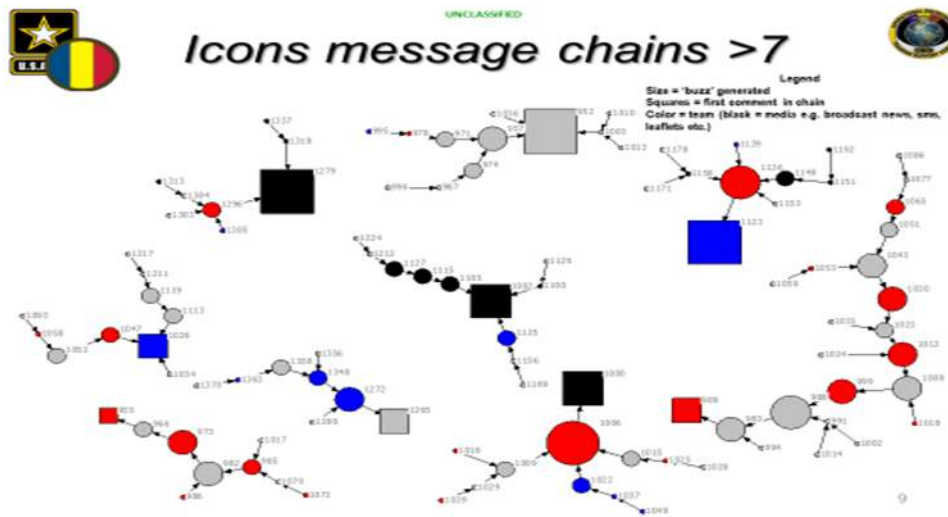


Figure 4 Slide Four

Key Outcomes: It appears Da'esh often got the 'first response' and framed future discussions. Blue tended to not participate as much in these more 'viral chains.' The largest chain, primarily between Da'esh and Mosul/Ninewa population, focused on the Kurds' trustworthiness. The longest message chain is 22 messages was starting with 999 – Da'esh messaging "the Kurds will abandon you." This indicates a target where Da'esh is successfully influence Mosul populations to mistrust the Kurds—it is clearly encouraging divisiveness between groups.

Other Messages of Note:

Message 952: Source: Imam in Mosul picked up by the Blue Anbar Imam and caused an Imam execution leading to 1279/1284 the death of the Imam leading to coalition against Da'esh.

Message 955: From Da'esh to Mosul: The American cowards hide behind their bombs and planes from thousands of feet in the sky. When they "liberate" they kill. Here Da'esh is playing to the narrative that blames the West for the chaos in Iraq.

KEY TAKE AWAY:

To directly assist Blue PSYOP teams in the field, simulations must be more representative of the operational environment (OE).

Examples include 1) teams had technical experts embedded in each Blue team but no media center or fusion cell to disseminate real-time information; 2) the simulation had challenges in exemplifying real theater experience since Blue teams strategized independently and not together—they did not communicate directly during the simulation, a disadvantage and loss of the opportunity to directly coordinate; and 3) Blue did not understand the 'Gray' players again due to lack of communication between teams.

Additionally, although limited in scope, real world social media networks are often more robust, SNA can help visual understanding of the battle space, but not completely map it. Only good data and experience can inform teams and commanders on how to be strategic about targeting your TA and provide clarity on over targeting yourself and others or missing the group you are actually hoping to shape.

Conclusion

In summary, there are many factors that reinforce maneuvering in the narrative space. Narrative network structuring is important; one must know the TA, the relationships between them, and the networks they operate in in order to be strategic and deliberate about the content. Messages that change the narrative network can change opinions. Through network analysis, teams can identify message broadcasters, targets, narrative frames, and key players. In essence, SNA provides an analytic tool backed by sociological and communication theory to inform moves.

All in all, SNA and other tools can assist Blue's maneuvering in the narrative space; it cannot, though, replace the continued focus on other in theater engagement and face to face encounters that supplement it. Nor can Blue ignore cultural, historical, or regional knowledge to inform what is seen in a visual networking map. But the bottom line is that simply producing counternarratives is insignificant. The social structures individuals are embedded in should not be ignored since they have been shown repeatedly to heavily influence behavior and individual cognition. Understanding these systems will increase your understanding of the IE/OE and how to more successfully operate there.

Chapter 5: Unified and Synchronized Communications—An Inter-Agency Perspective: Dr. Kay Mereish, Ms. Gia Harrigan, Dr. Susan Szmania, DHS & Dr. Gina Ligon, University of Nebraska, Omaha

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Abstract

While the Department of Defense mission is to defeat and degrade Da'esh as a terrorist network, structure, leadership, and material, the Department of Homeland Security (DHS) mission with regard to countering violent extremism (CVE) is to strengthen efforts to prevent extremists from radicalizing and mobilizing recruits in the homeland to violence. While DHS does not engage in specific counter-messaging activities, a goal of this effort was to determine how to leverage existing digital technologies and communications to engage, empower, and connect CVE stakeholders. Through this exercise, DHS worked with a variety of USG and civil society partners to understand and support CVE efforts. Furthermore, DHS currently leads an interagency "CVE Task Force" aimed at coordinating and prioritizing USG CVE activities, including digital engagement strategies and partnerships with private sector parties to pursue CVE-relevant tools. The following chapter will highlight lessons learned from the April exercise as they relate to the DHS CVE mission.

DHS is committed to understanding how violent extremists recruit and mobilize individuals to violence—including online—and DHS will prioritize support to communities that may be targeted by violent extremists.

One goal of the April simulation was to look at messaging targeting and impacting North Africa in order to align with current USG capabilities and legal restraints to conduct countermessaging campaigns outside of the United States. Although the messaging in the simulation did not necessarily directly target Westerners, the viral nature of the Internet and social media platforms may allow messages to spread further than their initial intended audience. DHS, as part of a whole of government approach to countermessaging, benefitted from understanding how these messages and counter messages echo

onto Western populations. As seen in Figure 1, messages and actions radiate out beyond their initial intended audience or actors. DHS, while focusing on the periphery of messages targeted at a foreign audience, still needs to coordinate its strategy with USG partners to ensure consistent approaches.

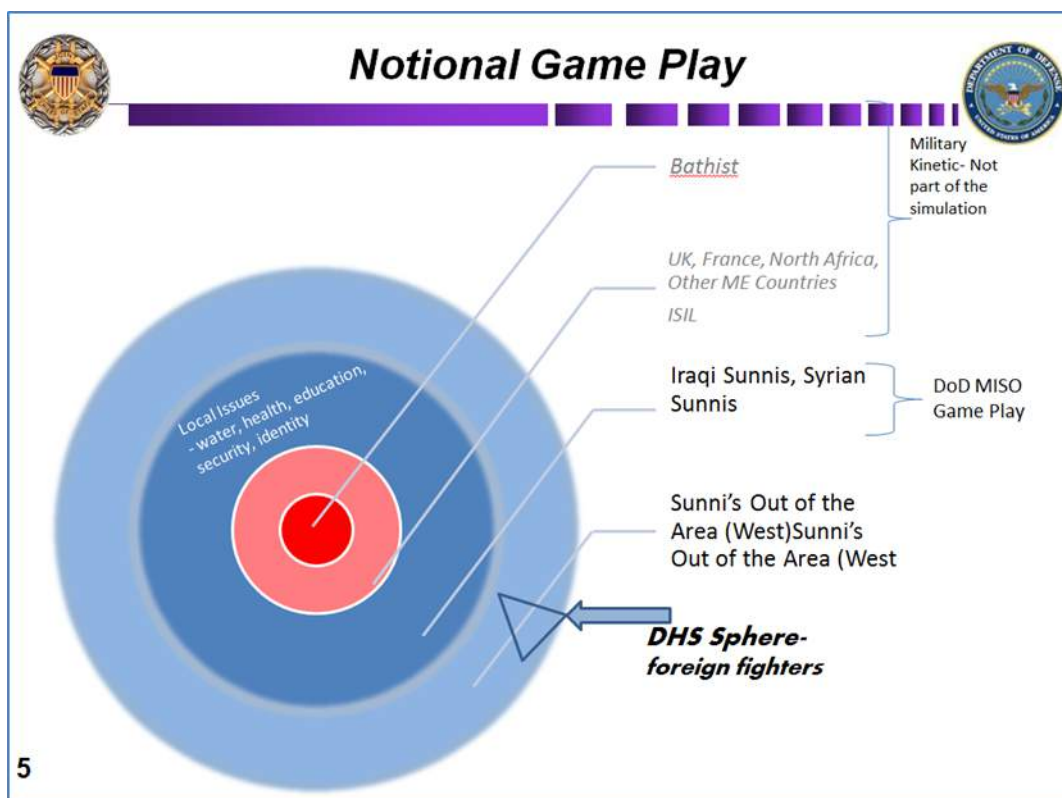


Figure 1. Messages echo outside of intended audience.

Accordingly, our DHS team supported a robust interagency team at the simulation exercise of April 2016. The DHS team and researchers from DHS academic Centers of Excellence (National Consortium for Studies of Terrorism and Responses to Terrorism (START) and the National Center for Risk and Economic Analysis of Terrorism Events (CREATE)) evaluated communications intended for certain White and Red teams for 2nd and 3rd order effects of potential to attract foreign fighters and provide this insight to community members so they are better informed of the threat and positioned to counter it.

Since DHS is not/not currently messaging directly on this issue, this exercise allowed DHS to explore the role it can play within the multiagency teams; Red, Blue, White, Technical, and Assessment teams, as a Blue cell (see Figure 2 for an illustration of cell dynamics and interplay). The National Counterterrorism Center (NCTC), the Department of State's (DoS) Global Engagement Center (GEC), the Transportation Security Administration (TSA), DHS Office for Community Partnerships (OCP), DHS Science and Technology Directorate, and DHS Intelligence and Analysis (I&A) focused on evaluating the messaging sent by the various Blue teams to Red and White populations. In addition, researchers from START and CREATE served as part of the Technical Team embedded with this Interagency Cell.

Lessons Learned

There were at least three important outcomes for the Interagency team during this exercise. First, we learned that the DoS GEC has a significant effort in counter-messaging that the Interagency can leverage. Because the role of the GEC is coordinating, integrating, and synchronizing all public communications of the United States Government directed toward foreign audiences abroad in order to counter the messaging and diminish the influence of international terrorist organizations and other violent extremists abroad (Executive Order 13721 of March 14, 2016), it has devoted resources to develop communication content. Through this exercise, we learned that the GEC offers overall narrative synchronization and a series of Thematic Guidance documents to ensure that there is a consistent, proactive message from the Coalition about Da'esh. For example, the Interagency team during the

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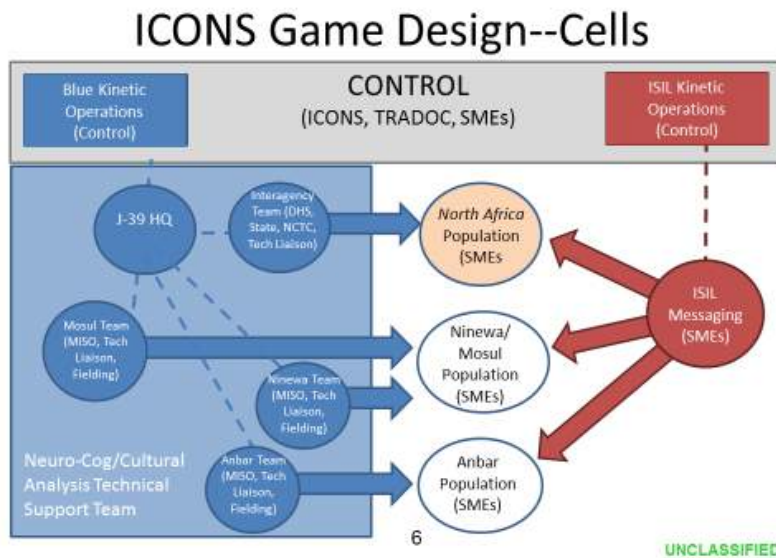


Figure 2 Inter-Agency Role as it related to exercise and game design

exercise established the narrative “United for All,” which shaped our messages to be positive, proactive, and consistent. While we did not ignore Da’esh content, we did not react to it message for message. This overarching narrative empowered members of our team to generate agency-specific communication strategies, (e.g., we developed potential wording for a press release for a high ranking member of DHS in wake of the simulated attack; this was done to reassure our domestic Community Partners that we stand with them in the face of the atrocities conducted by Da’esh).

Second, we learned that an important element of a communication strategy is that it is reinforced over time and with multiple, credible voices. By using the Thematic Guidance from the GEC, our Interagency team developed communications variants from soccer players, mothers, government officials, and other sources to reinforce our message. This facilitated our team staying on message rather than engaging with the “Red” team on specific threads and counter arguments. While Da’esh is able to “flood” social media with a high volume of messages,¹⁰ the high-level narrative approach to counter-messaging allowed Interagency members and their partners to reinforce truly engaging appeals for action across multiple media, message formats, and credible sources.

Third, we learned that there are significant efficiencies to be gained in the Interagency. For example, while DHS does not engage directly in messaging against Da’esh, the Office for Community Partnerships (OCP) could potentially benefit from leveraging Thematic Guidance from the GEC to reinforce the

¹⁰ DHS S&T Office of University Programs has sponsored START researchers at University of Nebraska Omaha to content code English-language messages on Da’esh forums and transient webpages; they have identified over 30,000 unique cyber objects posted in the last 12 months targeted toward English speakers.

messaging about the degradation of Da'esh's ability to govern, organize, and lead a successful state. However, in an After Action Review, our team discovered that there has been no systematic effort to assess the impact of GEC and coalition communications to foreigners abroad on individuals who may have ties to the Homeland. Thus, a potential way ahead is for DHS S&T to commission a study to examine GEC messaging campaigns as they relate to stop the flow of Foreign Terrorist Fighters domestically.

Finally, given research on inter-organizational collaboration, the nature of the problem of countering Da'esh messaging is complex and ill defined.¹¹ Thus, it requires that agencies do more than information sharing about their respective lines of effort; instead, we propose that members of the Interagency team form closely integrated work groups to facilitate collaborative problem solving in a cogent, innovative way. Moreover, one step of the PSYOP and GEC message generation process is to anticipate 2nd and 3rd order effects of a given message. By having a close working relationship with the DHS-CVE Taskforce as well as the DHS Office for Community Partnerships, message crafting teams can leverage expertise on domestic populations to better anticipate both positive and potentially deleterious outcomes associated with their messages. In addition, we learned through this exercise that there are sometimes duplicated I&A efforts occurring on the collection and analysis front; it may make sense for a more cohesive team effort across the Interagency to gain greater efficiencies in analyzing Da'esh messaging. Moreover, as the Office for Community Partnerships develops and manages counter narrative initiatives, such as the Peer-to-Peer Challenging Extremism (P2P) university student program, there could be potential ways to increase collaboration between the GEC and DHS. This might include providing P2P student teams with unclassified guidance on the communication strategies or tactics used by terrorist organizations or supporting research and analysis of online campaign measurement and metrics.¹²

Way-Ahead

Given the important lessons learned through this simulation, the Inter-Agency team has developed a series of questions to be examined. First, what is the communication strategy domestically against Da'esh? Given that there is a new DHS-CVE task force, with the related structure of the Office of Community Partnerships, what can be leveraged from the international communication strategy to reinforce messages domestically to vulnerable audiences and credible stakeholders? Our after action review of the exercise led to a concerted conversation about the way ahead for our individual teams to work together in person as well as electronically. We also found that there was true synergy through partnership: multiple agencies implementing the same narrative at the same time reinforced each other and had a greater impact on the target audience than uncoordinated social media "fights" with Da'esh messages and messengers. Consistency over time, echoed by multiple voices, helped the USG maintain control of the narrative from the tactical to strategic levels and forced Da'esh to fight defensively on our terms rather than set the agenda.

¹¹ DHS S&T CSD commissioned a study on collaboration between public and private partnerships that suggested that when the nature of the problem is complex, more integrated work groups should be stood up to increase collaboration among diverse stakeholders (Ligon, Derrick, Lundmark, Pleggenkuhle-Miles, 2015).

¹² Peer to Peer (P2P) Challenging Extremism is a public private partnership between EdVenture Partners and US federal agencies including the US Department of State and US Department of Homeland Security. The objective of P2P is to engage university students around the globe, while earning academic credit, to create narratives on social media to challenge violent extremist group recruitment. Since 2015, over 120 student teams have participated in P2P from universities and schools around the globe.

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Chapter 6: Influence Operations—Observations & Opportunities, Major Peter J. Reiley, Ph.D., USSOCOM

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This simulation represented a significant step toward closing the gap between evidence-based theory and its applied practice in the counter-Da'esh narrative space. This chapter offers additional, overarching observations and operational insight from the simulation and highlights some opportunities to enhance and expand the effort.

1. More frequent injects should simulate assessment information traditionally collected throughout the MISO process.
2. Leverage more kinetic operations to demonstrate and reinforce messages.
3. Rehearse broader Partner Nation and Interagency (IA) coordination and stress distinct roles and authorities among Blue team members in, and across, undeclared and declared areas of hostility.
4. Team training and composition requires more investigation and analysis.
5. Group related simulation messages graphically and relegate administrative conversations to a separate channel/posting board.

MISO Assessment Injects

The April simulation improved message quality and sheer overwhelming quantity; however, it is important to maintain focus on target audience attitudes and sentiment as impact indicators and evidence of effectiveness. The simulation provided measures of influence effectiveness primarily through end-of-day injects representing national “polling results” (based on White Team after-action surveys). Assessments are a central component of influence operations and should be incorporated early on and throughout the MISO process (JP 3-13.2, 2010). Assessment injects should be offered more frequently to represent/simulate information traditionally collected and analyzed throughout the MISO process from a range of assessment resources (e.g., additional White team-based/simulated: intelligence, open source data, commercial-off-the-shelf polling, qualitative/quantitative research, and more localized/targeted MISO assessments). Incorporating more of these elements into the simulation would mirror the intended operational use of assessments throughout the MISO process. Using a wider range of assessment resources could help train MISO personnel and familiarize them with the types of broadly available information that might be used to build a composite picture of effectiveness. Furthermore, exposing technical experts to the types of resources MISO personnel utilize, as well as the content these MISO personnel seek, may inform and guide the technical experts’ own research and future production of valuable assessment materials.

Kinetic Operations

While messaging in the narrative space should firmly remain the primary focus of this wargaming effort, these simulations should incorporate more kinetic operations with the express purpose of demonstrating and reinforcing messages. Da'esh repeatedly demonstrates an advantageous propensity to leverage kinetic operations and events to punctuate their messaging, regardless of whether or not

they themselves played a role in conducting these physical activities. In contrast, while the US continues to improve the strategic synchronization of influence and leverage IO as part of an integrated effort, IO (and particularly MISO) is still often viewed and employed in a strictly supporting or, more often than not, separate role from kinetic operations. As this wargaming effort reinforces, messaging operations cannot be an afterthought in a battle for hearts and minds. The complexity of incorporating more kinetic operations into the exercise to train, emphasize coordination, and support influence operations is ultimately a necessary and valuable step to address real-world operational needs.

As noted previously, target audiences are less receptive of USG messaging overall and these messages are only seen as credible when reinforced by actual actions. To support narratives aimed at the seeds of violent extremism, operations in the physical domains should extend beyond the DoD, and traditional military activities, to leverage IA capabilities as well as key non-USG influencers in Partner Nations (Lieber & Reiley, 2016). For example, integrating messaging efforts with active simulation participants from the Broadcasting Board of Governors (BBG) would engage broader audiences and provide factual information to undermine Da'esh disinformation in regions without a MISO or Department of State (DoS) presence. Furthermore, USAID exercise objectives could be included and synchronized simultaneously with messaging objectives to amplify influence efforts and address underlying sociological conditions, which leave populations vulnerable to the influence of violent extremist organizations.

Integrating these elements into the simulation with an informed bio-psycho-social perspective would allow Blue teams to harness the impact of operations in the physical domains to support messaging efforts in the information environment. Planning and conducting operations with messaging as the lead effort, punctuated by kinetic operations, will provide valuable lessons learned and perspectives for real-world operational challenges. These coordinated elements are extended and elaborated on in the following section.

Rehearse Broader Coordination

Future simulations should rehearse even broader Partner Nation and IA coordination and stress distinct roles, authorities, and attributions among Blue team members in, and across, undeclared and declared areas of hostility. As Chapter 5 discussed, different agencies have distinct roles and restrictions that must be addressed and coordinated to achieve a whole-of-government (and multinational) strategic communication effort. The recently released "DoS & USAID Joint Strategy on Countering Violent Extremism" (2016) outlined the DoS-Global Engagement Center's emerging responsibility to "coordinate, integrate, and synchronize US government public communications directed toward foreign audiences abroad, for the purposes of countering violent extremism" (p. 8). Combining this role with a broader counter-narrative effort presents several challenges, which would benefit from inclusion and consideration in the simulation. While each Blue team's members worked as a single body to engage audiences and disseminate messaging, testing the unique role of each organization represented in the Blue teams more thoroughly might improve coordination, provide a shared understanding of constraints/restraints, and highlight challenges (or provide potential solutions) for the execution of distinct operational roles. For example, some real-world operational challenges include using appropriate attributions when conducting MISO in different regions, engaging trans-regional target audiences, coordinating messaging designed to counter foreign fighter flow originating from inside the US and other Partner Nations, and assessing influence effectiveness in inaccessible regions.

Team Training and Composition

There were several noted benefits to embedding cultural and technical experts within the Blue teams that purportedly enhanced messaging and responsiveness. However, while teams with embedded experts in the second simulation were qualitatively more effective than the separated Technical “reach-back” Teams in the first simulation, training and onboarding interventions may improve the utilization of these Technical Teams. Knowledge sharing in distributed/virtual teams is driven by members’ awareness of and perceived access to applicable knowledge (Gupta, Mattarelli, Seshasai, & Broschak, 2009), as well as a shared sense of connectedness (i.e., the degree of social interaction and social relationships between members; Coakes, Coakes, & Rosenberg, 2008). Training interventions aimed at role familiarization, technical input expectations, task integration, and distributed/virtual teamwork may improve the Blue team MISO players’ interaction with and utilization of the Technical Teams. Endeavoring to use the Technical Teams more effectively may prove to be a more practical and operationally achievable approach than embedding experts into every MISO team, given the limited availability of these expert resources compared to the range and volume of global influence operations. Still, determining the superior team composition combination requires more investigation and analysis.

Simulation Messaging

Pertaining to the simulation’s functionality, an interface that groups related messaging graphically (e.g., Twitter-like replies, reposts, and utilizing the message tags) and relegating administrative questions/conversations to a separate channel/posting board might improve participants’ ability to interact and monitor messaging clearly in the simulated environment. While the message “tag” function was available, it did not seem to be utilized extensively by the teams. Linking conversations visually, and having more participants use the tags to group topics and messages, might help team members (and observers following multiple posts and conversations) track messages and locate previously posted MISO products referenced in later messages more efficiently. Having administrative messages intermixed with operational messages and conversations was also somewhat distracting and disruptive during the wargame.

Conclusion

Overall, the simulation provided valuable insight into creating a more balanced and informed scientist-practitioner approach to countering the Da’esh narrative. These observations and suggestions are intended to build on a solid foundation, offer insight into current and emerging challenges, and highlight opportunities to move toward a broader application of combined national and social influence to defeat the Da’esh threat.

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Chapter 7: Designing a PSYOP Wargame—Challenges, Successes, Lessons-Learned: Devin H. Ellis and Jonathan Wilkenfeld, ICONS Project, START, University of Maryland
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The genesis of this project was a series of studies and papers done under the auspices of TRADOC and the Joint Staff exploring ways to better counter-message Da’esh and outmaneuver them in the narrative space by leveraging the best practices from cognitive and social sciences, as well as marketing and communications. What the project team discovered was that the PSYOP community had relatively few opportunities to wargame the effectiveness of their messaging—especially in this critical arena. Once the Joint Staff effort to support USASOC with this gaming project was underway, serious design considerations had to be addressed: how would a distributed exercise like this be assembled to allow Blue to properly address the target audiences (in this case Iraqi and North African populations)? How would we structure Blue chain of command? In a distributed simulation, running over a relatively compressed period of time, and on an online platform, how best could we effectively represent and incorporate many different media platforms and types, as well as messaging vehicles? How would it be best to capture and then incorporate live feedback from the target audiences on the effectiveness of different aspects of the narrative campaigns?

Challenge: Exercise Design

Focusing on PSYOP as the main activity of a wargame, rather than as part of a full spectrum of Diplomatic Information Military and Economic (DIME) activities, is quite rare within the professional defense community. The members of the project team and the Blue leadership from USASOC and Fielding University met for two days in February at ICONS to hammer out an overall structure for the simulation and a work plan to get the teams assembled and trained by the April run-time. The team settled on a weeklong schedule, with *synchronous* rounds on Monday/Wednesday/Friday mornings, Eastern Time. Tuesday and Thursday would be used by the Control team, and the supporting technical experts and SMEs, to adjudicate the impact of different narrative campaigns on the storyline based on careful review of the live feedback and post-round questionnaires collected from the target audiences. Prior to the beginning of each subsequent round, a scenario update would be released, describing events which had transpired since the end of the

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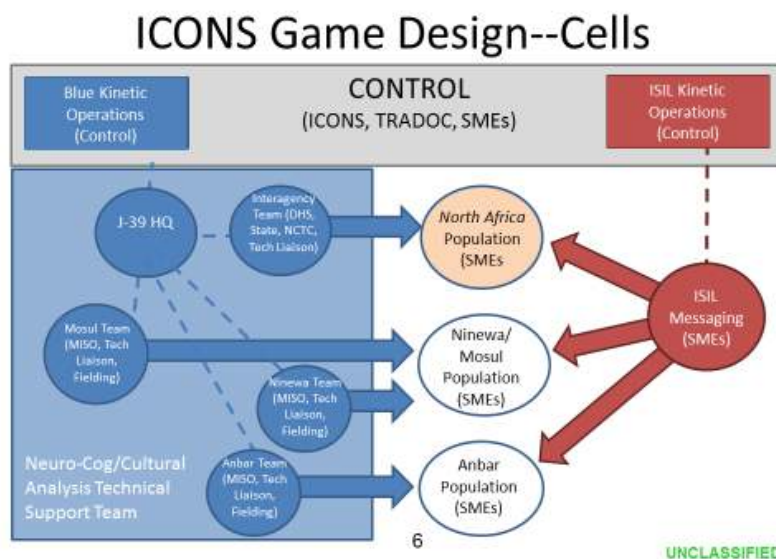


Figure 1 Team and Activity Structure

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simulation and a work plan to get the teams assembled and trained by the April run-time. The team settled on a weeklong schedule, with *synchronous* rounds on Monday/Wednesday/Friday mornings, Eastern Time. Tuesday and Thursday would be used by the Control team, and the supporting technical experts and SMEs, to adjudicate the impact of different narrative campaigns on the storyline based on careful review of the live feedback and post-round questionnaires collected from the target audiences. Prior to the beginning of each subsequent round, a scenario update would be released, describing events which had transpired since the end of the

last round and updating the state of play with regard to the population sentiment and activity towards both Blue and Red teams.

The team decided that since the goal of the simulation was to focus on narrative engagement, having the Blue and Red teams also responsible for kinetic and support operational decisions would potentially overwhelm the focus. For that reason all kinetic action—as well as events that would change the state of play in the scenario—were played out of the Control team. This left the participants to focus on the mission at hand. Figure 1 shows the structure of teams and allocation of activity, which was ultimately decided for the game.

In most ways, the overall structure and facilitation of the simulation was quite traditional for a wargame—which the team viewed as a positive. The focus would remain on the efficacy of the content rather than the novelty of design.

Challenge: Dynamic and Interactive Messaging in Real Time

The goal of having this exercise serve as both a test bed for messaging techniques and a training opportunity for PSYOP operators put a high premium on the reliability of the feedback messaging products received. As discussed in previous sections of this white paper, great care was taken in recruiting the players on the target audience population teams in order to provide as authentic and knowledgeable a spectrum of reactions to the Blue and Red products as possible. The next critical consideration was supporting a wide range of “platforms” and delivery methods for individual messaging strategies.

Any wargaming exercise requires a certain amount of suspension of disbelief—but the challenges of this exercise were higher than normal. The psychological response to both message content *and* the means by which it was conveyed were themselves the critical barometer of success, so it was important to emphasize realism wherever possible. The ICONSnet platform supported the integration of audio, video, imagery, and other types of formats with relative ease. The Blue teams worked diligently in the run-up to the simulation to produce multi-media content for their messaging campaigns—and to the degree that they could, used the off days of the exercise to update and add new material. However, some use of ‘wand-waving’ was unavoidable, given the time and budget constraints of the exercise, and target audiences were urged to try as hard as possible to fairly evaluate media content that was just *described* as opposed to actually being produced.

The final, critical element of supporting realism was to make sure that Blue and Red messaging came to the target audiences through the appropriate means. In developing this capability within ICONSnet, the design team adopted the term **modality** to describe the collection of platforms, venues, and people that would serve as ‘messengers’ for the Blue and Red content. A comprehensive list was generated and integrated into the ICONSnet messaging tool so that when Blue or Red players went to send out products, they could choose the appropriate **modality** to match the content and target audience. Figure 2 below is a screenshot of the tool in use during the simulation.

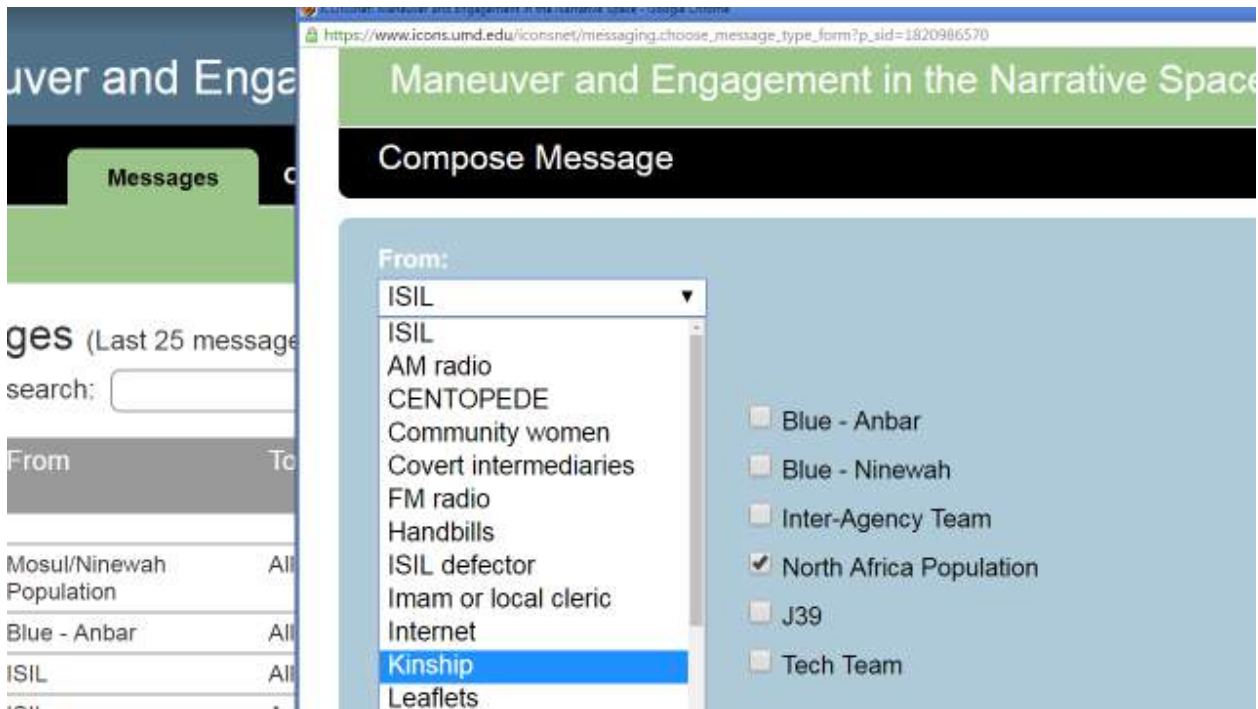


Figure 2: "Modality" Menu on Messaging Screen

Successes:

Overall, as described in the early sections of this white paper, the exercise was considered very successful. The USASOC team felt their key goals had been accomplished, and considerable learning on what messaging was and was not effective took place. Of particular note:

- The overall participation was extremely consistent and highly effective, with few technical or substantive issues, despite the exercise taking place across a dozen time zones and three continents, with over ninety participants.
- The newly developed features of the platform designed to support PSYOP gaming were viewed as largely effective and understandable by users and recipients alike.
- Pacing was brisk, with nearly 1,800 substantive messages sent in around six hours of synchronous play. Many participants noted that this created an overwhelming feeling that mimicked the real world media landscape.
- Participants and observers noted that in both process, as a proof of concept for PSYOP gaming, and in substance, the exercise contributed many interesting positive ideas for future development.

Lessons Learned

As with any concept in initial testing, there were many lessons learned for the future. A few of the more important:

- More 'affective' wrappers (making the modalities and the message content feel ever more realistic) would increase the effectiveness of the platform at serving the PSYOP

environment. The ICONS team suspected this to be the case from the outset, and it was confirmed by feedback from participants.

- Lengthening the exercise time wherever possible would serve the mission of testing message efficacy. In the real world, the psychological impact of effective narrative campaigns is difficult to gauge in the short-term. In this exercise, the team did its best to account for that with the modeling-supported adjudication in between rounds and the scenario updates. However, a longer exercise timeframe—perhaps played in short rounds every week or so over several months—would increase the subtlety and value of feedback from the target audience players.
- More scenario injects would have provided greater incentive to ‘shake up’ narrative campaigns and given the target audience teams a greater sense of ‘realism.’ Despite the scenario updates, the control team chose to put in very few injects during the synchronous play in each round in order to keep focus on the narrative. However, ultimately, feedback suggests that with the criticality of programming PSYOP around events on the ground, more substantive ‘storyline’ developments would have enriched the exercise.

Chapter 8: Know Your Audience: Mr. Jimmy Krakar, TRADOC G27 Models and Simulations Directorate

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During the ICONS simulation supporting USASOC G39, the TRADOC G27 Models and Simulation Branch provided the analytical framework for the population (White teams). Development of this framework required decomposing the population into relevant sub-groups with applicable belief systems. The team then quantified the effects of Blue and Red messaging/Information Operation (IO) actions on the population by modeling them with the Athena Simulation.¹³ This work expanded on previous Da'esh-related work that the team had conducted in support of SOCCENT and CJTF-OIR.

Key Findings:

1. Often messaging would influence only one group. Messaging that attempted to influence the entire population was often diluted and ineffective.
2. More specificity in regards to geography and targeted civilian group resulted in more effective messaging.
3. Detailed knowledge of the socio-cultural aspects of population is necessary to properly decompose population, which in turn will refine Target Audience Analysis supporting more detailed messaging.
4. Certain civilian groups will not be influenced by Blue messaging regardless of message or attribution.
5. Provision of services or essential non-infrastructure services had more effect than messaging on how the population viewed Red, Blue or Green.

Methodology

In order to decompose the population, the study team took the following steps:

1. identified and defined the key demographic groups (civilian groups) and decision makers (actors) that supported the simulation architecture;
2. deconstructed the study area geographically to isolate key areas;
3. developed a belief system for each civilian group and actor;
4. determined population numbers for each respective civilian group in each geographic area;
5. refined decision makers (actors);
6. vetted with applicable subject matter experts (SMEs) and USASOC G39; and
7. socialized with Control and Blue.

At the completion of this process, the TRADOC G27 team had developed the framework for this effort. This consisted of seven applicable civilian groups, four geographic study areas, and sufficient actors to support the wargame as it evolved.¹⁴ Figure 1 (below) is the simulation demographics for Mosul City.

¹³ The Athena Simulation is a decision support tool designed to increase decision-makers' understanding of the effects of PMESII-PT variables on operations in a given area over time. It was developed by NASA's Jet Propulsion Laboratory in conjunction with the US Army TRADOC G-27 Models and Simulations Branch.

¹⁴ Please contact the author for the comprehensive products used in this simulation.

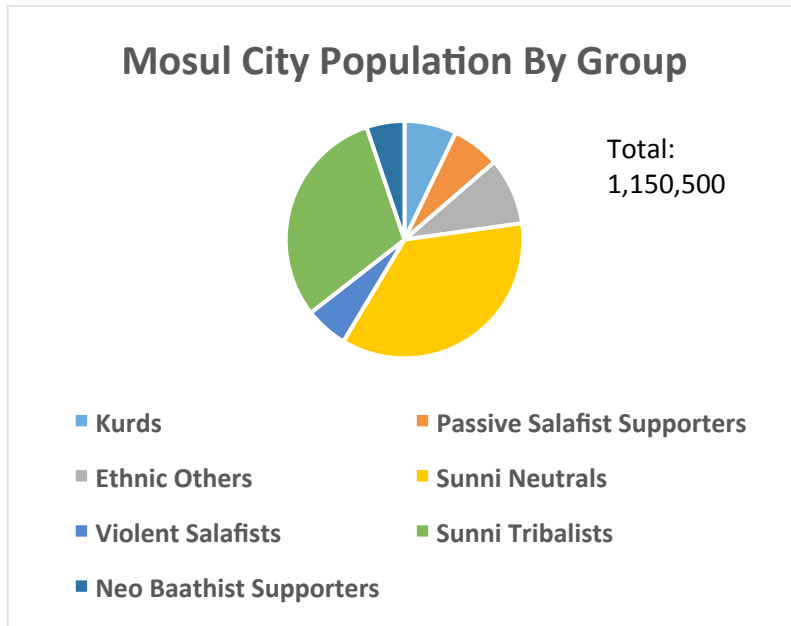


Figure 1: An example of the simulation demographic construct.

Once this was completed, the study team was able to use this population construct to model the effect of messaging and IO on the population *writ large* but, more importantly, amongst each respective population group.

Key Findings in Detail

To accurately sample a representation of the messages being used during the wargame, the study team modeled a string of Blue messages from the ICONS simulation. Below are the messages, with ICONS reference number:

ICONS Message # 132, which emphasized a Pro-Iraq nationalism;
 ICONS Message #141, which was anti-Da'esh; and
 ICONS Message #451, which emphasized unity against Da'esh.

The study team then ran these messages in the Athena Simulation for each of the seven Mosul civilian groups in order to assess with effect on each group. For Measure of Effect, the study team used Autonomy: defined as a group's satisfaction with their governance—in this case Da'esh. In the Athena Simulation, Autonomy ranges from 100 to -100, so if a civilian group's affinity towards Da'esh declines, it would equate to a worsening in relations between that group and Da'esh.

Key Findings 1 and 2.

- 1) Often messaging would influence only one group. Messaging that attempted to influence the entire population was often diluted and ineffective.
- 2) More specificity in regards to geography and targeted civilian group resulted in more effective messaging.

**Effects of Messaging on Autonomy
(satisfaction with ISIL Governance)
Messaging Conducted Weeks: 10-20**

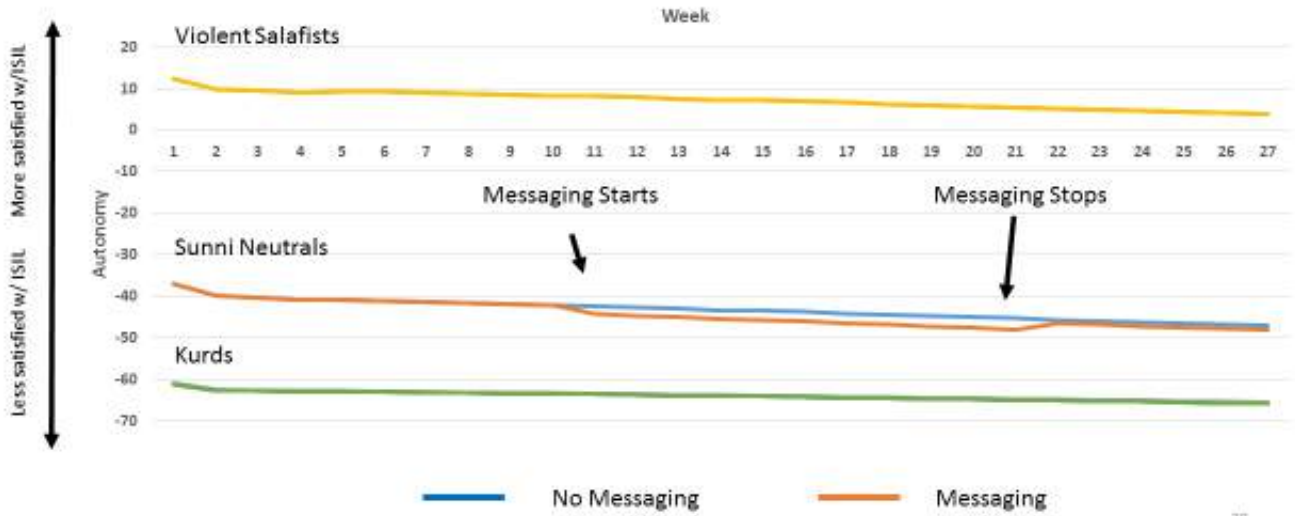


Figure 2: Effects of Messaging on Selected Civilian Groups in Mosul

Figure 2 (above) shows three of the Mosul civilian groups: the Violent Salafists, Sunni Neutrals, and the Kurds. The three message campaign did not resonate with either the Violent Salafists or the Kurds. However, this campaign did produce a noticeable effect among the Sunni Neutrals—estimated at 36% of the population—due to the fact that the messages specifically addressed the key concerns of the Sunni Neutral population.

Key Finding 3: Detailed knowledge of the socio-cultural aspects of population is necessary to properly decompose population, which in turn will refine Target Audience Analysis supporting more detailed messaging.

In this simulation, the study team was able to leverage both their previous Counter-Da’esh efforts¹⁵ and the expertise inherent in the SMA effort in order to develop the understanding necessary to decompose both the civilian population as well as develop actors. However, the ability to develop, manage, and store the socio-cultural data required to develop detailed resolution of the socio-cultural aspects of the population is random at best for most areas of the world.

¹⁵ TRADOC G-27 participation in Counter-Da’esh efforts has included operational embeds with CENTCOM Forward-Jordan, SOCCENT, and CJTF-OIR.

Key Finding 4: Certain civilian groups will not be influenced by Blue messaging regardless of message or attribution.

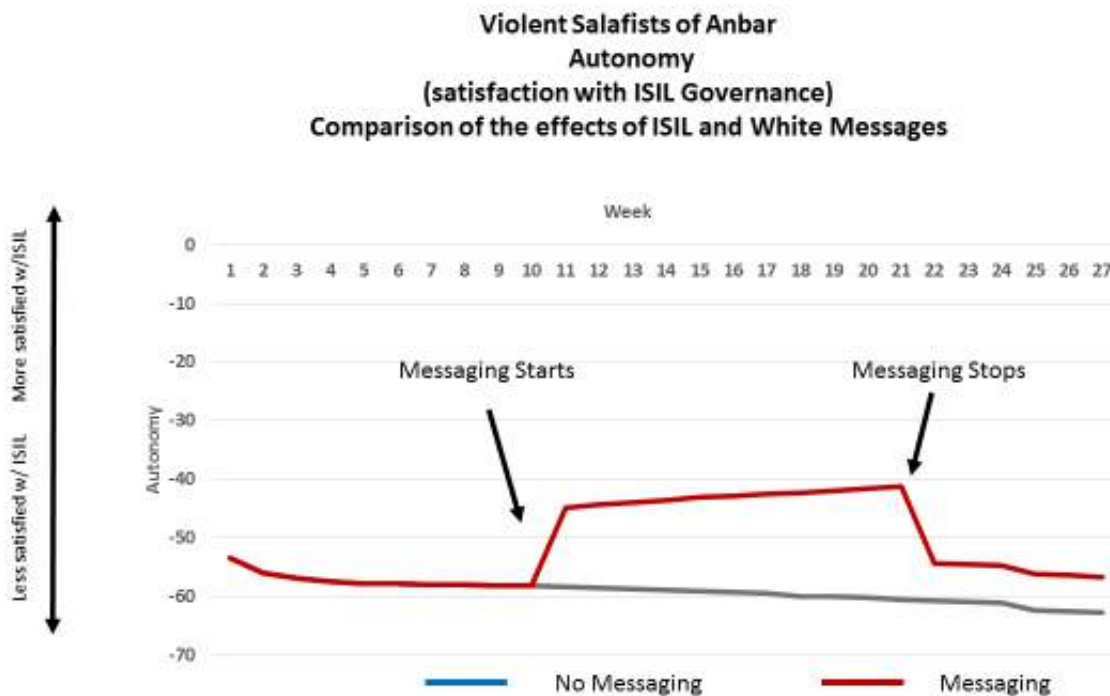


Figure 3: Effects of Competing Messaging on Violent Salafists of Western Anbar

On day one of the wargame, the team expanded on the results from Figure 2 by comparing the effects of dueling Da’esh and White messages on the Violent Salafists of West Anbar. For this exchange, the team used an exchange represented by ICONS # 463 as the Da’esh message and ICONS # 455 as the anti-Da’esh message. Not only did the pro-Da’esh messaging have a dramatic impact on the Violent Salafists, but this effect continued after the messaging ceased. Figure 3 (above) shows the effect of both the pro- and anti-Da’esh messages. In order to remove attribution bias, the team ran these messages as unattributed.

Key Finding 5: Provision of services or essential non-infrastructure services had more effect than messaging on how the population viewed Red, Blue, or Green.

During Day 3 of the Counter-Da’esh Messaging Wargame, TRADOC G27 Models and Simulations Branch used the Athena Simulation to model the effect of the Free Officer Movement (FOM)¹⁶ conducting Civil Military Operations, distribution of funds, and messaging on local population groups in Mosul City (Figure 4, below).

¹⁶ The Free Officer Movement was a notional actor used to advance the simulation scenario.

For this series of simulation runs, the team used Vertical Relations as the Measure of Effect. Vertical relationship is a representation of how favorably a civilian group views an actor—in this case the Free Officer Movement, The Tribal Elite, or Da’esh. If a group has a positive Vertical relationship with an actor and that group has sufficient security, it will result in that actor having influence and vying for control in that geographic area.

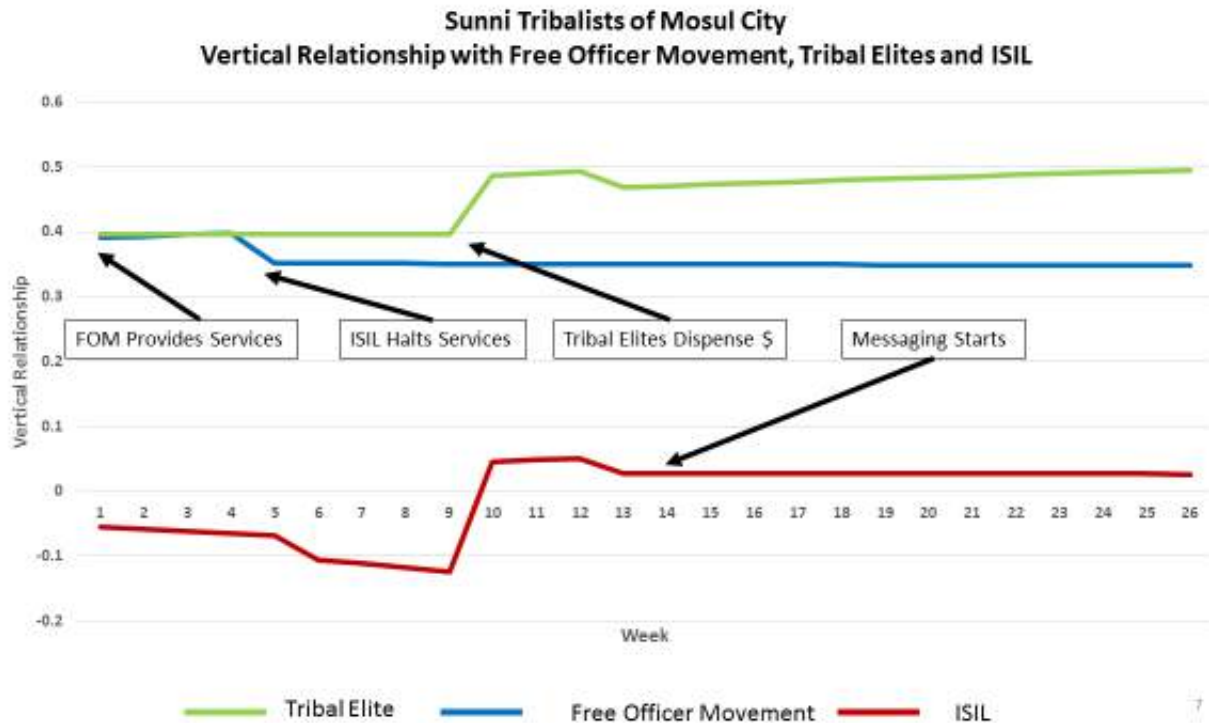


Figure 4: Effects of Civil Military Operations on Sunni Tribalist Relationships in Mosul

Chapter 9: Virtual Think Tank—Global Expertise for Population and Da’esh Teams: Ms. Sarah Canina, NSI Inc.

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For this effort, NSI’s Virtual Think Tank (ViTTa)¹⁷ pulsed its global network of experts to represent three



population teams: Anbar Province, Ninewa Province, and North Africa as well as a Da’esh leadership and information operations team.¹⁸ Experts were assigned to specific population segments within the team as described below.

Team	Roles	Number of Experts
Anbar	1) Violent Salafists, 2) Passive Salafists, 3) Politically Neutral, 4) Sunni Tribalists, 5) NeoBaathists	9
Ninewa	1) Violent Salafists, 2) Passive Salafists, 3) Politically Neutral, 4) Sunni Tribalists, 5) NeoBaathists, 6) Iraqi Kurds	8
North Africa	Population vulnerable to radicalization	6
Da’esh	Leadership & information operations team	7

It was the responsibility of each expert to respond to USG and Da’esh messaging from the perspective of his or her assigned population segment. Experts could both respond directly to the originator of the message as well as communicate within their population team about the message. USG and Da’esh messaging effectiveness was measured through a survey at the end of each day of play asking the experts to identify the most and least effective messaging and discuss why.

Results

Compared to the December 2015 Counter-Da’esh Messaging Simulation, the most significant improvement in USG operations was its brisk operations tempo, which forced the Da’esh team to be

¹⁷ The ViTTa process provides rapid response to critical information needs. We do this by pulsing our existing, global network of subject matter experts or by creating new networks customized to customers’ specific information needs. The ViTTa process allows us to produce in-depth, multidisciplinary data and analyses for defense and industry clients. ViTTa brings together unconventional thinkers, foreign voices, and varied perspectives on social phenomena outside of government or industry conventions.

¹⁸ There were 17 regional experts on the Anbar & Ninewa teams; 6 experts on the North Africa team; and 7 experts on the Da’esh team. The experts were drawn from the US, Europe, the Middle East, and North Africa.

more reactive in their messaging. Mubin Shaikh, a former Salafist activist who participated in both simulations on the Da'esh team, stated in relation to the speed of the game, "[T]his time the anti-ISIL side was doing it right." However, outpacing Da'esh messaging does not necessarily mean that the messaging was effective. Below, we look at the population teams' response to USG and Da'esh messaging.

Please note that the conclusions here are based solely on the simulation, which was designed primarily as a training environment for the USG Psychological Operations (PO) operators and may not be directly applicable to a real world environment without further research.

Iraq (Anbar & Ninewa Provinces)

The Anbar and Ninewa team responses are grouped here due to the similarity of their responses to USG and Da'esh messaging.

USG Messaging



Iraq population teams were foremost responsive to USG messaging highlighting Da'esh violence against fellow Muslims—particularly against women and children. Interestingly, the North Africa team also found these kinds of messages particularly effective as well.

The second most effective USG message supported the return of normalcy: the end of violence, the end of suffering (particularly of women and children), and stability. However, the experts noted that the messaging has to go deeper than Tweets, podcasts, and

posters—the USG has to demonstrate a willingness to act, communicate a strategy for achieving these ends in coordination with local and regional powers, and back up these promises with actual actions. Without credibility, several Iraq team members stated there were “no circumstances in which Blue messaging could be effective.”

Da'esh Messaging

The top two messages that resonated with the Iraq population include Da'esh posturing itself as the only credible option for pushing back Shia influence and Da'esh promising to bring stability to the region. It should also be noted that Da'esh rapidly and adeptly was able to point out and maximize the fallout from any slip up Blue made in its messaging, which undermined the USG's messaging effectiveness.¹⁹



¹⁹ Examples of Blue missteps: one poster included an image of a Christian church, one message included the Saddam Hussein-era flag, and one image showed Shias instead of Sunnis.

Insights

Overall, though, the people of Anbar and Ninewa seemed fairly pragmatic and were not responsive to either ideological messages from Da’esh or bumper sticker-like messages of hope from the USG team—instead wanting to hear more about *how* the USG or Da’esh could bring stability and governance to the region.

North Africa

USG/DoD Messaging



During the simulation, the USG/DoD “Blue” Team distributed global messages. While these messages were often Iraq-specific, the population in North Africa received and reacted to them as well. This population mirrored Iraq’s reaction to Blue messaging in that it saw messages highlighting Da’esh’s violence against Muslims as effective. They also were greatly affected by the before and after pictures of Mosul—not wanting to see that happen to their cities.

Population team members also mirrored Iraq populations’ concerns that the messaging must go into greater depth to engage the population in a discussion of how and why Da’esh should be rejected. Experts noted that North Africa is more diverse than Anbar and Ninewa and, therefore, the messages must be more nuanced and targeted to local concerns.

USG Interagency Messaging

A USG Interagency team had the primary responsibility for directly messaging the North Africa team to prevent the population vulnerable to radicalization from committing violence. Because this was a training exercise to explore interagency coordination, the Interagency team was not able to disseminate messaging on the first day, so the North Africa team only responded to global Blue/DoD messaging. However, when the Interagency team did engage the population team, the messaging—particularly messages showing a display of solidarity with victims of Da’esh’s attack in Rome—was seen as effective.



Da’esh Messaging

We were unable to truly assess how effective Da’esh’s efforts to recruit from the vulnerable population in North Africa were for several reasons. First, the members of the North Africa population team were perhaps too close to the situation on the ground and had a difficult time remaining in their assigned population’s mindset (i.e., open to Da’esh messaging). So in this simulation, the population was not particularly receptive to Da’esh’s recruitment campaign. Second, experts pointed out that while social

media is an important component of radicalization, so are personal connections to friends and recruiters that cannot be replicated easily in a virtual environment.



However, they noted that Da'esh's inclusive messaging resonated well with this population because tensions between ethnic Arabs and Berbers in North Africa is quite high. Also, messaging that discredited governments in the region could be very destabilizing since democracy is so nascent in many countries.

Insights

As we know, radicalization is a very complex phenomenon that varies from individual to individual. Therefore, messaging should not be expected to prevent specific acts of violence, but instead build a population's resilience to Da'esh messaging through two avenues: more positive actions and messaging that builds community resilience to Da'esh persuasion and demonstration of the potential destruction (to cities, to women and children, etc.) Da'esh's brand of governance brings.

Conclusion

Accurate and truly representative population team feedback is a critical component of successful training simulations. The interaction between the USG, Da'esh, and population teams generated important insights for PO preparation and training.

First, virtual, embedded, cultural knowledge is extremely important to avoid communication pitfalls not obvious to Western-trained analysts. While it would be ideal to physically embed a cultural expert on all PO teams, this is not always possible. Instead, have virtual resources for reach back is essential for effective messaging.

Second, while the Anbar, Ninewa, and North Africa population teams were open to counter-Da'esh messages and messages promoting the return to stability, they did not find the messages effective for a number of reasons: 1) the USG lacks a credible voice, 2) to be perceived as credible, the USG must back up its words with deeds, 3) the USG failed to deepen communication in a meaningful way after the initial set of messages.

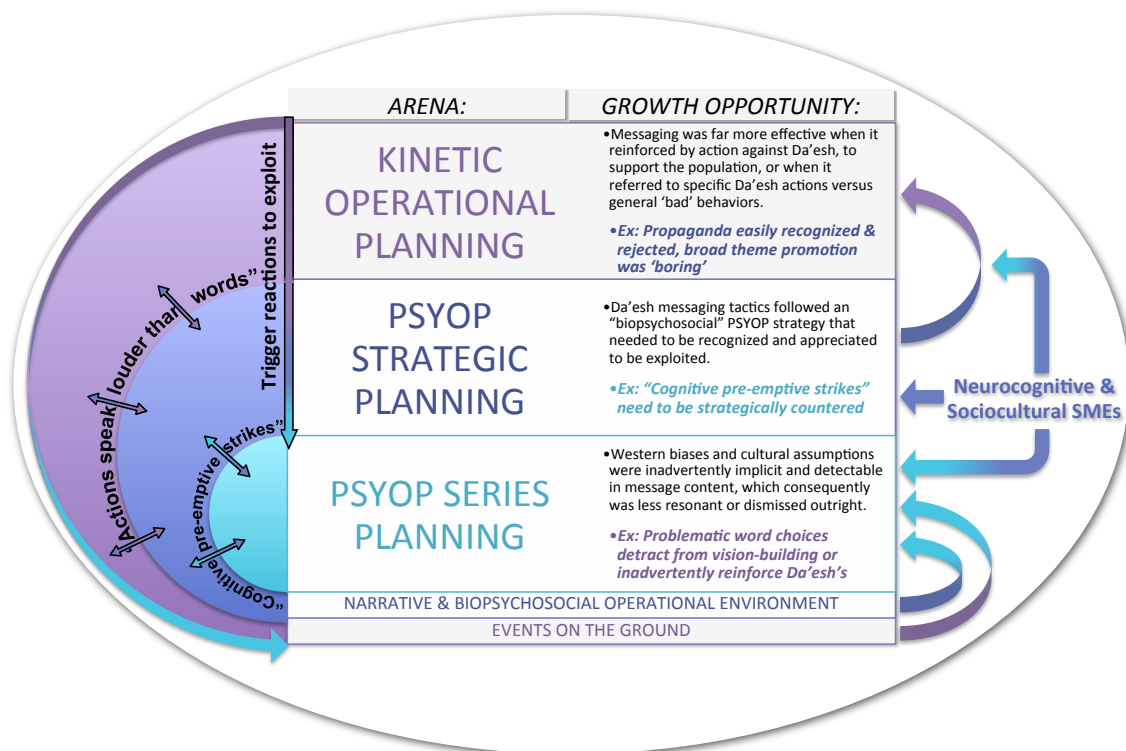
Simulations are an efficient way to test methods that bridge the gap between the USG and target populations in a safe and productive way. It serves multiple purposes: improve training, vet messages, and learn more about targeted population interests.

Chapter 10: Integration Across Cognitive Arenas: Dr. Rachel Wurzman, University of Pennsylvania

Summary

The Blue teams grew substantially more successful as the simulation progressed by increasingly integrating biopsychosocial insights into their operational planning and execution. The benefits of the biopsychosocial approach were evidenced by increased agility, sensitivity, responsiveness, and engagement of Blue team messaging. Closer examination of the contexts in which Blue teams gained traction or missed opportunities leads to our assertion that enhanced integration across operational, strategic, and tactical cognitive arenas will improve counter-Da'esh messaging effectiveness, with reciprocal benefits in the kinetic and narrative space. For example, the most effective messages included concrete reference to—or integration with—exploitable actions or events in the real world. In contrast, messages explicitly about broad themes and ideas (positive or negative) were called “boring” and failed to gain traction as topics of conversation. PSYOP strategy needs to anticipate and accommodate changes in the cognitive battlespace that operations in other arenas might prompt—it needs to be integrated.

The figure below diagrams how biopsychosocially-informed tactics bridge arenas of operational planning, the points at which they can inform one another, and how neurocognitive and sociocultural SMEs can facilitate this.



Integrating the PSYOP strategy across multiple cognitive arenas (tactical, operational, and strategic) has the potential to magnify our capabilities to leverage insights from social, behavioral, cognitive, and neuroscience to undermine Da'esh influence in the following ways:

Integration at the Level of Unit/Cell Organization and Series Planning

- **Integrating operationally experienced members with social and behavioral science experts within teams afforded the capability for neurocognitive and sociocultural insights to function like *strategic intelligence at the level of series development*.** This, in turn, enabled more integrative planning processes at both strategic and product series levels, to the benefit of all.
 - The most effective Blue messaging was accomplished via an *creative* process that fully integrated the sociocultural embedded expert member's perspective throughout the analysis and series development process.
 - The Mosul Blue team dynamic was an exemplary model for this.
- **Tighter functional integration between operators and embedded socio-cultural subject matter experts** was essential to ensuring that the message resonated from the target audience (TA) perspective.
 - Some western biases and cultural assumptions were inadvertently implicit and detectable in Blue message content, which consequently became less resonant or was dismissed outright.
 - When words are intended to help build a vision of the future, monitor their potential to cue unpopular or unwanted concepts ("democracy" or "united") with negative associations ("hypocrisy" or "unfairness").

Integration at the Level of Strategic PSYOP Planning

- **Integrating expert insight can be useful for training PSYOP operators to identify the messaging tactics employed by Da'esh**, which first needs to be recognized and appreciated before it can be exploited.
 - Blue became more effective once they increased their vigilance against the tactics Da'esh would use predictably. For example, the Da'esh team would accuse Blue and others of morally reprehensible actions they had recently undertaken or were preparing to take themselves, very soon after it became publically known (whether or not it was misinformation). This tactic is a "cognitive pre-emptive strike."
 - Without Blue anticipating or blocking their cognitive preemptive strikes, Da'esh was easily able to pin the blame elsewhere. They simply targeted a group about whom the population is already biased to perceive as hostile (Iran, US, Israel, etc.).

- *Factual information to the contrary will be ineffective if such a competing association is well reinforced.*²⁰
- **Blue’s deficits in agility and responsiveness to events were related to their isolation from kinetic operations and inability to synchronize messaging with US/Coalition *action* on the ground.**

Integration at the Level of Kinetic or Broad Tactical Operations Planning

- **Effective messaging cannot consist of blatant propaganda.** Propaganda was transparent and rejected by the TAs as such. Repeated messaging about general ideas (empowerment, unity, fight back) became boring to population teams. Only concrete references gained traction.
- **Actions speak louder than words. The action is not just in the narrative, the action is the narrative. Messaging becomes the “voice-over”—it determines the *meaning* of those actions or events.**
 - Messaging was far more effective when it referred to *specific and recent Da’esh actions* as a means to convey broad themes. An example of this was messaging that supplied commentary interpreting every Da’esh violent action as ***“ISIL must be desperate if they are resorting to this,”*** with regard to torturing and executing women and children.
- When the TA perceived that past or present US military action conflicted with a message, messaging backfired and made Da’esh’s case stronger.
- When the primary objective is in “narrative space,” consider using kinetic actions as narrative support operations by baiting Da’esh into a predictable, exploitable reaction. This is a successful tactic that Da’esh uses and could be tested in future simulations.

²⁰ Wurzman R and Casebeer W.D. (2016) Predicting And Reducing Hostility: Insights From Cognitive Models And Cognitive Behavioral Therapy. In: Giordano J., Rhem S., and Popp G. (Eds.) *White Paper on Assessing and Anticipating Threats to US Security Interests: A Bio-Psycho-Social Science Approach for Understanding the Emergence of and Mitigating Violence and Terrorism*. A Strategic Multi-Layer (SMA) Periodic Publication.

Chapter 11: Embedding Technical Information in Counter-VEO Messaging: Dr. Allison Astorino-Courtois, NSI Inc.

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Abstract: This paper reports insight gained from two attempts to introduce technical and academic expert information typically not accessed by PSYOP planners, namely: 1) Blue team information pull and 2) assisted information pull where Technical Team liaisons were assigned as Blue team members. The Technical Teams in each case consisted of academics and researchers representing analytic approaches relevant to effective messaging. While this was not a true test of these approaches in the field, each of the Blue teams accessed and used significantly more technical/academic information when information pull was assisted by a Technical Team liaison. Players also felt that their own messaging was improved by the addition of this information. Red and White population players receiving these enhanced messages also saw them as more closely “getting it right” than in the purely information pull simulation.

Key Take-aways From Simulation

- Embedding one or two trusted “technical” experts into PSYOP teams is a force multiplier.
- The majority of players considered embedding Technical Team liaisons into Blue both saved needed time and proved to be a significant enhancement to message development tasks.
- Blue team members generally did not take advantage of reach-back analytic support (i.e., the expertise resident in the Technical Team) during either ICONS exercise. However, embedding a Technical Team representative directly into Blue allowed for frequent and highly valued technical input during message development and expert review when new messages had to be developed rapidly.
- Technical Team embeds were able to bridge the gap between Blue team operational needs and theoretical or other academic work that is relevant but not necessarily tailored to the operational environment.
- The majority of Blue team information requested of Technical Team members can be categorized as regional or Da’esh expertise rather than analytic in nature.
- Critiques of Technical Team involvement centered on their gaining a better understanding of the reality of the PSYOP process.

Discussion

This paper reports insight about ways to enhance the technical information and expertise available to PSYOP planners gained during two web-based simulations intended to counter Da’esh messaging in Iraq and Syria. The first (ICONS II) was held in December 2015. The second (ICONS III) was held in April 2016.²¹ While there were too many uncontrolled factors and game changes to use the simulations as an experimental test of the effect of embedding technical expertise, we did derive a number of insights that may prove helpful to consider either in future simulations or PSYOP force planning.

²¹ The scenarios and Blue team tasks for both simulations focused on counter-Da’esh messaging and PSYOP planners attempting to influence “White” (population) and “Red” (Da’esh supporters, fighters, and leadership) populations. The primary objective of the December simulation was to sow division and mistrust within Da’esh leadership. The April simulation focused on messaging populations in three locations in Iraq: Anbar, Mosul, and Ninewa, and included an Inter-agency team focused on vulnerable populations in North Africa.

Both simulations included a Technical Team consisting of 30+ academics and researchers representing a variety of analytic approaches (e.g., agent-based modeling, social media analysis, etc.) and disciplines (e.g., neuroscience, communications, area studies, etc.) relevant to effective messaging. In both cases, the primary objective of the Technical Team was to provide information that is not readily accessible to PSYOP planners. The presumption was that the effectiveness of PSYOP messaging in the simulations would increase along with the use of this input.

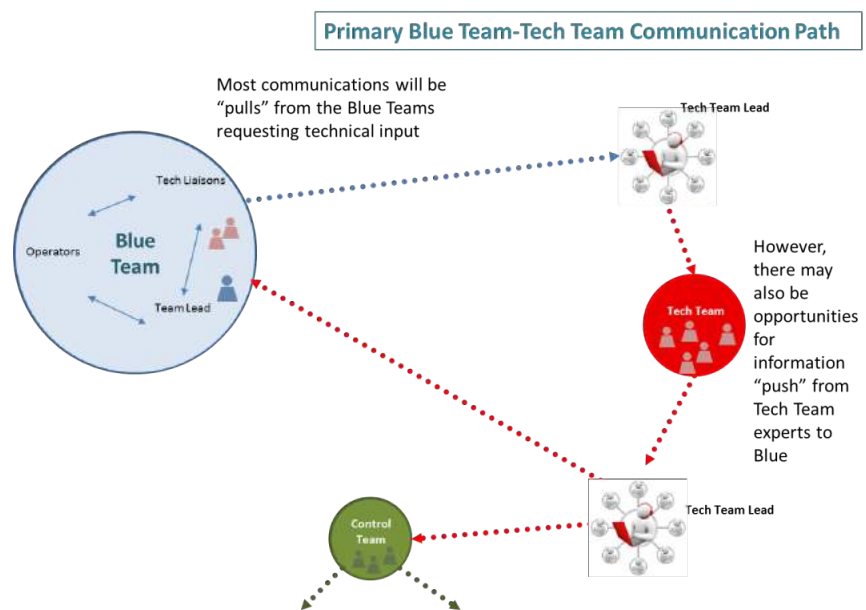
December 2015 Simulation: Blue Pull on Technical Information

Approximately one week prior to the December 2015 ICONS simulation, the Technical Team was introduced to the Blue team players by way of a booklet emailed to each. The booklet contained brief descriptions of the types of assistance each Technical Team member could provide to Blue message generation processes, including, for example, insight from neuroscientists on how messages might be phrased to be most appealing and interest analysis insight on types of messages that would be most likely to provoke disagreement and dispute among different types of Da'esh leaders. During the simulation, the Technical Team was made available to Blue team players on demand. Blue players were instructed that they could request technical support at any point during the span of the simulation. While it was clear that Blue team members had read the information in the booklet, they did not reach out to the Technical Team for substantive input during the exercise. Even when Technical Team members began pushing suggestions to Blue, the information was not apparent in Blue messaging.

Feedback from Blue team players after the simulation explained the reasons:

- Technical Team input was “too theoretical” and difficult to apply to the fast-paced game;
- there was not enough lead time to the exercise allow for series development and other activities during which technical input might have been tailored to messages and been more useful; and
- there was a general disconnect between the detail and tactically oriented Blue team and the ways that the Technical players were presenting input.

We suspected that there were other reasons as well. For the most part, Blue team players had not interacted with Technical Team members prior to the kick-off of the simulation. In hindsight, it may not have been reasonable to expect that during the course of play Blue team PSYOP professionals and others engaged in fast-paced tasks would ask for technical information from people they had never met.



April 2016 Simulation: Technical Team Aided Blue Pull

For the April 2016 ICONS simulation, we refined the process by which Blue players might access technical information by adding two Technical Team liaisons to each Blue team. Technical liaisons participated in weekly Blue planning meetings during the run-up to the simulation. In addition, Technical Team members held briefings for Blue team members on their own research and technical work. The primary function of the liaison was to facilitate the push and pull of information from the rest of the Technical Team into the Blue planning and messaging processes. The figure above shows the general path for communication between the Blue and Technical Teams.

Prior to the start of the simulation, three Blue team requests for information were addressed by the full Technical Team, and two more were addressed during play. The nature of each of the questions can be categorized as regional or Da'esh expertise rather than analytic in nature. While each Blue team employed its one or two Technical liaisons in slightly different ways, the most common was as consultants/reviewers of message content prepared by other team members. In a couple of cases, liaisons also got involved in suggesting message content.

What did we learn?

There were a couple of factors that muddy conclusions that may be drawn from the outcome differences of the embed strategy used for ICONS III versus the information pull strategy used during the previous simulation (ICONS II). First, in the recent exercise, PSYOP operators were in some cases unable to participate in the full exercise as they were being tasked by their home units at the same time. Second, the longer duration of ICONS III meant that civilian Blue players (mainly from Fielding University) stepped into leadership roles in some cases, developed message content and production, and sent messages. As a result, post-simulation survey results may not be representative of what a purely PSYOP operator-led team would believe about the usefulness of the Technical liaisons. Despite these caveats, we believe that this effort shed some light on the use and usefulness of embedding

"During the simulation the tech liaison played an integral role. We requested information on a regular basis. The tech liaison again gave feedback, ideas, and/or went to the larger group of tech support for additional support." Blue Team Member

technical expertise in PSYOP teams. Post simulation surveys and other feedback from players indicate that:

As during the December simulation, Blue team players felt there was little time for expert reach-back during game play even via the Technical liaisons but that having direct access to the embedded Technical Team member was

extremely valuable.

Most reviewers rated the input of the Technical liaisons as important to the success of the team and all thought that they "definitely helped shape" the team's output and provided valuable insight, especially regarding "wording, phrases, and cultural context" of the messages.

The suggestions for improving the information provided by the Technical Team and Technical liaisons included more timely input from the liaisons, and training Technical Team members and liaison in the PSYOP process and PSYOP authorities.

"... the exercise did not accurately reflect the [PSYOP] process or [PSYOP] operations. Each member of the Tech Team, while clearly knowledgeable in their own fields, did not understand how MISO works, which resulted in unfocused messaging without a clearly defined target audience or measure of effectiveness." Blue Team Member

Chapter 12: Providing MISO Operators with Insights from Narrative Science: David Koelle, Charles River Analytics

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Ongoing research in narrative science and operationally-relevant target audiences (e.g., Da’esh) continually identifies insights that can be used to optimize the effectiveness of messages intended to influence and change behavior. In fact, this volume of white papers itself includes a collection of research results that are of benefit to MISO operators’ craft. While this white paper represents a collaboration between academic and operational communities, most academic research in narrative science is not as easily transferred to MISO operators and made relevant to their needs.

There are several challenges in transferring research findings to the operational community. For instance, results are often circulated within the academic community in the form of papers and presentations, with less opportunity for knowledge transfer to operational communities. Research uses specific terminology (e.g., “narrative transportation”) that may not be well-understood outside of the research community. Research communities themselves may be specialized and disparate, so even a motivated and well-equipped operational representative may not have the awareness of the diversity of communities or the availability to participate in more than a few.

To address these challenges, under the DARPA Narrative Networks (N2) effort, we developed an approach in which results of narrative science research and operational knowledge (including research into specific target audiences) are represented as models. These models include actionable guidance—clear and practical suggestions for developing and communicating messages—that are provided to MISO operators within the context of their doctrinally-defined workflow. Furthermore, we developed a prototype user-centered application to assist MISO operators as they develop products intended to influence and change the behavior of target audiences.

For the April 2016 ICONS simulation, we used this prototype behind-the-scenes to provide the Blue team with actionable guidance. In addition to the primary objective of providing Blue team with guidance, our secondary objective was to assess the utility of the prototype for direct use by the Blue team in future simulations, and eventually by MISO operators in future deployments.

In this brief, we describe the details of our approach, results from the ICONS simulation, and thoughts for future work.

Details of Our Approach

The centerpiece of our approach is a collection of models, each of which represents relationships among narrative concepts from a single publication or presentation. The models (e.g., as shown in Figure 1) capture an abstract-level description of the academic work in a form that software tools can use for a variety of applications. The models consist of an assortment of node types (e.g., general concepts, actionable guidance, neurophysiological state) and links between those nodes (e.g., increases, decreases, correlates to). A key insight from our research motivates the use of such models: abstract-level qualitative summaries of narrative research are useful for understanding the main concepts and relationships from the research. This is in contrast to high-fidelity computational models, which we did not adopt as our solution to the challenges presented earlier.

Today, these models are created manually by members of the Charles River Analytics team involved in the effort, although we intend to transfer this responsibility to military trainers, lessons learned centers, or doctrine shops, to which we would supply a model authoring tool to aid the development of high-quality models and a means to assess the validity of those models. We have currently modeled approximately 50 research publications and presentations, including several models based on operational experience from the MISO community and several that are specifically about Da'esh and have been informed by previous SMA presentations.

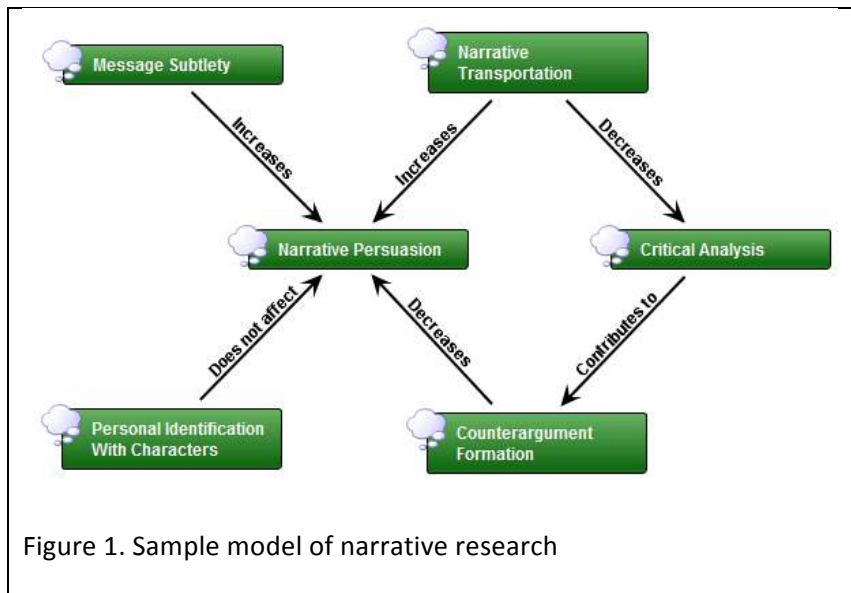


Figure 1. Sample model of narrative research

Individual models can be merged together when the models contain nodes that have identical definitions. This provides an automated means for generating the equivalent of a survey paper and it amplifies the end-to-end relevance of individual research results. For example, if Paper 1 states, “narrative transportation leads to pro-social behavior,” Paper 2 says, “identifiable characters contribute to narrative transportation,” and Paper 3 claims, “narrative transportation can be assessed

using a questionnaire,” the combined model can provide suggestions for creating and measuring pro-social behavior, despite that such guidance is not explicitly stated in any one of the three papers.

The other significant component of our approach is one or more user-centered tools that fit within the MISO operators’ workflow and that use the models to provide actionable guidance to soldiers. There are no restrictions within the modeling formalism that constrain what type of tools can be built that use the models, and our ideas have included tools that provide guidance for creating narrative products, identify sensors to conduct pre- and post-testing to measure narrative effects, and assess measures of effectiveness for deployed narrative products (including those deployed by the adversary).

State of the Prototype and Rationale for Its Components

Under the DARPA N2 effort, we developed a prototype tool that assists MISO operators in the creation of narrative influence products. The tool integrates with a MISO system for conducting target audience analysis and conforms to the steps that MISO operators perform when developing products. The tool takes facts from the soldier’s target audience analysis as input, searches the narrative models for relevant guidance based on that input, and provides the operators with a ranked list of guidance from the models that they can use in developing their product. It also contains a worksheet that lets the operator map where in the description of their product they have addressed the suggested guidance. While the prototype application tested well with operators, one path of follow-on work that originated with the N2 effort is moving in a different direction that does not involve models of narrative research.

Nevertheless, we believe that these models represent a compelling and innovative approach to drawing connections across otherwise unconnected research while also serving as a data source to inform a

variety of MISO-centric tools. For this reason, we are fortunate to have the opportunity to participate in the ICONS simulation to further advance this area of research.

Results on Using the Prototype Tool in the ICONS Simulation

The pace of the ICONS simulation was different from the workflow considerations under which we had designed the prototype application. In the prototype, we assumed a well-formed target audience analysis would be used as input for the model search capability and that MISO operators would be developing products through the worksheets specified in MISO doctrine. In contrast, the ICONS simulation was a fast-paced scenario in which products were being developed with MISO doctrine in mind, but outside of a structured MISO workflow complete with worksheets. In addition, the products were developed in response to other narratives sent through the simulation's messaging system in real time, rather than products developed to support longer-term strategic objectives. The prototype was designed to support a workflow that we did not experience during the ICONS simulation.

Recall that there are no constraints on the type of user-centered tools that the narrative models can support. Knowing that the models can support more types of tools than the prototype we happened to have developed, we manually navigated the models themselves to find information to support the Blue team, while simultaneously thinking about how the Blue team working under the simulation's operational tempo (and, by extension, how MISO operators might need to respond to messages in real operations) might benefit from a tool with a different design.

During the simulation, we provided several pieces of actionable guidance to the Blue team. For example, after a particularly egregious display from Da'esh, we provided the following pieces of guidance directly from the models (recall these are based on extant research, so you may recognize this guidance if you are familiar with the original source) along with some additional discussion to describe, for example, what is meant by terms like "sacred values:"

- highlight Da'esh's transgressions of values that are sacred to Muslims;
- especially identify instances where transgressions of values can be associated with material gain; and
- include strong emotional content in product text (e.g., poster, radio show)

Despite our current set of models, there were situations for which we simply had no ready responses. For example, there was no information in our models to address assassination, which was a pivotal event towards the end of the ICONS simulation.

One of our key takeaways from the simulation is that we believe there is still immense promise in our approach to representing research in models that can be searched by user-centered tools, and the creation of a new type of tool that is less constrained to the MISO workflow and that allows operators to explore the research in a more dynamic manner would be a valuable addition to their software arsenal.

Future Work

In the future, we believe that something akin to a "Knowledge Discovery Tool" centered on the concepts of narrative science and operational knowledge (e.g., guidance specific to Da'esh) would be a worthwhile addition to the Blue team's toolbox (and, by extension, to MISO operators). This tool would provide a user-centered means for searching, browsing, navigating, and understanding the information that the models represent. (We hesitate to provide the models directly to users; the merged model is

overwhelming and a set of individual models lacks the connections to other relevant models.) We envision this as a sort of model-backed, MISO-oriented online encyclopedia with short, readable descriptions for key concepts and clear actionable guidance. This tool would use the connections in the model to aid in navigating to related concepts. It would allow users to search the content of the models, and it would allow users to flag gaps in the content (e.g., assassination); trainers or doctrine teams could later assess the flags to identify whether additional research needs to be codified to support future operations and close the gap. The tool would also provide a means to assist the operator in tailoring the actionable guidance to a specific scenario: during the simulation, we realized that some of the guidance from the models needed to be restated or refined to maximize its relevance to the Blue team.

We look forward to continuing our investigation into this promising research direction for the future benefit of the MISO mission.

Appendix A: Archival Material

This simulation produced a volume of work that is too large to attach here. If you are interested in obtaining any of the material listed below, please contact Mr. Sam Rhem at samuel.d.rhem.ctr@mail.mil or click on the links provided.

Simulation Scenarios

Scenarios were produced and disseminated at the outset of each day during the simulation. These scenarios set the scene for the Blue (USG), White (Iraq and North Africa populations), and Red (Da'esh) teams.

Messages Prepared by Blue (USG) Teams

The Blue teams produced numerous Tweets, podcasts, posters, flyers, and other forms of messaging that is available on the ICONS website at <http://www.icons.umd.edu/data/4952/>. Many examples of these messages are inserted throughout the text of this report.

Corpus of all Simulation Content

The University of Maryland ICONS team prepared Word and Excel documents containing all messages from the simulation on their website: <http://www.icons.umd.edu/data/4952/>. This open source material may be used by researchers to conduct various forms of analysis. The corpus contains over 1000 messages and contains metadata relating to sender, receiver, content, time stamp, etc.

Author Bibliographies

To review a compilation of author bibliographies, please go to <http://www.icons.umd.edu/data/4952/>.