



Members of the Civilian Leadership Development Program receive a demonstration of Special Operations Forces capabilities at Melrose Air Force Range, New Mexico, 30 January 2019. U.S. AIR FORCE PHOTO BY STAFF SGT. LUKE KITTERMAN

The JSOU *Special Operations Research Topics 2020* publication highlights a wide range of topics collaboratively developed and prioritized by experts from across the Special Operations Forces (SOF) community. As with the previous versions of this publication, this list is tailored to address special operations priorities. The topics in these pages are intended to guide research projects for professional military education (PME) students, JSOU faculty, fellows and students, and others writing about special operations during this academic year. This research will provide a better understanding of the complex issues and opportunities affecting the strategic and operational planning needs of SOF.

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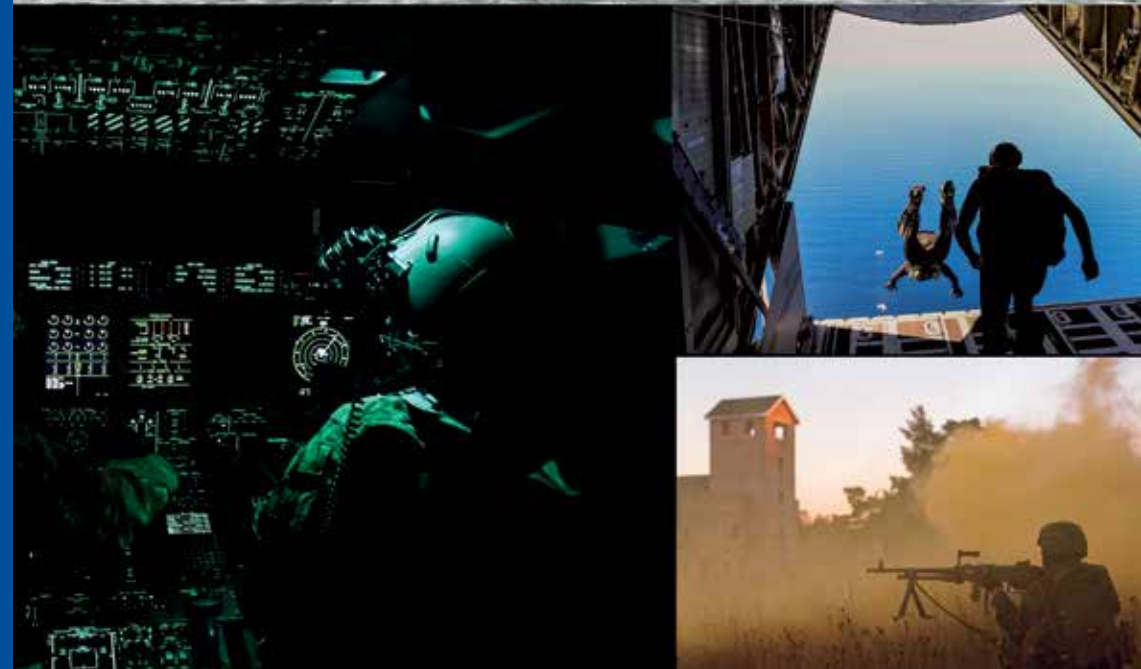


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Special Operations Research Topics 2020

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**Special Operations
Research Topics**

2020





Joint Special Operations University and the Center for Strategic Studies

The Joint Special Operations University (JSOU) provides its publications to contribute toward expanding the body of knowledge about joint special operations. JSOU publications advance the insights and recommendations of national security professionals and the Special Operations Forces (SOF) students and leaders for consideration by the SOF community and defense leadership.

JSOU is the educational component of the United States Special Operations Command (USSOCOM), MacDill Air Force Base, Florida. The mission of JSOU is to prepare SOF to shape the future strategic environment by providing specialized joint professional military education (PME), developing SOF-specific undergraduate and postgraduate-level equivalent curriculum, and by fostering special operations research, analysis, and outreach in support of the USSOCOM objectives.

JSOU conducts research through its Center for Strategic Studies (CSS) where efforts center upon the USSOCOM mission:

USSOCOM mission. USSOCOM develops and employs fully capable Special Operations Forces to conduct global special operations and activities as part of the Joint Force to support persistent, networked, and distributed Combatant Commands operations and campaigns against state and non-state actors, to protect and advance U.S. policies and objectives.

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2020

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Comments about this publication are invited and should be forwarded to the Director of the Center for Strategic Studies, Joint Special Operations University, 7701 Tampa Point Blvd., MacDill AFB, FL 33621.

The JSOU Center for Strategic Studies (CSS) is currently accepting written works relevant to special operations for potential publication. For more information, please contact the CSS Director at jsou_research@socom.mil. Thank you for your interest in the JSOU Press.

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On the cover. Clockwise starting top:

Marine Raiders from Marine Corps Forces Special Operations Command (MARSOCC) K-9 Unit conduct water casts off the coast of Naval Air Station Key West during the Special Operations Command's multipurpose canine handler training. U.S. NAVY PHOTO BY DANETTE BASO SILVERS/RELEASED

SEAL Team 7 members jump from an MC-130J Commando II during Emerald Warrior/Trident at Naval Air Station North Island, California, 19 January 2019. U.S. AIR FORCE PHOTO BY STAFF SGT. ERIN PIAZZA

A Lithuanian National Defence Volunteer Forces (KASP) soldier provides overwatch for a raid as part of exercise Saber Junction at the Grafenwoehr Training Area, Germany, 27 September 2018. Special Operations Forces work alongside the KASP during Saber Junction 18 to conduct irregular warfare in enemy occupied territory. U.S. ARMY PHOTO BY 1LT BENJAMIN HAULENBEEK

Aircrew from the 9th Special Operations Squadron perform preflight checks before takeoff in an MC-130J Commando II during Emerald Warrior/Trident at Naval Air Station North Island, California, 21 January 2019. U.S. AIR FORCE PHOTO BY STAFF SGT. ERIN PIAZZA

Back cover. Members of the Civilian Leadership Development Program receive a demonstration of Special Operations Forces capabilities at Melrose Air Force Range, New Mexico, 30 January 2019. U.S. AIR FORCE PHOTO BY STAFF SGT. LUKE KITTERMAN.

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The proposed topics suggested in this publication are entirely views of the author of this publication and do not necessarily reflect the views, policy, or position of the United States Government, Department of Defense, United States Special Operations Command, or the Joint Special Operations University.

Foreword

The Joint Special Operations University (JSOU) provides joint Special Operations Forces (SOF) Education for joint, interagency, intergovernmental, and multinational (JIIM) students and educators to develop agile JIIM leaders who think differently, critically, and creatively in order to adapt to the future SOF operating environment. This is done through specialized joint professional military education (PME) and by fostering special operations research—research that will be shaped by the research topics contained within the covers of this publication. In this way, JSOU helps place SOF at an advantage to cognitively outpace competitors in operational and strategic environments.

The *Special Operations Research Topics 2020* publication highlights a wide range of topics collaboratively developed and prioritized by experts from throughout the SOF community. The topics in these pages are intended to guide research projects for PME students, JSOU faculty, fellows and students, and others writing about special operations during this academic year. This research will illuminate blind spots, provide a better understanding of complex issues and opportunities, and contribute to the evolution of the way SOF leaders think.

Our research topics are organized to support the special operations priorities of the Commander, United States Special Operations Command (USSOCOM). This list of topics was generated from recommendations solicited from the USSOCOM headquarters staff, the theater special operations commands (TSOCs), component commands, SOF chairs from the war colleges, and select research centers and think tanks. The topic submissions were then reviewed, revised, rated, and ranked at the annual Special Operations Research Topics Workshop. That workshop produced the first draft of this comprehensive list of issues and challenges of concern to the greater SOF community. The list was reviewed and vetted by the headquarters, TSOCs, and component commands prior to publication.

I challenge the members of the SOF community involved in academia to use their intellect to ignite new ideas and lead the way as a catalyst for

innovation. These research topics will give you a head start on deciding where to focus your research effort. Once your research is complete, I encourage you to send your findings to the JSOU Center for Strategic Studies within the College of Special Operations via e-mail at jsou_research@socom.mil. Good luck in your academic pursuits.

Scott M. Guilbeault, Colonel, U.S. Air Force
Acting President

Introduction

Joint Special Operations University's (JSOU) publication of *Special Operations Research Topics 2020* represents a list of Special Operations Forces (SOF)-related research topics proposed so that the resulting research can provide insight and recommendations on issues and challenges facing the SOF enterprise. As in previous years, this list is tailored to address the United States Special Operations Command (USSOCOM) Commander's special operations priorities. This year's topics focus on how the confluence of information, technology, and innovation (artificial intelligence, machine learning, cyber operations, and big data) affect these issues.

SOF professional military education students research and write on timely, forward-thinking, and relevant, SOF-related topics. Such activity develops the individual's intellect and provides a professional and practical perspective that broadens and frames the insights of other analysts and researchers in regard to these topics. This list, and the accompanying topic descriptions, are a guide to stimulate interest and thinking. Topics may be narrowed or otherwise modified as deemed necessary (e.g., to suit school writing requirements or maximize individual interests and experiences). The researcher should explore and identify doctrine, capabilities, techniques, and procedures that will increase SOF effectiveness in addressing them. At the same time, research on these topics may be used to inform policymakers, military professionals, and the public of the issues and challenges facing the SOF community.

Section A (Priority Topics) identifies topics of significant importance that have impacts across the SOF enterprise. Sections B through F focus on the USSOCOM Commander's five special operations priorities:

- Compete and Win for the Nation
- Preserve and Grow Readiness
- Innovate for Future Threats
- Advance Partnerships
- Strengthen our Force and Family

These topics reflect a consensus of the SOF experts who participated in the research topics workshop as particularly worthwhile in addressing immediate SOF needs and in building future capacity for emerging challenges.

The 35 participants included representatives from the USSOCOM Service Components, sub-unified commands, USSOCOM Headquarters Directorates, and representatives from select academic organizations to include: Canadian Special Operations Forces Command Education and Research Centre, Naval Postgraduate School, Naval War College, National Defense University College of Information and Cyberspace, Embry-Riddle Aeronautical University, University of Tampa, University of South Florida, University of Central Florida, University of New Hampshire, University of Texas at El Paso, and the Program on Irregular Warfare at the University of Maryland. The topics have been vetted through the USSOCOM headquarters, theater special operations commands, and components prior to publication to ensure emerging topics were addressed.

Please share this reference with fellow researchers, thesis advisors, and other colleagues and feel free to submit additional topics for consideration in future research topics publications. You may also visit our library website to see if JSOU has a publication that relates to your area of interest. We encourage you to send us your completed research on these topics.

A Note on the Relevance of Previous Years' Topics Lists

Previous years' research topics lists provide a repository of issues that may continue to have research relevance—especially the prior year's list. Previous editions of these publications (2009 through 2019) are available on the JSOU library public website on the JSOU Press publications page located at: <https://jsou.libguides.com/jsoupublications>.

Five Special Operations Priorities

Compete and Win for the Nation

Protect our interests and address today's challenges

Special Operations Forces (SOF) provide unique capabilities to help the Nation prevail, especially in competition below the level of armed conflict. Countering Violent Extremist Organizations (CVEO) that threaten the Homeland and U.S. interests remains the top priority for United States Special Operations Command. As the Coordinating Authority for CVEO, our focus is to counter a resonant ideology, deter the international flow of foreign fighters, dismantle their command and control, and disrupt their resources that flow across boundaries.

We are also directed to coordinate Department of Defense (DOD) efforts for Countering Weapons of Mass Destruction (CWMD) and internet-based Military Information Support Operations (MISO). Through our CWMD Fusion Cell, Joint MISO Web Ops Center and other information operation elements, we will maintain important relationships to promote unified action across the U.S. Government. We will sustain planning efforts, constantly assess campaign progress, and provide implementable recommendations to the Department for these efforts.

Preserve and Grow Readiness

The right people, skills, and training to maximize our competitive edge

SOF readiness begins with superior selection, training, education, and talent management. Standards must be rooted in objective operational requirements and values based decision making. Readiness is enhanced by ensuring our force is equipped with interoperable and reliable equipment that is field tested during pre-deployment training and validation exercises.

We will sustain investments in the National Mission Force and continue investments in enterprise readiness reporting. We will meet the Department's directed 1:2 deployment to dwell ratio and strive to achieve a 1:3 goal. We will continue to increase readiness, provide predictability and stability to our force, and mitigate PERSTEMPO* impacts.

** PERSTEMPO stands for personnel tempo and is a congressionally mandated program, directed by the Office of the Secretary of Defense. It is a method to track and manage individual rates of deployment (time away from home).*

Innovate for Future Threats

Relentlessly build the competitive advantage

Future SOF must be more lethal, trans-regionally integrated, and effective in contested domains. We must field overmatch technologies and tactics that exploit adversary vulnerabilities and negate near-peer competitor advantages. We will pursue clear priorities for combat development, focus innovation and modernization efforts, and think critically about capabilities at the tactical edge to enable our SOF professionals. Great ideas come from all levels of our formation. We will listen to the force and embrace transparency in the requirements process. We will ensure that what we develop is operationally sustainable, shared and interoperable throughout DOD, and can grow to scale.

We will streamline our requirements process to respond rapidly to future requirements, press the limits of research and development in our acquisitions, and lead the Department in the use of recent acquisition reforms. We will exploit revolutionary technological inflection points. Artificial intelligence, machine learning (AI/ML) and cloud computing are demonstrating the potential to bring leap ahead capabilities. We will develop our Experimentation Force (EXFOR) and our exercise programs to ensure that we are developing new approaches to competing and fighting in the future that provide asymmetric advantage and supported by the right technologies, equipment and capabilities.

Advance Partnerships

Create opportunities through our unique global understanding and placement

SOF must leverage its organic cultural and regional expertise, worldwide placement and access and our robust communications networks to make us inherently collaborative team builders. We will maximize transparency, while protecting operational security, in our Defense and Interagency relationships. We will leverage the authorities and capabilities of our allies and partners to achieve our mission objectives, and will assign world-class Liaison Officers who provide insight and access to decision makers and commanders and who are trusted in their own and hosting organizations.

Strengthen our Force and Family

Solemnly commit to the short and long term well-being of our SOF Family

Our people are our most precious resource. Our military, civilians and their families—not platforms or equipment—provide SOF with its competitive advantage. We will leverage Service, community, and SOF resources to protect our long-term investment in our personnel. Our Preservation of the Force and Families, Warrior Care, Religious Services and Joint Special Operations University educational programs will provide comprehensive support to all elements of our human capital (physical, mental, ethical, cognitive, emotional and spiritual). We will seek resources to extend care to and reduce risk in every part of our formation. We will improve human performance to preserve our investments in our SOF personnel, bolster their resiliency, lengthen their careers, and assist in a healthy transition. All efforts are designed to keep faith with our people, now and forever.

A. Priority Topics

Topic Titles

- A1. Influence and counterinfluence
- A2. Optimizing SOF for the Future Operating Environment (FOE)
- A3. Strategic sabotage: Historical lessons with future potential
- A4. Measuring the effectiveness of SOF campaigning: Converting tactical effects into strategic impacts
- A5. SOF FOE 2035
- A6. Resistance/counter-resistance operations
- A7. Alliance dynamics
- A8. Maneuver paradigms for the 21st century
- A9. Evolution of SOF culture for the FOE
- A10. Future SOF global employment structure and organization
- A11. Disruptive innovation efforts
- A12. SOF ethos and ethics

Topic Descriptions

A1. Influence and counterinfluence

Topic area: Compete and Win for the Nation

Influence and counterinfluence are both conceptual and operational for Special Operations Forces (SOF). At the conceptual level, the Joint Concept for Human Aspects of Military Operations (HAMO) encourages the force to gain deep appreciation about the worldviews, identities, social networks, relationships, and concepts of time associated with different population groups. To a large extent, this requires a high degree of social science capability and new mechanisms for blending HAMO analysis with operational and strategic objectives in competition. Operationally, influence and counterinfluence are achieved through a multitude of activities, some of which fall under the purview of SOF and others under larger U.S. Government structures. In SOF vernacular, the effects might be achieved through non-kinetic toolsets, strategic messaging, trust building, and multi-platform information operations. What questions must SOF contend with in the contemporary and future operating environment to gain

advantage in the future competitive space? What are the methodological/scientific solutions within the influence space to help determine outcomes? How can SOF influence/counterinfluence? How do SOF identify intentions and objectives? What means/tools are needed to persuade others to modify their behavior? How important is understanding others' sense of identity? How can SOF influence military/security force personnel in rogue states to weaken their commitment to protection of the regime? Does doctrine and Military Information Support Operations tactics, techniques, and procedures (TTPs), authorities, etc. need fundamental changes to reflect today's faster, more interconnected information environment? What are the intentions and objectives of our counterpart? How has our counterpart's sense of identity developed? How could we modify their behavior? What tools are effective in modifying their behavior? How are influence/counterinfluence operations directed against states different than those that are directed against non-state political actors i.e. rebel groups, violent extremist organizations (VEOs)?

A2. Optimizing SOF for the Future Operating Environment (FOE)

Topic area: Preserve and Grow Readiness

The FOE will be characterized by peer, near-peer, and non-state competitors, with technologically advanced threats, ubiquitous surveillance, artificial intelligence (AI)-enabled battle networks, an accelerating rate of change, globally scaled and interconnected information, and the increasing relevance of people and populations in competition and conflict. SOF requires new operating concepts and associated capabilities to confront this broad range of anticipated future security challenges. In this increasingly complex environment characterized by exponential advances in technology, shifting global order, and hyper-enabled adversaries, SOF must correspondingly optimize to confront these challenges. What enhancements in competency, cognition, performance, and total health create SOF capable of navigating the changing human terrain and new technology landscapes of the future? What competencies (i.e. observable and measurable knowledge, skills, abilities, and behaviors) will provide: the ability to operate in a digital technology saturated environment; robust political/historical awareness, increased language, regional

expertise, cultural proficiency, and the ability to effectively interact across the total range of physical and virtual populations and subgroups; the ability of future SOF “digital natives” (lacking analog skillsets) to operate in austere or low-tech environments using non-technical means? What tools and techniques are required to improve working memory, language comprehension, calculating, reasoning, problem-solving, and decision-making? How can SOF recruit from nontraditional populations? What are the SOF educational needs to train soldiers to think critically in an analog environment? How does United States Special Operations Command (USSOCOM) create the requisite diverse teams necessary to address the complex problems of the future? How does USSOCOM recruit, train, and retain these highly specialized warriors? What parameters or indicators are necessary? What are the leadership impacts (good and bad) and how can leadership better understand these factors to optimize SOF performance?

A3. Strategic sabotage: Historical lessons with future potential

Topic area: Innovate for Future Threats

Defined as deliberate action aimed at weakening a polity through subversion, obstruction, disruption or destruction, sabotage has proven to be a powerful force down through history. Strategic sabotage focuses on undermining confidence in the highest levels of adversaries’ leadership’s policies, capabilities, and/or actions through activities that expose and exploit those vulnerabilities. Concepts underlying many of history’s most successful sabotage efforts may well be as applicable today as they were in the past ... perhaps even more so given the multiple domains—land, air, maritime, cyber, space, and social media—and range of military activities across which sabotage can be exploited today. This topic proposes research to: (1) select exemplars from recent (18th century forward) history of both successful and unsuccessful strategic sabotage; (2) develop a metric (to include strategic objective, why/how objective was selected; Diplomatic, Information, Military, and Economic roles and implications) and evaluate reasons for success or failure of each activity; (3) key lessons learned; and (4) potential applicability to future SOF, joint, Department of Defense (DOD) and/or whole-of-government actions.

Research should not be constrained to U.S. or purely military actions. Note: SOF has leveraged “lessons learned” to great advantage over the decades. SOF is increasingly viewed—and employed—for strategic effect. Leveraging relevant strategic sabotage “lessons learned,” SOF can expand and strengthen options and capabilities it affords the national command authorities, Combatant Commands, and the Services. If the goal of sabotage is to weaken a polity, what forms of sabotage could be most effective at this? Conversely, what forms of sabotage carry the greatest risk? In the Cold War, how effective were strategic sabotage operations in great power competition? Under what conditions were sabotage operations successful? How was success defined? How did sabotage operations fold into and affect broader operations, and vice versa? What were the unforeseen consequences?

A4. Measuring the effectiveness of SOF campaigning: Converting tactical effects into strategic impacts

Topic area: Compete and Win for the Nation

Determine how the United States can achieve strategic success against violent Islamic terrorists and other VEOs that threaten important national interests, and determine how USSOCOM can better connect their tactical successes to the nation’s strategic goals. Unclassified captured enemy material (CEM), open-source reporting, and related primary source material have revealed a possible Islamic State of Iraq and Syria (ISIS) transgenerational “long game” associated with females and minor children. Specifically, “cubs of the caliphate” and associated programs designed to weaponize minor children, in addition to the use of women to radicalize, indoctrinate, manage, and activate these youthful combatants are consistent with a transgenerational “long game” created to outlast the current fight. The complex, multifocal nature of this ISIS line of effort will require data-informed approaches to effectively characterize, understand, and disrupt the recruiting, radicalization, and training pipeline. How do SOF use its unique access, insight, and understanding to contribute to the knowledge base, enabling the military to inform and advise in support of meaningful, sustainable, effective, and lawful solutions to a transgenerational fight? How will SOF protect the force from

physical, as well as legal, ethical, and moral harm, particularly as it relates to youthful combatants? What are the associated implications for the rules of engagement? How do SOF translate their unique access, insight, and understanding to inform options, particularly as it relates to leveraging unclassified CEM in support of data-informed, non-kinetic opportunities for disruption? What are the indicators or variables that SOF should monitor for transgenerational VEO development? What are the lessons learned from other countries who are monitoring for VEO behaviors and are reintegration programs working?

A5. SOF FOE 2035

Topic area: Innovate for Future Threats

The environment in which SOF operate in 2035 will be complex and characterized by global competition for influence, resources, and technology. This environment will manifest in evolving geopolitics, resurgent nationalism, changing demographics, rapid technological advancement, and unease resulting in global tension and competition for resources. The pace of disruptive technological innovation coupled with globally integrated populations will likely involve “black swan” events presenting strategic and operational challenges and opportunities. Rapid change and innovation will be the new normal and development cycles will shift to weeks and months instead of years. The pace of change in multiple fields is analogous to that of Moore’s law used to predict integrated circuit performance—performance doubling every 18 months. The impact is that some areas of “science fiction” today will be reality by 2035. What is the SOF role in addressing the reemergence of long-term, strategic competition by revisionist powers, China and Russia, who want to shape the world consistent with their authoritarian model? How will rogue regimes North Korea and Iran destabilize regions through their pursuit of nuclear weapons or sponsorship of terrorism? How will non-state actors threaten the security environment with increasingly sophisticated capabilities? Terrorists, transnational criminal organizations, cyber hackers, and other malicious non-state actors will continue to seek to restore an Islamic Caliphate across the Middle East, Africa, and into Asia. U.S. national security priorities confront threats from

Russia, China, North Korea, and Iran. Will this serve as an advantage for VEO reemergence? Assume Salafi-jihadist networks leverage new technologies e.g. AI, encrypted communications, virtual currencies, the Dark Web, offensive cyber capabilities, armed drones, and weapons of mass destruction to facilitate propaganda, raise funds, recruit new members, conduct disinformation campaigns, and perpetrate attacks. The joint force will continue to prepare for long-term strategic competition from great power competitors, rogue regimes, and VEOs. U.S. SOF must be ready to meet future challenges and opportunities, be fully prepared for foreseeable threats, and organized to maintain flexibility, adaptability, agility, and resiliency to react to unforeseen threats. U.S. SOF will serve as the force of either first or last resort. SOF personnel will have to be as physically dominant as they are now, but will also have to be cognitively and culturally resilient to operate in the complex FOE. How will SOF conduct operations against a peer-to-peer competitor when all the technological and professional advantages that they have held to date against less capable opponents no longer exist? What implications does this have for training and education?

A6. Resistance/counter-resistance operations

Topic area: Advance Partnerships

What is it that a resistance organization should seek to accomplish under occupation and how? If the resistance is in a small ally, such as a Baltic nation, and we have an agreement with them to protect their sovereignty (North Atlantic Treaty Organization [NATO] treaty)—how does that affect the resistance operations? If we are ramping up our conventional forces to restore their territorial sovereignty, what role does resistance play? If they perceive that the U.S. and its allies are moving too slowly, what are the consequences? As forcible entry occurs, then what sort of operations should the resistance be undertaking? How do they keep their people motivated to resist? What political problems could they present to us if the population is simply awaiting NATO/U.S. force arrival who will be placing themselves at risk for a passive or even accepting population? Resistance is tied with resilience including the psychological aspects. Conversely, what would a nation like Russia or China do to reduce the effectiveness of

resistance to them? What are their options (pre-crisis and post occupation)? Destroying a small town such as in the mid-twentieth century is likely not an option (worldwide communications and public opinion development) unless they want local and international opposition to them to increase and become more justified to ousting them. So, what other options do they have (e.g. ‘accidental’ deaths, loss of power, food shortages; all blamed on logistical difficulties, terrorists or criminals). What and how effective is present Russian and Chinese counterinsurgency doctrine (e.g. Chechnya, Ukraine, Uighur region)?

A7. Alliance dynamics

Topic area: Advance Partnerships

The Joint Concept for Integrated Campaigning explicitly recognizes the importance of achieving objectives through integrated military operations and aligned activities with interagency and other partners. The resumption of a multipolar environment suggests that alliance dynamics will be increasingly important to campaigning for advantage in a competitive international environment. As the United States moves beyond its unipolar moment, it is important to revisit how governments balance their national interests versus alliance interests. What makes alliances durable as entities? What behaviors are necessary to elevate the value to alliances in government perception? What operational and strategic issues do allied SOF face moving from a counterterrorism to a near peer focus? How do alliance concepts move beyond states to reflect the value of non-state and commercial actors? What are the attitudes, concepts, and behaviors that contribute to authentic engagement and durable associations? How do SOF leverage its global network for great power competition with China and Russia? Where can SOF support allies and partners in the pursuit of their interests to increase U.S. competition with Russia and China in the future? How does the U.S. balance national interest and the collective good? Are there any allies/partners SOF should leverage in the future? How can SOF build credibility with potential partners? How can SOF become a more attractive partner to be able to build alliances when required/needed?

A8. Maneuver paradigms for the 21st century

Topic area: Compete and Win for the Nation

In an era of unrelenting competition, U.S. systems and thinking (for the most part) still center on a binary peace-war paradigm. Adversaries are now waging a global multi-domain campaign against the United States. How might SOF, as part of the joint force, better conduct near continuous and asymmetric maneuvers across multiple domains and battlefield frames, through time, at all levels of war, globally, and in some cases simultaneously, to deter and defeat adversary strategies below the level of armed conflict, and when necessary, fight and win wars against increasingly capable peer and near-peer rivals? How might geographic combatant commands be more flexible to deal with what are increasingly global vice regional threats? Current tactical, operational, and strategic models are not effective against an adversary that has an integrated strategy across all levels of war. How might component commands, which are currently Title 10-focused (organize, man, train, equip), vice warfighting headquarters, better support the Theater Special Operations Commands? Fully integrated, cross-functional, interagency teams are imperative to address challenges in the competition space. Could a global memorandum of agreement better facilitate co-deployment (and employment) of U.S. government agencies? What are some required changes in training and education to create “21st Century Maneuverists?” Does maneuver, as defined, need to be expanded to consider physical and information power, as well as cyber and electromagnetic capabilities? How might we garner a clearer understanding of adversary actions and underlying logic to maneuver those adversaries into unfavorable positions in order to set the conditions that dictate the terms of the next move? What environmental variables have changed since the last era of potential great power conflict (i.e. the Cold War)? How might theories of deterrence and compellence inform SOF maneuver paradigms? What is the emerging role of SOF in great power competition below the level of armed conflict? Should an actual hot war break out, what mission sets should SOF prioritize?

A9. Evolution of SOF culture for the FOE

Topic area: Preserve and Grow Readiness

Special operations are special because their success depends on long-term relationships with indigenous forces and populations and knowledge of the cultural, societal, economic, and political environments in which they occur. Special operations improve a nation's security capabilities, foster or counter insurgencies, dismantle terrorist networks, counter weapons of mass destruction, and address other irregular adversaries. The greater the environmental knowledge and extent of relationships, the more likely the outcome will be successful. This, more than any other single factor, defines the nature of special operations. The nature of special operations is further defined by the SOF who conduct them. SOF are carefully selected for physical excellence, maturity, judgment, adaptability, and ability to make good decisions under pressure. SOF are trained in languages and culture; special operations TTPs; and provided with equipment designed or modified for special operations. SOF are able to conduct a wide range of missions—often at high risk—and in a clandestine or low visibility mode when required. How can SOF transform or innovate, focus on recruiting and retaining new people, and enabling them with the proper equipment while at the same time increasing adaptability? How must the recruitment and retention culture of SOF change to attract and incorporate more women and “Generation Z?” What is the SOF ethos that guides ethical and moral behavior of the enterprise? How must SOF culture change to recruit and retain individuals from different backgrounds with diverse perspectives and a wide range of skill sets?

A10. Future SOF global employment structure and organization

Topic area: Innovate for Future Threats

What innovative organizational structures and deployment models can best enable SOF employment against global lines of effort, increase the speed and quality of decision-making, and reduce wasted capacity under current Unified Command Plan and deploy-for-presence models? How will SOF continue to maintain the global intelligence collection posture and picture as we shift from a Deploy-for-Presence to a Deploy-for-Purpose model? Additionally, what is the

feasibility for SOF to virtualize a portion of its core missions to meet denied area and dwell time concerns? Can SOF scale and expand to include more allies and partners? Which allies and partners present the most desirable qualities for SOF scalability? Are current SOF organizations fit for purpose in the future security environment?

A11. Disruptive innovation efforts

Topic area: Innovate for Future Threats

Technology is accelerating at a rate previously unseen in human history. What are the emerging and disruptive technologies most concerning to SOF operations? Disruptive innovation includes widespread proliferation of AI; big data for predictive analysis; machine learning technology; new biotechnologies; global shift to advanced information and communications technologies; and advances in manufacturing (3D printing). How will SOF take advantage of these technologies and how will SOF counter their adversary's use? What resources—DOD innovation labs, research and development labs, nontraditional defense contractors, etc.—can SOF leverage better to implement innovative technologies into the warfighter? Within the “BRINE” (biotechnology, robotics, information, nano, energy) areas, what are the most potentially disrupting innovations of the future? How does human augmentation/enhancement, including new genetic technologies, align with the core values of SOF? What are the implications of fighting adversaries that use advanced human augmentation/enhancement techniques? In addition, advances in the neurological sciences has increasingly enabled science and technology that enables controlled effects on human and animal brains. Do these neuro weapons create a new weapon of mass destruction, or possibly a new weapon of mass disruption? What are some of the commercial off-the-shelf technologies available to terrorists and other adversaries and how could those technologies be employed in a destructive or disruptive way? What risk do neuro weapons pose to SOF? Does that risk include possible long-term impairment of personnel? What must be done to improve detection and mitigation of neuro threats? Do current rehabilitative programs effectively resolve effects of neuro attacks on the human brain and sensory organs?

A12. SOF ethos and ethics

Topic area: Strengthen our Force and Family

There have been several widely-publicized incidents that highlight ethical lapses (criminal activity) among some members of the SOF community. These incidents sparked the USSOCOM Commander's concern and resulted in a memorandum from the Commander to the entire command. Studies have evaluated unit cohesion in small teams and found that it can foster groupthink, impede information flow with external players, etc. However, there are very few studies focused specifically on SOF or with an application to small team SOF units. Ethical lapses have implications for SOF culture, and are particularly relevant as team diversity increases. Do these recent events highlight a force-wide problem? Compared to the past, are the number of occurrences of these problems increasing? Does modern media and technology amplify the negative perceptions caused by these types of events? If there is a problem, what may be underlying factors that would contribute to adverse behaviors and what are effective ways to message the force to create awareness and modify behaviors? How do the occurrences among USSOCOM forces compare to the Services? What is the negative side to the SOF brotherhood and unit cohesion? What are the specific statistical trends in terms of ethical misbehaviors?

B. Compete and Win for the Nation

Topic Titles

- B1. Innovative uses of the technology environment by state and non-state competitors
- B2. Intelligence, surveillance, and reconnaissance (ISR) next
- B3. Anticipating the unintended consequences in campaigning
- B4. Resiliency in and among sanctioned states
- B5. Global mineral market 2030 and beyond
- B6. Possibilities for terrestrial ISR platforms
- B7. The operational and political implications of “dense urban terrain”

Topic Descriptions

B1. Innovative uses of the technology environment by state and non-state competitors

Technology is advancing at an extraordinary pace. This provides resource-constrained states, and terrorist and criminal elements, the ability to approximate military capabilities previously available only to advanced militaries. It will be increasingly important for Special Operations Forces (SOF) to anticipate how competitors might use available technology for the purposes of evasion, communicating, attacking, recruiting, moving resources, and denying or degrading partner and allied capabilities. How might the SOF enterprise generate ideas on how technology can be employed either in support of or against its forces and missions? Are there specific analytical capabilities that should be developed and remain internal to the SOF enterprise? How might the SOF enterprise engage those people and organizations at the cutting edge of technology development to imagine potential military applications? How might the acquisition process be streamlined to keep pace with new technological capabilities available to others on the open market?

B2. Intelligence, surveillance, and reconnaissance (ISR) next

The opportunity for obtaining, analyzing, and utilizing information voluntarily disseminated in the public domain is improving as

people's lives become increasingly intertwined with digital devices. Moreover, people are wittingly or unwittingly self-profiling, volunteering their biometric data, and establishing patterns of life that can be potentially exposed with or without their permission (user agreements vs. hacking). This modern reality presents the opportunity for new ways to conceive of ISR at multiple levels. For example, to what extent can social media analysis provide verifiable and reliable data for measuring preferences and attitudes at the operational to strategic levels? What are the weaknesses inherent with relying on social media as an indicator? What kinds of sociocultural analysis are necessary prior to utilizing social media analytics in order to make sense of the data? At the operational to tactical levels, how might facial recognition and other biometric indicators be captured and potentially utilized for ISR purposes? What are the vulnerabilities in digital device biometrics that could expose SOF to potential harm? What evolving cyber-enabled experiences might be utilized to gauge sentiments or serve as useful indicators of measures of performance and measures of effect during SOF engagement strategies? What can the Internet of Things provide in terms of sensing patterns, trends, concerns, and potential crises? What are its limitations? How might artificial intelligence and machine learning be leveraged in the performance of ISR in this way?

B3. Anticipating the unintended in campaigning

By issuing the Joint Concept for Integrated Campaigning, the Joint Staff has begun the process of reorienting the military away from linear planning based on end states and toward persistent, proactive intervention in nonlinear, social systems. The use of the term “campaigning” is purposeful in that it requires a cognitive shift from contingency plans to one comfortable with perpetually seeking advantage without a clear idea of how the future will unfold. Unanticipated consequences are a reality in military operations, but are magnified in social settings by the multitude of unknown variables impacting a population and its perception of events. Many questions arise as the joint force moves towards a campaigning mindset, especially in the context of competition short of armed conflict. Is there a requirement to develop in operators an understanding of how mission objectives

reach beyond the tactical mission and nest within a larger campaign or strategy? What mental models in military education need to be adapted to facilitate campaigning attitudes and activities? How does one determine if a campaign is moving toward a desired or acceptable future? How might others with important insight and perspective, such as allies, interagency personnel, partner nations, scholars, and others contribute to campaigning design and assessment? How do we inculcate the necessity for planners to consider all sociopolitical-economic considerations in the planning process (as factors as important as the tactical plan)? What role does scenario planning play in a campaigning framework?

B4. Resiliency in and among sanctioned states

Economic sanctions are a crucial element of statecraft, especially when tensions do not rise to the level of armed conflict. However, the last 30 years has demonstrated that a number of the government targets of U.S. sanctions, notably Iran, Venezuela, Cuba, North Korea, and Iraq under Saddam Hussein, have been able to withstand economic pressure, persist, and sometimes even improve their strategic position. This is of particular interest for SOF since many of these regimes are linked to terrorism and weapons of mass destruction for which United States Special Operations Command (USSOCOM) has coordinating authority. Moreover, these governments are reported to have relationships with one another and possibly other types of transregional threat networks. Given the history it is fair to ask, are sanctioned states capable of creating a sustainable, alternate regime of international trade of their own given their own indigenous natural resources? What foreign assistance is critical for sanctioned states to operate outside the existing international system of finance and trade? What are the practical and institutional barriers they face if they have such an intention? What are sanctioned states' most effective means for exploiting loopholes in the existing systems of international finance and trade? What role might crypto-currency play in sanction busting by sanctioned governments? How might transregional threat networks adapt to or play a role in sanctions busting, and what vulnerabilities do they face in doing so? From an integrated campaigning approach, what might the role of SOF be in combatting

such activity given the current distribution of authorities, permissions, capabilities, and access across the U.S. Government?

B5. Global mineral market 2030 and beyond

Rare earth metals and other identified strategic materials are becoming increasingly important to statecraft in that the digitization of economies exposes countries to dependency on a very small number of providers, China among them. The Joint Concept for Integrated Campaigning asserts that, in the era of great power competition, integrating military and aligning interagency and partner nation capabilities is essential for progressively seeking strategic advantage to prevent conflict. With rare Earth metals concentrated mainly in one rising global power, what might the role of SOF be from the perspective of statecraft or gray zone politics? Might SOF have a crucial diplomatic role to play to mitigate the possibility of rare Earth metals or other precious commodities from being used as a strategic lever in negotiations given their access and placement? Alternatively, rare Earth metals are also found in many countries riven by internal conflict? What are the implications of threat networks gaining control over such commodities? How might their position as a provider impact their ability to conduct external operations given the demand for the commodity? Are there any indications that threat networks have such intentions?

B6. Possibilities for terrestrial ISR platforms

Perspective matters and ISR accomplished from overhead assets are inherently limited in the perspective they can bring. There are times when seeing and sensing the environment from the ground is crucial for situation awareness. The rapid improvement in mobile sensor platforms, most visibly represented by technology used for the Mars rovers, suggests that new ISR platforms capable of landing can be developed. What SOF core activities can be supported with existing technologies and which mission sets should be given priority given the state of technology? What areas of emphasis should USSOCOM establish given trends in great power competition? How might the data, and platform itself be recovered in a way that protects the

technology? What are the moral, legal, and ethical concerns associated with conceiving of ISR in this way?

B7. The operational and political implications of “dense urban terrain”

Demographers expect that population flows to urban and suburban areas will continue through 2050 leading to increasingly dense urban environments. The operating implications for this whether in the context of large scale conventional operations, counterinsurgency or counterterrorism, or humanitarian assistance and disaster relief are profound. On the one hand, large scale attacks on urban centers with conventional weapons or weapons of mass destruction could lead to outward migration flows that choke major transportation arteries and impede military mobilization and response. On the other hand, urbanization leads to political transformation in societies over time, which might lead to insurgent or terrorist operations against friendly governments. In other cases, SOF could be called upon to provide humanitarian relief to city-level actors due to host government incapacity after a natural disaster. In each of these cases, SOF will require concepts for operating in and analyzing the social reality of dense urban terrain. How should SOF posture itself for operations across multiple domains in dense urban terrain? Are there lessons to be learned from current conflicts or operations in such environments? How do political dynamics change in a country as urbanization occurs? Are there patterns associated with political change? What are the best practices for dealing with humanitarian crises and migration flows in dense urban environments? How can neighborhood and/or community ecosystems be recognized and assessed? How might different sensor technologies, such as social media, small unmanned aerial systems, and networks of nongovernmental organizations participate as a system for addressing challenges in these environments? What modeling tools are available to test potential crisis scenarios?

C. Preserve and Grow Readiness

Topic Titles

- C1. Prioritizing cyberspace capabilities to support United States Special Operations Command (USSOCOM) core activities
- C2. Cyber support to tactical SOF Operations—tactical organization
- C3. Medic skill set sustainment
- C4. Cyber talent management
- C5. Measuring and reporting analytic health
- C6. Compare and contrast simulation methodologies for manpower and personnel policy management

Topic Descriptions

- C1. **Prioritizing cyberspace capabilities to support United States Special Operations Command (USSOCOM) core activities**
Whereas a few years ago “cyber” was not clearly recognized as a major Special Operations Forces (SOF) concern, concepts of cyber-enabled SOF and SOF-enabled cyber are becoming regular discussions across the enterprise. In the context of USSOCOM’s core activities, how should the enterprise prioritize these activities given the high-demand, low-intensity nature of cyberspace forces and challenges associated with developing cyber capabilities? Which core activities require high degrees of cyber competency and which do not? What are the implications for training and education in career progression? Are USSOCOM forces currently prepared to operate in and through cyberspace for carrying out core activities that demand cyber competency? For which core activities should USSOCOM seek unique tactical capability development and which activities are, perhaps, better suited for broader support from United States Cyber Command? How should USSOCOM move forward and prioritize cyberspace operations in their core activities? What attitudes, behaviors, and skill sets are required for leveraging the system of cyber-related capabilities across the U.S. Government?

C2. Cyber support to tactical SOF operations—Tactical organization

Much like conventional forces, SOF tactical teams can potentially benefit from applying cyber capabilities to their operations. Toward this end, how can SOF better organize to best implement cyber operations capabilities, to include at the official development assistance level? Should a SOF cyber capability be engendered organically (through cross-training) and/or SOF Service- like component to support the joint force? Conversely, should Service organizations instead provide specific cyber augmentation and/or develop their own independent methods (toward a joint solution)? What are the risks and opportunities associated with each of these possibilities?

C3. Medic skill set sustainment

It is unclear how much or how often a special operations combat medic (18D, 68WW1, 38BW4) should be conducting continuing hands-on medical skill sustainment. Current United States Army Special Operations Command 350-29 requires each medic to complete four weeks of Medical Proficiency Training every four years. This may be insufficient considering the depth and breadth of skills a special operations combat medic is responsible to maintain. Objective evidence is required to establish appropriate skill sustainment intervals. This data will in turn drive command influence and support of dedicated and integrated medical training. A rapidly evolving domain requires more frequent refreshing to ensure that new best practices and associated lessons learned are translated into practice in a timely manner. What best practices are followed in the private sector? How do Emergency Medical Technicians and Registered Nurses maintain proficiency other than working every day? What is their structure for continuing education that can be emulated or adopted? How can USSOCOM overcome the attendant inhibitors such as licensing, credentials, and working in civilian medical institutions?

C4. Cyber talent management

The future operating environment may call for increased cyber capability requirements for SOF. Effective government (i.e., civilian and uniformed military) offensive cyber operators possess a unique skill set that is difficult to obtain, atrophies quickly, and offers lucrative

opportunities in the private sector. In order to balance opportunities for members (e.g., promotion, career progression, bonuses) and maintain operational capability, how can the Services and USSOCOM best manage their trained cyber operators? How can the cyber skill set be recorded and tracked? How can it be factored into promotion and career progression? Is the restoration of a system similar to the Army's former specialist track appropriate? Is a warrant officer track appropriate? What can the Department of Defense (DOD) and USSOCOM offer cyber operators that the private sector cannot? Could this specialty reside within SOF reserve components/National Guard, allowing cyber operators to maintain job in the private sector? What cyber skills are required by SOF operators?

C5. Measuring and reporting analytic health

The quality of analysis provided by intelligence support is the direct output of the quality of the skills and abilities of the analysts and the analytic process. How can the SOF enterprise evaluate and measure these skills and abilities and report the findings in a way that is accurate and impactful to both decision makers and the organization? How does SOF incorporate those assessments into further training for analysts? Once analysts are assessed, if there are issues, what is the next step? How can analysts' skills and abilities be improved in areas such as critical thinking, basic statistics, sampling bias, and vetting and validation of sources and methods?

C6. Compare and contrast simulation methodologies for manpower and personnel policy management

Naval Special Warfare (NSW) needs a way to effectively evaluate prospective manpower and personnel policy decisions. Decisions that focus too much on one perspective may appear to be optimal, but cause unforeseen issues in the other. For example, is the force capable of producing enough milestone-qualified personnel at a given pay grade given end-strength levels that appear to be adequate? Is a prospective policy change likely to mitigate or exacerbate unintended dynamics such as the one referred to as "flush and fill?" Navy Manpower, Personnel, Training & Education uses a Markov chain Monte Carlo simulation model to determine manning levels from the

Echelon I perspective down. NSW has a Discrete Event Simulation model to determine end- strength levels and personnel effects from the Echelon IV perspective up. Which simulation methods should NSW invest in and for what purpose?

D. Innovate for Future Threats

Topic Titles

- D1. Nontraditional analytic service delivery models
- D2. SOF readiness and lethality in support of Multi-Domain Operations (MDO)
- D3. Terrorist vulnerability: Privacy vs. convenience
- D4. SOF/space/cyber electromagnetic activities (CEMA) nexus
- D5. SOF support to U.S. Navy Irregular Warfare (IW) operations in coastal environments
- D6. Can there be a universal SOF Common Intelligence Picture (CIP)?
- D7. Cyber Measures of Effectiveness (MOEs) and Measures of Performance (MOP)

Topic Descriptions

D1. Nontraditional analytic service delivery models

A recent decision to retain captured enemy material in its native unclassified form provides unprecedented opportunities for Special Operations Forces (SOF) to gather insights on key adversaries. In tandem, commercial companies increasingly are turning to nontraditional analytic service delivery models to access data science talent, methods, technology, and related to accomplish similar queries on marketing and sister information. How can captured enemy material be better retained, controlled, disseminated, processed, and employed to support civil legal and criminal prosecution efforts against terrorist organizations and their members? Can (contractually, talent wise) and should (mission focus) SOF explore the adoption of such service delivery models to review enemy material? What steps can be taken to overcome classification and operations security challenges if/when they arise? Can lessons be learned from commercial entities with respect to evaluation methods of such information?

D2. SOF readiness and lethality in support of Multi-Domain Operations (MDO)

MDO is fundamentally about how U.S. forces will deter and defeat peer adversary strategies below the level of armed conflict and—when necessary—fight and win to overcome rapidly evolving challenges posed by powerful and intelligent peer rivals. MDO allows U.S. forces to outmaneuver peer competitors physically, virtually, and cognitively, applying combined arms in and across all domains. How might SOF increase readiness (via civil affairs (CA), influence operations, security force assistance, etc.) to prevent/deter adversary threats in the MDO realm? How might SOF better harness its suite of lethal capabilities to enhance joint force convergence against MDO? How may SOF enhance penetration and disintegration of enemy anti-access and area denial systems to improve strategic, operational, and tactical maneuver?

D3. Terrorist vulnerability: Privacy vs. convenience

As evidenced in the prominence of social media and information sharing, society is increasingly surrendering privacy protections for technological convenience. This, however, is not limited to friendly actors. Terrorist networks and their members are likewise surrendering privacy as a part of the modern day convenience tradeoff. How could an examination of this ratio better explain terrorist culture and willingness to assume privacy vulnerabilities? Could this information be exploited to expose terror networks and/or locate threats? How are peer competitors knowingly employing this information against the U.S. and its partners? What are the impacts of current and emerging privacy laws and regulations worldwide on potential U.S. counterterrorism efforts?

D4. SOF/space/cyber electromagnetic activities (CEMA) nexus

In a technology-saturated mid-twenty-first century security environment, transparency and reach are of the utmost importance. This reality arguably presents strategic opportunity at the nexus of SOF (knowledge of the people, cultures, and populations, and the ability, if needed, to deliver precision fires), Space (full view of the planet and global access), and CEMA (an understanding of the global pulse

through the World Wide Web and social media, as well as the ability to deliver non-kinetic effects via computer networks operations, electronic warfare, and information warfare). How can SOF better leverage existing space and CEMA expertise via recruitment and/or private sector relationships? Would a SOF/Space/CEMA nexus philosophy redefine whole-of-government approaches to security challenges? Does a SOF/Space/CEMA nexus improve joint force ability to maneuver (or create effects) in operational and strategic deep fires areas? What capabilities, if any, do SOF need from United States Cyber Command, U.S. Army Space and Missile Defense Command, the joint force, and/or the Interagency to operate in the Space and CEMA domains? What unique aspects of Space (as a domain) would inform the roles/missions of a Space Service SOF? What is the role of SOF, if any, in defending or controlling critical terrestrial uplinks for friendly and/or adversary weaponry?

D5. SOF support to U.S. Navy Irregular Warfare (IW) operations in coastal environments

In today's challenging, hybrid-malign actor arena, IW remains a critical tool for many Service, joint, and U.S. Government-wide activities. Still, IW and its enabling factors are often misunderstood or poorly appropriated, while belligerent actors wield and maneuver in this space with apparent impunity. Despite its historical prominence addressing IW, surprisingly the U.S. Navy's 2018 Navy Strategy and its Design for Maintaining Maritime Superiority has not a single mention of Naval Special Warfare (NSW) or the role of SOF in IW. To address this gap, what would maritime IW in support of large-scale combat operations of the future look like? Given the growing vulnerabilities of U.S. Navy capital ships to missile attacks, what role can SOF play in the defense of these assets? How are Russia/China/Iran developing and utilizing maritime IW strategies? What additional partner nation training and education in the maritime environment is needed to execute this function?

D6. Can there be a universal SOF Common Intelligence Picture (CIP)?

At present, SOF units employ theater intelligence data as a primary information source. For future operations, how can SOF develop a

CIP template to best support SOF missions, roles, and functions? What would such a template look like? Can artificial intelligence and machine learning be part of such a solution? How can a CIP better prepare deploying units prior to arrival? What types of more focused support can a CIP yield for operators once in theater?

D7. Cyber Measures of Effectiveness (MOEs) and Measures of Performance (MOP)

Unlike traditional kinetic weapons, payloads, and munitions; there is no Joint Munitions Effectiveness Manual (JMEM) for cyberspace operations. For example, Bomb/Battle Damage Assessment (BDA) of cyberspace operations are often minimal, insufficiently codified, or not deliberately built into mission planning at all. How can SOF—via its cyberspace capability—integrate MOEs and MOPs into existing models and products? What model or policy would be needed to empower such integration? What lessons can be learned from peer organization and/or competitor cyber MOE and MOP?

E. Advance Partnerships

Topic Titles

- E1. Special interest aliens and terrorist movement in migrant flows
- E2. Amplifying the role of civil affairs (CA) and civil reconnaissance as a SOF sensor
- E3. Addressing geographic and interagency transregional threats
- E4. Naval Special Warfare (NSW) support to U.S. Government attribution operations in hyper-challenging environments

Topic Descriptions

- E1. **Special interest aliens and terrorist movement in migrant flows**
Global migration has become a key security issue for many countries due to the ability of terrorist and criminal elements to exploit vulnerabilities in overstretched immigration and humanitarian assistance infrastructure. While the vast majority of migrants are motivated by economic and security concerns with no inherently nefarious intent against the destination country, human smuggling has transformed in recent decades to the point that family and community-based human smugglers cannot conduct business without working at some point with criminal organizations with nefarious intent. Given this reality, how might Special Operations Forces (SOF) distinguish between different types of migrants working with human smugglers and their respective intents? What are the push and pull factors that enable analysts to differentiate groups? Are there reasons other than money that might incentivize a human smuggling operation or criminal organization to work with terrorist or threat networks? To what extent does policy, i.e. securitization of the border or antiquated immigration processes, contribute to the conflation of human smuggling with criminal and terrorist organizations? How might SOF, law enforcement, justice officials, partner nations, and others create a more efficient integrated campaigning approach for dealing with human smuggling as a complex adaptive system?

E2. Amplifying the role of civil affairs (CA) and civil reconnaissance as a SOF sensor

By issuing the Joint Concept for the Human Aspects of Military Operations (JC-HAMO), the Joint Staff recognized that effective integrated campaigning is not possible without relevant, meaningful, and timely information about the populations subject to U.S. military activity. While counterinsurgency and counterterrorism operations over the last 18 years of conflict have improved many of the database and atmospheric collection capabilities of CA, integrating the information with broader U.S. military and interagency systems remains a challenge. With new trends in great power competition and the persistence of terrorist and threat networks in fragile states, what role might CA play in the future SOF operating environment? How do SOF executives currently interpret the CA capability and how it fits as an asset in integrated campaigning? What are the horizons of interaction between CA and interagency engagement, and how might they be better aligned as a system of population engagement? How might the atmospheric and information obtained during CA operations be better distilled and disseminated to answer questions posed by military and civilian leaders in the spirit of JC-HAMO? What aspects are technical in nature and what aspects are cultural?

E3. Addressing geographic and interagency transregional threats

Ensuring civilian and military alignment is essential to not only the success of SOF, but also the entire Department of Defense (DOD) organization and the interagency at-large. As we collectively prepare for the strategic environment of tomorrow, what should the U.S. Government be doing to ensure it is aligned to tackle these challenges? Is the traditional Geographic Combatant Command (GCC) structure no longer sufficient for both problem and data assessment? Is the rise of the global GCCs with worldwide responsibilities (United States Special Operations Command, United States Transportation Command, United States Strategic Command, etc.) the solution for transregional friction points? Do interagency roles need to be adjusted to include SOF? How and where do partner nations fit into this equation?

E4. Naval Special Warfare (NSW) support to U.S. Government attribution operations in hyper-challenging environments

Attribution operations span across a spectrum of military activities, ranging from detection, identification, tracking, surveillance, reporting, dissuading, deterring, and defeating. With increasing geopolitical and military conflict now purposely below the threshold of armed conflict, NSW must be prepared to conduct attribution operations where others either will not and/or cannot go (i.e. SOF activities in hostile, non-permissive, extreme conditions, or ones politically/diplomatically sensitive and geopolitically contested). Working with and through partners, how can NSW better align its building partnership capacity to better assist in the planning, equipping, training, synchronizing, directing and execution of partner nation forces? What capabilities would enable NSW to be more effective at combating maligned actors in littoral regions in particular? What case studies of maritime hybrid warfare can be used to prepare for future ones? What legal authorities (such as the United Nations Convention on the Law of the Sea) constrain/expand freedom of maneuver for friendly or adversarial forces?

F. Strengthen Our Force and Family

Topic Titles

- F1. Special Operations Forces (SOF) suicide
- F2. Preservation of the Force and Family (POTFF): It's a permanent authority now, but is it working?
- F3. Weaponization of neuro science and technology

Topic Descriptions

F1. **Special Operations Forces (SOF) suicide**

The special operations community has been dealing with a high suicide rate for some time. Prolonged combat operations and the very nature of SOF engagements over the last 10–12 years, compound the likelihood of Post-Traumatic Stress Disorder. SOF personnel are conditioned to power through adversity, “tough it out” and “shut it down.” This serves operators well in action; it is a devastating reaction to people suffering post war/action problems. How do SOF suicide rates compare to the Services and the civilian sector? What are the factors involved in SOF suicide? What prevention methods can be employed by United States Special Operations Command (USSOCOM) to reduce suicide rates? How can USSOCOM personnel deal with stressors that lead to suicide? What messaging/narrative is effective in preventing suicides? How can the stigma associated with asking for help be reduced or eliminated.

F2. **Preservation of the Force and Family (POTFF): It's now a permanent authority, but is it working?**

USSOCOM received funding to implement POTFF Family Support Pilot Programs for FY14–16). The 2015 National Defense Authorization Act extended Section 554 for two additional years (FY17–18) with the following requirements: (1) The identified activity must be one that has a direct and concrete impact on the readiness of SOF; (2) The identified activity is not currently being provided by the individual Services; (3) a cost/benefit analysis for each activity must be conducted; and, (4) outcome measurement standards must be developed

to evaluate the success of each family support activity. In 2018, POTFF was codified at 10 U.S.C. Sec. 1788a, and \$10 million of MFP-11 was authorized per year. A detailed report is due on 1 March every year beginning in 2019, detailing the programs, assessing their impact on readiness, comparing them to programs provided by the Services, and recommending lessons learned incorporation for other family programs. Has USSOCOM developed POTFF programs tied to readiness? If so, have the programs impacted readiness? How is that measured? What are the results? How have actual costs of the POTFF programs compared to predicted costs? Given the actual numbers, what is the new cost/benefit analysis of such programs? What outcome measurement standards or measures of effectiveness (MOEs) were developed? What are the results of the MOEs? What programs are working, why are they working, and how do we know? What should change about POTFF programming/implementation/MOEs? What should stay the same? How does the dwell ratio impact readiness, mental health, and family unity? Is there an optimal dwell ratio for a more effective force? How are return on investments defined for each program and sub-program? What does success look like?

F3. Weaponization of neuro science and technology

Advances in the neurological sciences has increasingly provided science and technology (S&T) that enables controlled effects on human and animal brains. An example is the suspected sonic attacks in 2016 on some members and family assigned to the U.S. Diplomatic Mission in Havana, Cuba, that expressed itself in symptoms that included ear pain, tinnitus, dizziness, and cognitive issues. Do these neuro weapons create a new weapon of mass destruction, or possibly a new weapon of mass disruption? What are some of the commercial off-the-shelf (COTS) technologies available to terrorists and other adversaries and how could those technologies be employed in a destructive or disruptive way? What risk do neuro weapons pose to SOF? Does that risk include possible long-term impairment of personnel? What must be done to improve detection and mitigation of neuro threats? Do current rehabilitative programs effectively resolve effects of neuro attacks on the human brain and sensory organs? ↑

Appendix: Acronym List

AI	artificial intelligence
CA	civil affairs
CEM	captured enemy material
CEMA	cyber electromagnetic activities
CIP	Common Intelligence Picture
COTS	commercial off-the-shelf
CSO	College of Special Operations
CSS	Center for Strategic Studies
CVEO	Countering Violent Extremist Organizations
CWMD	Countering Weapons of Mass Destruction
DOD	Department of Defense
FOE	Future Operating Environment
GCC	geographic combatant command
HAMO	Human Aspects of Military Operations
ISR	intelligence, surveillance, and reconnaissance
ISIS	Islamic State of Iraq and Syria
IW	irregular warfare
JC-HAMO	Joint Concept for the Human Aspects of Military Operations
JSOU	Joint Special Operations University
MDO	Multi-Domain Operations
MISO	Military Information Support Operations
MOE	Measures of Effectiveness
MOP	Measures of Performance

NATO	North Atlantic Treaty Organization
NSW	Naval Special Warfare
PERSTEMPO	personnel tempo
PME	professional military education
POTFF	Preservation of the Force and Family
S&T	science and technology
SOF	Special Operations Forces
TSOC	theater special operations command
USSOCOM	United States Special Operations Command
VEO	violent extremist organization

