



# NPS IN THE NEWS

## Weekly Media Report – Oct 11 - 17, 2022

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### EDUCATION:

#### [Learning the Art of Wargaming](#)

*(Maxfell 11 Oct 22) ... Airmen 1<sup>st</sup> Class Greydon Furstenau*

The Teaching and Learning Center hosts a wargaming event with special guest, Sebastian Bae, wargamer, research analyst and former Marine, to discuss the future of wargames and its use in military education at Air University, August 29-31, 2022... "With Sebastian Bae's visit, we are very excited to collaborate with one of the key leaders in taking gaming to a new level in the learning process. And with participants from several professional military education institutions including the **Naval Postgraduate School**, Army War College, Marine Corps University and even our consœurs and confrères from France's L'École de guerre ... we've all contributed to forging an alloy of new ideas to improve our teaching practices," Dr. Mehmed Ali, Director of Academic Services said.

### RESEARCH:

#### [NWSI's Latest Warfare Innovation Continuum Workshop Examines the Future Hybrid Force](#)

*(Navy.mil 18 Oct 22) ... MC2 Lenny Weston*

*(NPS.edu 18 Oct 22) ... MC2 Lenny Weston*

The Naval Postgraduate School (NPS) hosted its latest hybrid Warfare Innovation Continuum (WIC) Workshop in late September. Spearheaded by the Naval Warfare Studies Institute (NWSI), WIC 2022 brought together more than 138 participants, allowed NPS students to envision the future hybrid force with faculty, staff, fleet officers, Navy labs, industry partners, and international participants from Australia, Japan, Brazil, the Netherlands and Mexico.

#### [Suffolk Officials Plan For Another Emergency](#)

*(Patch 12 Oct 22) ... Peggy Spellman Hoey*

A drill Thursday will explore county officials' response to scenarios like natural disasters, terrorism, and food shortages... Fresh off the recent cyberattack, Suffolk County officials are now planning for another emergency by taking part in a tabletop drill with the **Naval Postgraduate School** Center for Homeland Defense and Security.

#### [Tracking Competition in Cyberspace Announcing the Dyadic Cyber Incident Dataset Version 2.0](#)

*(MWI 14 Oct 22) ... Ryan C. Maness, Brandon Valeriano, Kathryn Hedgecock, Jose M. Macias and Benjamin Jensen*

What does cyber conflict actually look like? Do adversary states exhibit patterns of behavior in the cyber domain that make them susceptible to deterrence efforts? And are cyber operations better understood as a constellation of one-off events, or are there rhythms and discernible trends that connect these operations into a defined landscape... Since its initial publication, the data has been used in multiple peer-reviewed publications and has provided a wealth of information on nation-state cyber security activities. After an initial major expansion to version 1.5, the newly released version 2.0 represents another dramatic expansion and a rebuild of the data enabled



by collaboration with external parties, including US Army Cyber Command and the **Naval Postgraduate School**, that seek to examine the domain through advanced social science methods.

## **FACULTY:**

### **[NPS Meteorology Professor Awarded Buchan Prize for Seminal Work in Hurricane Prediction](#)**

*(Navy.mil 14 Oct 22)* ... Rebecca Hoag

*(NPS.edu 14 Oct 22)* ... Rebecca Hoag

Expanding the theoretical knowledge of hurricanes and tropical cyclones is essential to improving early warning systems, especially in a changing climate with increasing potential to fuel the severity of these weather events and their impact on military operations.

### **[Subcontinent Adrift – Strategic Future of South Asia](#)**

*(Stimson 14 Oct 22)*

Launch event for “Subcontinent Adrift: Strategic Futures of South Asia,” a groundbreaking new book authored by Feroz Khan... Feroz Khan is a research professor at the U.S. **Naval Postgraduate School**.

### **[Xi’s New Generals Face Tough Military Challenges Post-Congress](#)**

*(Jago 17 Oct 22)*

In his first two terms as commander of the world's largest military, Chinese President Xi Jinping has unleashed sweeping changes to its structure, posture and potency... Christopher Twomey, a security scholar at the U.S. **Naval Postgraduate School** in California, said it was important to resume international exchanges to better understand Beijing's evolving nuclear doctrine, despite the growing role of habitually suspicious commissars on the commission.

### **[The Renaming of Military Bases – What is Past is Not Prologue](#)**

*(Small Wars Journal 17 Oct 22)* ... Hy Rothstein

“What is past is prologue” is a quotation by William Shakespeare from his play *The Tempest*. In contemporary use the phrase means that history sets the context for the present. This phrase does not apply to the decision to rename U.S. military bases. While Congressional and military leaders may have good reasons to take these actions today, we are very fortunate that the leaders of the post-Civil War period did not think like today’s leaders. If they did, it is very likely that the country would have been racked by insurgency and the Union would have not survived after winning the war... Hy Rothstein recently retired from the faculty of the **Naval Postgraduate School** in Monterey, CA. He is a graduate of West Point and holds a Ph.D. from Tufts University in International Relations. He has written and edited numerous books on war as well as book chapters and journal articles on national security topics.

### **[The Navy Needs a Sea Change in Ship Design](#)**

*(USNI 17 Oct 22)* ... David H. Lewis

Maritime warfare has always been defined by the relationship between sailors and their machines. From the Roman corvus to the birth of ocean-going sailing warships, to the cannon, to the airplane, and onto the computer and radio, sailors have always grappled to incorporate new technologies into their warfighting repertoire... Mr. Lewis is a retired U.S. Navy surface warfare officer and engineering duty officer. He currently serves as the acquisition chair and professor of the practice at the **Naval Postgraduate School** in Monterey, California. His afloat tours were in USS Spruance (DD-963), USS Biddle (CG-34), and USS Ticonderoga (CG-47), all in combat systems and communications assignments.

## **ALUMNI:**

### **[Ms. ‘STING’ Ignites Teen Ambition From 90 Miles UP](#)**

*(Aerotech News 11 Oct 22)* ... Larry Grooms

When Jessica “STING” Peterson took the stage at Antelope Valley College the morning of Oct. 5, 2022, she commanded the attention of the 250 high school and college students, many of whom imagined themselves filling a flight suit or a lab coat... No, she didn’t start out to be an engineer. She first thought of becoming a patents attorney, but an internship in a law office changed her mind. She was drawn to mechanical engineering, got a BS degree at Cal Poly San Luis Obispo and a MS degree from the **Naval Postgraduate School** in Monterey.



## **Inflation and Its Impact on the Midterm Elections**

*(Stormlake 12 Oct 22) ... Rick Morain*

With the midterm elections less than five weeks away, and absentee voting set to begin in only two weeks, Republicans across the nation are hammering away at one of their most powerful campaign issues: inflation... Mike Franken holds an engineering degree from the University of Nebraska and is a graduate of the **Naval Postgraduate School's** college of physics. He retired a few years ago as a three-star Navy admiral after a decades-long career as a naval officer, serving in key command positions around the world. He's not uneducated.

## **Lockheed Martin Names Michael Williamson as Senior Vice President of Global Business Development & Strategy**

*(Yahoo Finance 12 Oct 22)*

Lockheed Martin (NYSE: LMT) announced today that Michael Williamson will be the new senior vice president of Global Business Development & Strategy. The appointment is effective Nov. 1... Williamson holds a bachelor's degree in business administration from Husson University, a master's in systems management from the **Naval Postgraduate School**, and a Ph.D. in business administration from Madison University. He is also a graduate of the Advanced Management Program at the Harvard Business School. Williamson also serves as the chairman for the Army's Science Board.

## **Wyoming Highway Patrol Announces New Colonel**

*(County 10 13 Oct 22)*

Sheriff Timothy K. Cameron, Sheriff of St. Mary's County, Maryland, has been selected as the next Colonel and Administrator of the Wyoming Highway Patrol, effective early January 2023... He earned an undergraduate degree at Johns Hopkins University and a postgraduate degree from Johns Hopkins University in Baltimore, MD. In addition to his degrees, Cameron is a graduate of the National Sheriff's Institute, the FBI's Law Enforcement Executive Development course, the Maryland Police and Corrections Training Commissions Leadership Challenge, the Executive Leaders Program at **Naval Postgraduate School's** Center for Homeland Defense and Security in California, and the Police Executive Research Forum's Senior Management in Policing Course at Boston University.

## **Former Investigator Prepares for New Role**

*(Moberly Monitor 14 Oct 22) ... Winona Whitaker*

Sid Conklin hadn't even thought of running for the Randolph County Commission when he was elected county coroner two years ago... Conklin is a graduate of Moberly Area Community College. He attended Northeast Missouri State University, **Naval Postgraduate School**, the Center for Homeland Security and Defense Executive Leaders' Program and Washington University's Mini-Med Schools.

## **NSWC Dahlgren Division's Isel Caro: From a Small Town in Texas to the Naval Academy and Beyond**

*(NAVSEA 15 Oct 22)*

Capt. Isel Caro's life began in a single-wide trailer in the "Land of Heart's Delight," otherwise known as Falfurrias, Texas. Depending upon who you ask, the town either derived its name from the Lipan Apache language or from the name of a desert flower... Caro earned a bachelor's degree in mechanical engineering while at the Naval Academy. He later earned a master's degree in National Security and Strategic Studies from the U.S. Naval War College and a certificate in Space Systems from the **Naval Postgraduate School**.

## **Woodbridge Native Named Executive Officer in Navy**

*(Inside Nova 16 Oct 22) ... Cameron DeLean*

Commander David Hooper graduated from the Naval Academy in 2006 with an economics degree and received a commission as a surface warfare officer. He joined the USS Whidbey Island after graduating and served as the main propulsion division officer. He later earned his Surface Warfare designation...Hooper was redesignated into the human resources community in 2008 and earned a master's degree in operations research at the **Naval Postgraduate School**. He then served as the assistant recruiting operations officer in Raleigh, N.C.



## Colorado House District 19: Jennifer Lea Parenti

*(Yahoo Sports 16 Oct 22)*

Political/community experience: I have dedicated my time to serving the community by protecting voting rights and democracy, fighting for racial justice, LGBTQ rights and advocating for veterans and our environment...  
Education: Graduate of the U.S. Air Force Academy, U.S. **Naval Postgraduate School**, U.S. Air Command and Staff College and the French Institute of Higher Defense Studies.

## College of Business Honors Alumni, Welcomes Executive-in-Residence

*(UMW 17 Oct 22)* ... Laura Moyerleave

Several business leaders shaped by their University of Mary Washington educational experiences returned to campus last week as College of Business (COB) honorees... Clift holds a master's degree in engineering systems from the **Naval Postgraduate School** and is pursuing a doctorate in engineering at George Washington University.

## The Best Defense is Alliance

*(CIMSEC 17 Oct 22)* ... LTJG Andrew Bishop and 1<sup>st</sup> LT Alexander Huang

Perhaps it is instilled in the American spirit, or maybe the country has grown accustomed to it, but reliance on the offense-first mentality of the Navy and Marine Corps will cost the United States. From World War II to the mid-2000s, the U.S. Navy waged war on the premise that “the best defense is a good offense.” However, with the return of peer competitors, the Navy cannot merely rely on a “good offense” anymore — the country needs an impenetrable and unshakable defense based on reliable alliances. Advantage at Sea, the United States’ Tri-Service Maritime Strategy, maintains that alliances and partnerships are key to long term strategic success. For the U.S. Navy to accomplish an “alliance-first” strategy, it must strengthen current relationships with Asian and South American countries, build a strong alliance with India, and incorporate more training for naval officers to become familiar with partner nations early in their careers... LTJG Andrew Bishop is a 2019 graduate of the U.S. Naval Academy. He attended the **Naval Postgraduate School** immediately after commissioning and earned his Master’s in Aerospace Engineering. He then entered the aviation training pipeline and was selected for the maritime patrol community. He is currently stationed with VP-30 in Jacksonville, FL.

## Ukraine Lessons for Naval Intelligence's Next War

*(USNI 18 Oct 22)* ... LCDR David Ellison and CDR Daniel Vardiman

Russia's war in Ukraine revealed substantial combat weaknesses across all domains, unified NATO to a level not seen since the immediate aftermath of 9/11, if not the collapse of the Soviet Union, and exposed poor leadership practices that failed to identify problems up and down the chain of command. Russian leaders did not anticipate one resounding issue: the comprehensive, spectacular failure of their intelligence services. Most significantly, Russian President Vladimir Putin failed completely to understand the resolve of the Ukrainian people, believing he could win a quick war by cutting off the political leadership while the Ukrainian people welcomed him with open arms. The results were the same whether Putin was given bad intelligence or acted on bad assumptions never challenged by his intelligence services. The question remains if Russia can adapt to these intelligence failures and change the trajectory of the war... Commander Vardiman has served as an information dominance officer on active duty for over 21 years. He recently completed a year as the Senior Naval Fellow at the Atlantic Council. He earned a Master of Philosophy in international relations focused on the Middle East from the **Naval Postgraduate School**.

## **UPCOMING NEWS & EVENTS:**

**November 7-11:** [JIFX 23-1](#)

**November 11:** Veteran’s Day (Federal Holiday)



## EDUCATION:

### Learning the Art of Wargaming

*(Maxfell 11 Oct 22) ... Airmen 1<sup>st</sup> Class Greydon Furstenau*

The Teaching and Learning Center hosts a wargaming event with special guest, Sebastian Bae, wargamer, research analyst and former Marine, to discuss the future of wargames and its use in military education at Air University, August 29-31, 2022.

The event is part of a larger effort to bring people across the Department of Defense together to collaborate and raise awareness for wargaming for educational purposes.

Sebastian J. Bae is a game designer and research analyst on the Gaming and Integration team at the Center for Naval Analyses. The CNA is a nonprofit organization that is dedicated to the safety and security of the nation. His work principally focuses on wargaming, emerging technologies, the future of warfare, and strategy and doctrine for the U.S. Navy and Marine Corps. He has designed and led several analytical and educational wargames for a variety of U.S. government and DOD sponsors. Topics have included Force Design 2030, operational logistics, cyber warfare, future warfare, and more.

During his visit Bae was giving a lecture as well as a demo version of a game. His lecture was given on wargaming and its application in the DOD. Many people who attended came from the Academic Circle at Air University, this included DOD civilians and military service members.

Wargaming includes the use of games to help develop strategies, test tactics, plan logistics and consider multiple perspectives. It's an operational and educational tool that simulates real-world exercises and allows DOD members to get experience in low-risk environments before applying lessons learned in real operations.

"War is all about decision making. It's all about the mental reps and a problem. You never want the first time a staff officer sees an operational problem to be the first time where lives matter. It's the same thing with a sergeant on the ground. You don't want them to see the first tactical problem that they have to face, and it be the difference between success and failure of the lives of their troops," Bae said.

"Wargaming is about developing institutional knowledge, making a means to pass on that institutional knowledge and really cultivate what we call mental reps and sets at a problem, so that you can see different problems in different contexts and start recognizing those patterns but also share and develop skills, know what skills work where".

The role of the TLC is to assist faculty and staff with educational gaming facilitation and assessment skills to ensure students attain learning outcomes. To this end, the TLC has organized an "Educational Gaming Community of Interest" with quarterly networking meetings and various special events such as the workshop with Bae to promote collaboration and focus on competencies. Currently, 26 different organizations across the DOD are represented.

"The Teaching and Learning Center partnered with the Air University library on this event because we feel educational wargaming can be valuable for all types of military learners regardless of rank, specialty or proficiency," said Dr. Megan Hennessey Air University TLC director.

The TLC also contributes educational research expertise to the wargaming conversation, helping the joint force to better understand the effect of educational wargaming on learning for the near, mid and long-term Trained TLC researchers collect and analyze data from educational wargames at AU and share findings and recommendations with leaders to improve learning outcomes and faculty and student experiences. For example, they recently assisted Air Command and Staff College with a pilot study considering the comparative educational value of classified versus unclassified wargames.

"With Sebastian Bae's visit, we are very excited to collaborate with one of the key leaders in taking gaming to a new level in the learning process. And with participants from several professional military education institutions including the **Naval Postgraduate School**, Army War College, Marine Corps University and even our consœurs and confrères from France's L'École de guerre ... we've all contributed to forging an alloy of new ideas to improve our teaching practices," Dr. Mehmed Ali, Director of Academic Services said.

To join the Educational Gaming Community of Interest, email Hennessey at [AUTLC@us.af.mil](mailto:AUTLC@us.af.mil).



## RESEARCH:

### **NWSI's Latest Warfare Innovation Continuum Workshop Examines the Future Hybrid Force**

*(Navy.mil 18 Oct 22) ... MC2 Lenny Weston*

*(NPS.edu 18 Oct 22) ... MC2 Lenny Weston*

The Naval Postgraduate School (NPS) hosted its latest hybrid Warfare Innovation Continuum (WIC) Workshop in late September. Spearheaded by the Naval Warfare Studies Institute (NWSI), WIC 2022 brought together more than 138 participants, allowed NPS students to envision the future hybrid force with faculty, staff, fleet officers, Navy labs, industry partners, and international participants from Australia, Japan, Brazil, the Netherlands and Mexico.

The WIC Workshop is used as an NPS Thesis and Research Week activity, leveraging students and faculty at NPS to address complex fleet issues, “from technical to ethical, concept generation to experimentation,” according to the lead organizers.

“The annual WIC Workshop introduces a problem space of concern to naval leadership using a completely fictional scenario created by NPS Operations Research Professor of the Practice Jeff Kline based on open source global news sources,” said research assistant Lyla Englehorn, the NWSI concepts branch lead.

“Not only does this workshop approach a complex military problem space from a human perspective, which has not been a traditional DOD approach, but the workshop model purposefully structures teams with a vast array of perspectives to view the same problem space through the maximum number of lenses available, which leads teams into a robust solution space to generate truly unique concepts,” she continued.

Over a four day evolution, 55 participants were divided into seven teams comprised of military officers, early-career engineers and researchers. Through an iterative process, WIC teams brainstorm solutions to this year’s hypothetical question, "How might the convergence of emerging technologies offer new operational concepts and force designs to create a more effective and resilient naval, joint and coalition force across the spectrum of conflict and in all domains?"

"Our engineers don't always have military experience ... Here they get some," said Lockheed Martin Senior Strategy Analyst Glen Sears. "To sit down and work through problems with recent operational officers and learn new things ... Some of those impressions even lead to networks that they can use for years to come."

This year's WIC Workshop allowed the participants to innovate new ways to address concept outcomes in contested littoral warfare, integrated and joint fires, integrated deterrence, contested logistics, and cloud computing at the tactical edge. Additionally, two teams were in secured spaces facing challenges involving undersea and mine warfare.

"One thing that I think is a huge benefit is not only the experience but the networking opportunity," said Naval Information Warfare Center Atlantic Scientist Georgianna (George) Campbell. "The fact that I have met so many people, even when I was a participant, and the relationships and people I met as a participant in 2019, I currently have now in 2022. These are very important relationships that have directly impacted not only the projects that I work on, but also opportunities for me to work on."

Kline added that the hope for these career-long networks is for them to be a catalyst for future DOD problem-solving. WIC is a perfect example of how NPS impacts the development of Naval leaders, as well as a demonstration of the interest and value in lifelong learning which has been advocated by Secretary of the Navy Carlos Del Toro.

"Based on the growing interest in the annual WIC Workshop, I expect that it will continue to be a prominent activity on the NPS calendar in the week between finals and graduation each September for many years to come, allowing NPS students the freedom to fully immerse themselves in the guided exploration of key challenges facing the U.S. DOD and impacting global security," said Englehorn. "I also hope that this annual workshop will help NPS institutionalize this sort of human-centered design approach to rapid concept generation across campus and throughout curricula."

Attendees at the workshop are even envisioning how the WIC structure and process can be applied to their own issues. Steve Tomlinson, director of intelligence strategy and policy for Australia's Department of Defence saw potential in applying the approach to a future Five Eyes problem-solving engagement ... Five Eyes is an intelligence alliance between the United States, Australia, Canada, New Zealand and the United Kingdom.

"I think it's giving people the time and space to do that divergent thinking about starting with a problem and just exploring that problem space in depth rather than just jumping straight to solution," said Steve Tomlinson. "That's been a real eye-opener, just the power of that and seeing people work through the process."

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[Naval Warfare Innovation Continuum Workshop at NPS Focuses on Technologies for Hybrid Force Operations - Naval Postgraduate School](#)

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## **Suffolk Officials Plan For Another Emergency**

*(Patch 12 Oct 22) ... Peggy Spellman Hoey*

A drill Thursday will explore county officials' response to scenarios like natural disasters, terrorism, and food shortages.

Fresh off the recent cyberattack, Suffolk County officials are now planning for another emergency by taking part in a tabletop drill with the **Naval Postgraduate School** Center for Homeland Defense and Security.

During the drill, experts in the field will run a multimedia scenario-based seminar to explore homeland security risks and challenges that could threaten the county and also identify any potential gaps in response plans, officials said. Its content has been designed to help strengthen the county's capability to plan for, prevent, respond and recover from catastrophic events like earthquakes, snow storms, food shortages, and terrorism, according to officials.

County leaders will also analyze how they would respond to a natural disaster without the assistance of outside agencies like the Federal Emergency Management Agency.

The county previously hosted tabletop seminars that focused on pandemics and cybersecurity to help employees and leaders be better prepared for an emergency. Officials have credited the previous cybersecurity exercise for helping them through the cyberattack in September.

County Executive Bellone announced the drill in a news release on Tuesday.

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In a statement included in the news release, Bellone noted how it can be difficult "to know when or where an emergency might strike, that is why we must do our best to ensure we are as prepared as possible to protect the health and safety of our residents."

"Tabletop exercises have been vital to the county's response during previous emergencies, including during the COVID-19 pandemic, and this latest event will help us sharpen our disaster response and ensure all departments work in a coordinated fashion," he said.

The drill was planned before the Sept. 8 cyberattack, said Marykate Guilfoyle, spokesperson for Bellone.



"Training, such as tabletop exercises, are paramount to operations and ensuring the county is prepared in the event of an emergency," she wrote in an email to Patch Wednesday.

Patrick Beckley, commissioner of Suffolk's Fire, Rescue, and Emergency Services noted that "planning and coordination are integral aspects to ensuring the safety and well-being of residents and first responders in the event of an emergency."

With the county's extensive cooperation between its private and public partners, officials will be prepared for "evolving challenges related to public safety and homeland security while responding to emergencies, hosting large-scale events or catering to the everyday needs of our local communities."

Officials said the roundtable discussions will go on "in a non-attributive and neutral forum where county employees can identify and address dynamic homeland security issues."

Multiple county departments will take part in the exercise, including the police, Fire, Rescue, and Emergency Services, the Medical Examiner's office, public works, parks, information technology, and the Department of Health.

Dawn Wilson, director of the Executive Education Program at the Naval Postgraduate School, Center for Homeland Defense and Security, said that the center "works with local and state leaders around the country to prepare their communities for a variety of emergency management and homeland security threats."

"This week, Suffolk County is bringing together our national experts and a multi-disciplinary group of county leaders to do just that," she said. "These events will prepare local leaders as they plan for events and regional emergencies and disasters down the road."

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## Tracking Competition in Cyberspace Announcing the Dyadic Cyber Incident Dataset Version 2.0

*(MWI 14 Oct 22)* ... Ryan C. Maness, Brandon Valeriano, Kathryn Hedgecock, Jose M. Macias and Benjamin Jensen

What does cyber conflict actually look like? Do adversary states exhibit patterns of behavior in the cyber domain that make them susceptible to deterrence efforts? And are cyber operations better understood as a constellation of one-off events, or are there rhythms and discernible trends that connect these operations into a defined landscape?

These are questions researchers have long grappled with, and they have implications for both planners, policymakers, and the public. We can speculate and hypothesize—and there is value in doing so in an informed fashion—but answering these questions with the maximum degree of detail and nuance requires a very specific input: data.

That's why our research team recently published version 2.0 of the Dyadic Cyber Incident Dataset (DCID). We explain in detail why we believe this dataset is important in an upcoming article in *The Cyber Defense Review*, to appear early in 2023, (available now on SSRN). We believe there is an immediate need for this data in the policy and strategic community, and we invite others to use the data to further their own research.

This comprehensive interstate interactions dataset extends from 2000 to 2020 and can be used by military analysts and practitioners to inform the behavioral patterns of the United States' four main nation-state adversaries—China, Russia, Iran, and North Korea—at the strategic level. Specific operations and tactics can be developed for each adversary in order to better deter in cyberspace, which is an important domain in the integrated deterrence concept put forth by DoD in 2022.

### What is DCID?

The cybersecurity and national defense communities requires an open-source resource of cyber actions as they become an ever-increasing threat to global stability. The DCID is the only peer-reviewed



source of cybersecurity conflict incident data. This dataset is focused on state action during ongoing rivalry to enable data collection.

First demonstrated in a Foreign Affairs article in 2012 by two of our authors, the initial version of the data was published in the Journal of Peace Research in 2014. The data was further updated to support the books *Cyber War versus Cyber Realities* in 2015 and *Cyber Strategy* in 2018.

Since its initial publication, the data has been used in multiple peer-reviewed publications and has provided a wealth of information on nation-state cyber security activities. After an initial major expansion to version 1.5, the newly released version 2.0 represents another dramatic expansion and a rebuild of the data enabled by collaboration with external parties, including US Army Cyber Command and the **Naval Postgraduate School**, that seek to examine the domain through advanced social science methods.

### **Why Data Matters**

All too often pundits rely on guesswork to make empirical claims about cyber interactions without demonstrating that their theories can be examined using recent historical examples. We hope to avoid prognostication in the field of cybersecurity and push the community toward verification of empirical claims. This is critical for the military community, which cannot rely on fictions to outline practice.

Yet, the collection of international security data is always an ongoing process. No dataset is ever final or complete; rather, there are only different versions of the data. We constantly strive to update and maintain this data as it represents an important independent resource to the community. That's why we have published DCID version 2.0.

### **What is Included in DCID?**

While collecting cybersecurity interaction data was said to be nearly impossible by some because cyber interactions are secret. Yet, there have been many efforts to collect such data because operations in covert domains are not precluded from coding and identification. It only becomes increasingly difficult over time as nation-state actors seek to avoid attribution for cybersecurity actions. Here, we focus on actions between active international rivals to manage data collection efforts. Eventually, our goal is to produce automated versions of the data leveraging machine-learning algorithms, but the current state of the art remains human-enabled data collection efforts.

The DCID represents a full dataset with over twenty variables. Other cybersecurity dataset collection efforts that have popped up over the years were consulted and this data represents the most advanced accounting of legitimate nation-state action in the cyber domain. While there might be terabytes of data available on the technical aspects of cyberattacks, DCID focuses on identified cyber operations between nation-states, which can include many different cyberattacks within one operation. For now, we exclude nonstate actor incidents and criminal incidents, focusing instead on interstate interactions as they relate to international security. However, we have added a binary indicator to account for initiation by third-party actors.

The data has been collected by multiple parties to ensure redundancy using various sources. Each data point includes a summary news article by an external source and now, new for version 2.0, a technical report associated with the incident. This allows for both technical and political forms of identification. The team leads then examined each data point for accuracy and standards, finally conducting reliability examinations of the data to ensure consistent standards over time.

While the United States government does not own or produce the data, numerous state agents contributed to the project. We cannot remove this bias and can only seek to moderate it by openness, consistent standards, and collaboration with the community to maintain constant updates. DCID version 2.0 contains more US cyber incidents than existing collection efforts. Our researchers used the same open-source data efforts to gather information on US incidents as all other states in the database. In other words, US incidents in the database were included based on public attribution and do not represent a government attribution.



## What Do We Find?

Version 2.0 of DCID now contains 433 incidents. This new version expands the timeline and adds new variables for such factors as nation-state-enabled ransomware, supply chain attacks, critical infrastructure sector attacks, and connections to ongoing information operations. The key variables include the actor, incident type, target, method, severity, and objectives. (The forthcoming Cyber Defense Review article and the codebook we published along with the dataset provide a complete accounting of methods and variables.)

Analyzing the dataset yields several important findings. First, espionage attacks continue to make up most of the dataset at 61 percent of all incidents. Simple disruptions make up 28 percent of the data, while more serious degradation attacks make up only 10.7 percent of the total incidents.

Second, it is no surprise that China, Russia, Iran, North Korea, and the United States represent the most active states in the data, but other actors such as Pakistan, Israel, Iran, and Ukraine have a part to play in the domain as either a target or attacker. Three notable target increases include the United Kingdom (333 percent increase from DCID 1.5), Turkey (175 percent increase), and Vietnam (100 percent increase).

Third, with the expansion in total incidents from 266 in version 1.5 of the data to version 2.0 of the data concessions as a percentage of the data declines overall from 4.5 percent to 2.8 percent. Concessions are very rare in cyber interactions and have become rarer in time as the data expands to cover more incidents. We also noted that in total, 22.4 percent of the cyber operations contain associated information operations which indicates the clear association between cyber and information operations over time.

Finally, we developed a ten-point scale to identify the severity of individual incidents, ranging from the low end of one (probing/packet sniffing without kinetic cyber) to the high end of ten (massive death as a direct result of cyber incident). There remain few incidents at the level of five or six, with none above. However, there are many more level-four incidents, representing an increase of 117 percent since version 1.5, to now include 115 incidents.

## What Comes Next?

In short, this dataset update enables cybersecurity researchers to examine their theories with greater accuracy, or to dive down and conduct more fine-grained analysis on a constellation of cases that is well defined. This data enables rich quantitative analysis while at the same time supporting thick qualitative analysis.

With this data one can explore, for instance, which states leverage cyber operations and their success rate, or the targets, sectors, and impact of cyber operations by type and time. In the past, we have demonstrated that there can be a foreign policy impact from cyber operations, predicting the Albanian reaction to Iran's recent attack. In this notable incident, Albania weighed invoking NATO Article 5 and swiftly banned Iranian diplomats from the country after Iran launched destructive cyber operations because Albania hosted a conference with banned Islamic political group MEK. Other researchers can also explore claims of attribution, escalation, coordination, and cross-domain dynamics. Recently, William Akoto even explored the cyber implications of international trade using the DCID data.

Currently, our team is thinking how to incorporate information operations more fully into the data, eventually transforming the dataset into a Dyadic Information Incidents Dataset (DIID). This expansion cannot come at a more crucial time with the new Joint Publication 3-04, Information in Joint Operations approved in September 2022. Assessing new DoD joint operations in the information environment, where cyber operations will play a crucial role, will become increasingly important, and the DCID will be able to assist.

We are also actively coding cyber operations during the Russo-Ukrainian War using different data source collection methods to maintain active awareness of the war and to provide multiple sources of incident data on this important conflict, hopefully avoiding bias in data collection.

We encourage readers to get in contact with any of the authors if they wish to contribute, note mistakes and errors, or provide suggestions for future efforts. Ultimately, we hope DCID version 2.0 serves as a valuable resource for the entire cybersecurity community. As we noted at the outset,



answering difficult questions about security, escalation, and deterrence in the cyber domain requires data in pursuit of answers to critical ongoing security challenges.

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The views expressed are those of the authors and do not reflect the official position of the United States Military Academy, Department of the Army, or Department of Defense, or that of any organization the authors are affiliated with.

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## FACULTY:

### **NPS Meteorology Professor Awarded Buchan Prize for Seminal Work in Hurricane Prediction**

*(Navy.mil 14 Oct 22) ... Rebecca Hoag*

*(NPS.edu 14 Oct 22) ... Rebecca Hoag*

Expanding the theoretical knowledge of hurricanes and tropical cyclones is essential to improving early warning systems, especially in a changing climate with increasing potential to fuel the severity of these weather events and their impact on military operations.

In recognition of his highly-impactful research to advance that knowledge, Naval Postgraduate School (NPS) Distinguished Professor of Meteorology Michael T. Montgomery has been named the 2021 recipient of the Royal Meteorological Society (RMetS) Buchan Prize. The award recognizes an RMetS member whose published research over the previous five years, cumulatively, represents the most important contributions to the field of meteorology.

Throughout his career, Montgomery's research has led to countless seminal contributions to our understanding of varied theoretical aspects of these dangerous storms, providing foundational science for the Department of the Navy's Climate Action 2030 plan to prepare for and combat climate change impacts, and to build a climate-ready naval force. And his work continues ... Montgomery is currently in the first year of a four-year, \$1.1 million grant from the National Science Foundation to advance his research into these powerful storms.

Montgomery first became interested in formation and intensification of tropical storms, known as cyclogenesis, after attending a lecture related to the topic as a Harvard graduate student. Around that time, the Summer Olympics were taking place in Seoul, South Korea, and Montgomery, an avid swimmer, was intently watching the swimming competitions.

Just as the Olympics were getting underway, America was watching a category 5 hurricane named Gilbert barrel down the Caribbean in 1988, killing more than 300 people in Jamaica, the Cayman Islands, and Mexico. Hurricane Gilbert is still tied for the second most intense Atlantic hurricane in history.



With all of these events happening simultaneously, Montgomery said he was compelled to learn more about the science – fluid mechanics, thermodynamics and physics – behind these storms.

Montgomery has supported the research of many NPS master and PhD students. In fact, NPS maintains a strong relationship with the Naval Oceanography community. Promotion to the rank of commander or above requires an advanced education leading to the Master of Science in Meteorology and/or Physical Oceanography that is almost exclusively obtained at NPS.

“Dr. Montgomery’s enthusiasm was infectious in the classroom,” said Lt. Cmdr. Scott Britton, a former student of Montgomery’s currently serving as the METOC Officer for Carrier Strike Group 8. “As my research advisor, I was able to explore with a great amount of independence. In addition to learning a great deal about tropical systems, I worked with Amazon Web Services and got my feet wet with advanced cloud computing, which was challenging, but rewarding. Dr. Montgomery always pushed us to innovate and discover beyond the classroom and I apply these lessons every day as a naval oceanographer afloat.”

Today, Montgomery supports the research of several graduate students at NPS to track hurricanes, or the conditions that could potentially form a hurricane. They look for recirculating regions of low surface pressure that provide a protected space for a disturbance to move with a parent wave, and become a self-sustaining storm. This process was coined as the “marsupial paradigm” by Montgomery and his colleagues Tim Dunkerton and Zhuo Wang in 2009 because they related the low-pressure zone within the parent wave or disturbance to a marsupial pouch that keeps the baby safe.

Since these zones also have an intrinsic boundary that tends to protect them from exterior intrusions of dry air (often called “anti-fuel”) and retain the moisture (“fuel”) that the deep convective thunderstorms are supplying to the air within the pouch, these zones are called “pouches.” One implication of this new model is that a well-defined pouch acts to protect a fledging disturbance from dry, desert winds off Africa, allowing the proto-vortex within it to strengthen and intensify into a tropical depression, and eventually even a hurricane. In the Atlantic, there’s about a 20 percent chance a disturbance will become a tropical storm.

Since that initial paper, Montgomery has worked with several co-workers to publish a series of papers further fleshing out the theory and its potential forecasting applications. In 2010, he led a major field experiment funded by the National Science Foundation (NSF) called the Pre-Depression Investigation of Cloud Systems in the Tropics, or PREDICT, to test the marsupial paradigm. Coordination with NASA’s Genesis and Rapid Intensification Processes (GRIP) project and the National Oceanic and Atmospheric Administration (NOAA) Intensity Forecasting Experiment (IFEX) project led PREDICT to huge successes in showing how applicable the paradigm was in hurricane predictions.

A lot of these pouches come off Africa, and Montgomery and NPS Meteorologist Mark Boothe have developed an automated technique to look for them. On July 7, for example, they saw 24 potential pouches. For each one, they mapped out different factors like relative humidity and wind speed, among others, to see how much potential each pouch had to nurture a tropical depression or hurricane. Several students are looking at case studies from the past to better understand which factors are the most important ... It’s critical research, and Montgomery keeps his students engaged in every aspect of it.

“We want to teach our officer students the cutting-edge of this research to ensure they are prepared to make wise and sound decisions whether they’re at sea or planning air operations,” Montgomery says.

U.S. Air Force 2nd Lt. Nichol Corretjer, a student in NPS’ Meteorology program, is performing her research with Montgomery. She has shared a deep interest in hurricanes for a long time, coming from Puerto Rico which is all too familiar with these extreme weather events. After taking a couple of Montgomery’s classes early on, she quickly decided she wanted to work with him.

“I like his personality and his teaching style is very straightforward, which is something I really appreciate,” she says. She sees her experience directly helping her at her next station as a forecaster for the Air Force in Hawaii.

Montgomery remains passionate about furthering society’s knowledge on hurricanes, especially in the realm of intensification and the many distinct factors that determine whether a tropical storm intensifies, or not.



The marsupial paradigm is just one of many contributions Montgomery has made to storm theory. Others include asymmetric balance theory, vortex Rossby waves, vortex alignment and resiliency, super-intensity and potential intensity theory, tropical-cyclone intensification, the role of resolved eddy processes, the role of the frictional boundary layer, the vorticity dynamics of tropical cyclogenesis, and aspects of tropical cyclogenesis within synoptic-scale waves.

Montgomery's grant from the National Science Foundation will support research into secondary eyewall formations. When storms intensify significantly, they can actually form an outer eyewall, and in rare cases, even a third. How these outer eyewalls are formed is not well understood, so it will be up to Montgomery, Boothe, some colleagues, and a few NPS students as well, to explore this question while working on a few other projects along the way.

"It's going to keep us busy," Montgomery smiled. "We have lots to do."

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## **Subcontinent Adrift – Strategic Future of South Asia**

*(Stimson 14 Oct 22)*

Launch event for "Subcontinent Adrift: Strategic Futures of South Asia," a groundbreaking new book authored by Feroz Khan.

Please join us for a discussion with Feroz Khan regarding his landmark new book on India-Pakistan strategic relations, Subcontinent Adrift: Strategic Futures of South Asia. Uniquely for one volume, this book examines the security challenges faced by both India and Pakistan in isolation, as well as the strategies they have each adopted in response.

Subcontinent Adrift maps out and explains India and Pakistan's respective interests, motivations, and long-term objectives from a contemporary perspective, and analyzes the causes and consequences of the drift in South Asia. It also considers the extent to which the "drifting" subcontinent is affecting the political, military, and economic dynamics on the international stage. The book concludes with three scenarios for South Asia's strategic future with varying levels of stability. Our expert panel will provide comments on the important questions the book raises for our understanding of current and potential strategic trendlines in this crucial region for global stability.

This event is co-hosted with the United States Institute of Peace.

Feroz Khan is a research professor at the U.S. **Naval Postgraduate School**.

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## **Xi's New Generals Face Tough Military Challenges Post-Congress**

*(Jago 17 Oct 22)*

In his first two terms as commander of the world's largest military, Chinese President Xi Jinping has unleashed sweeping changes to its structure, posture and potency.

Over those 10 years, China has rapidly expanded and advanced its naval and rocket forces, purged thousands of officers over corruption, reformed its command operations and built bases deep in the maritime heart of Southeast Asia, reports Reuters.

Now come the tricky next steps for his Central Military Commission: implementing sweeping changes to its leadership, which commands China's two million-strong People's Liberation Army, potentially tightening Xi's grip over the military and its modernisation.



On Sunday, China's Communist Party kicked off its once-in-five-years congress, where it is expected to name replacements for four retirees among the six senior officers who serve under Xi on the commission. Among those expected to step down are the body's vice chairmen, Generals Xu Qiliang and Zhang Youxia, both 72. Zhang is widely viewed as a close Xi ally.

Their replacements must integrate increasingly complex forces that would be vital for a Taiwan invasion, say eight Asian and Western military attaches and seven security analysts, fulfilling Xi's long-held demand that the military can "fight and win wars".

Diplomatic challenges are also mounting, as China's military modernisation confronts the traditional U.S. strategic dominance in East Asia.

The military envoys and three of the analysts say the commission will need to secure foreign base and port access for its expanding naval fleet as well as tackle possible external pressure to deepen international engagement over its arsenal of nuclear weapons. A slowing economy could also complicate modernisation.

Amid all those challenges, most of the incoming generals are likely to lack one element that marked at least some of their commission predecessors: combat experience.

Zhang and commission member General Li Zuocheng, who is also expected to retire, are some of the last two serving officers to have fought in the bloody border conflict with Vietnam that started with a troubled Chinese invasion in 1979 but rumbled on until the late 1980s.

Potential replacements include recent commanders from the reformed Eastern and Western theatre commands, responsible for Taiwan and the Indian border respectively, eight envoys say. Promotions also could come from the Southern Theatre command, home to vital naval bases.

Who is chosen could shed light on Xi's military priorities. Any operational choices are almost certainly to be balanced by political commissar promotions, given their on-going role to ensure the military serves the Communist Party rather than the country.

Operating out of an imposing and well-protected command building in western Beijing, the commission sits nominally under the party's Central Committee but in practice works closely under the Politburo's Standing Committee. Xi heads both bodies.

That overlap means has led some analysts caution against predictions of a Taiwan invasion based on any new commission lineup. The Standing Committee, not ambitious generals, would make such a momentous decision, they say.

"There is no shortage of senior military officers who internally parrot Xi's 'fight and win' mantra, but the conundrum for the PLA is the lack of operational experience," said Alexander Neill, a private military analyst.

James Char, a security scholar at Singapore's S. Rajaratnam School of International Studies, said the PLA suffered from "shortcomings" in combined arms and joint operations.

"Its capacity for sustained power projection also remains limited at present," Char said.

China's Defence Ministry did not respond to requests for comment.

## LOYALTY

The importance of absolute loyalty to Xi is crucial.

Four diplomats scrutinising developments expect to see the continued rise of veteran commissar Admiral Miao Hua, head of the commission's Political Work Department, to one of the Vice Chair positions.

Miao, who has early links to Xi when both were posted in coastal Fujian province opposite Taiwan, will almost certainly be balanced by a more operational commander, possibly Army general Liu Zhenli.

Two officers recently promoted to staff roles at the commission are also being watched, recent Eastern and Western commanders He Weidong and Xu Qiling. Xu Qiling also has experience in Taiwan operations.

The August drills around Taiwan after U.S. House Speaker Nancy Pelosi's visit to Taipei showed the PLA still had only limited abilities to fully integrate its forces within and across commands - the so-called "jointness" that Xi is eager to promote.



Senior Pentagon officials recently reiterated assessments that they did not think China would invade Taiwan in the next two years.

U.S. officials have privately said that they do not believe China will be militarily ready to fully take Taiwan by even 2027.

## NUCLEAR FOCUS

For some diplomats and scholars, the growing importance of the commission is highlighted by China's nuclear forces, which Pentagon assessments say are expanding at a faster-than-expected rate.

Over Xi's next five-year term, China is expected to have up to 700 deliverable nuclear warheads, and 1,000 by 2030, according to the Pentagon's latest annual report on China's military modernisation.

More of those weapons are expected to be kept in an advanced stage of readiness in modernised silos. China now appears to operate a "nuclear triad", capable of launching missiles from land, aircraft and submarines, the report notes.

Christopher Twomey, a security scholar at the U.S. **Naval Postgraduate School** in California, said it was important to resume international exchanges to better understand Beijing's evolving nuclear doctrine, despite the growing role of habitually suspicious commissars on the commission.

"The new CMC will have an important voice on whether to engage the U.S. on ensuring the U.S. on ensuring the stability in the strategic nuclear arena," Twomey said. "One suspects that leaders from the political side of the force would be most suspicious, whereas more international minded officers might have some awareness of the dangers of spirals and inadvertent escalations."

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## The Renaming of Military Bases – What is Past is Not Prologue

*(Small Wars Journal 17 Oct 22) ... Hy Rothstein*

"What is past is prologue" is a quotation by William Shakespeare from his play *The Tempest*. In contemporary use the phrase means that history sets the context for the present. This phrase does not apply to the decision to rename U.S. military bases. While Congressional and military leaders may have good reasons to take these actions today, we are very fortunate that the leaders of the post-Civil War period did not think like today's leaders. If they did, it is very likely that the country would have been racked by insurgency and the Union would have not survived after winning the war.

Calls to rename military bases and other military assets began in earnest after the 2020 murder of George Floyd at the hands of police in Minneapolis and the ensuing national reckoning on racial injustice. The 2021 National Defense Authorization Act called for a commission to identify military assets that commemorate the Confederacy. As a result of the commission's report to Congress, the services are moving to rename nine Army posts, two Navy ships, and remove or modify a host of monuments and tributes to the Confederacy.

History means more than simply what happened in the past. The full story behind the history reveals the truth. Equally as important, understanding past decisions requires one to walk in the shoes of those decision makers, to think in time. What we know and feel today about slavery is very different than what people knew and felt in 1860. Ignoring the story behind what was done more than a century ago and holding past leaders to contemporary standards is mistaken. Today's standards will likely not hold in the next century either.

The "Lost Cause" was a bad cause. Confederate claims that the Civil War was just, heroic, and not centered on slavery are incorrect. Even most of the Founders knew slavery was wrong. But the forging and adoption of the U.S. Constitution required "bargain and compromise" leaving imperfections in the document that were necessary to become a nation. President Lincoln personally favored immediate emancipation, but he also deeply supported the Constitution. The mainstream anti-slavery position of the new Republican party argued that the Constitution should be used to eventually end slavery, but the



Constitution gave the President no authority to abolish slavery directly. Ending slavery was the goal but doing so was complex and politically challenging.

Many of the men whose bases are named for were loathsome individuals by contemporary standards, perhaps some of them even by the standards of their time. And maybe some bases and other federal properties should be renamed, to include those named after undeserving people not associated with the Confederacy. But the story that ultimately allowed southern leaders to name forts in their states after the war is important, specifically the circumstances surrounding the surrender at Appomattox and the reconciliation that followed. It is also important to examine more closely the charge of “treason” that is vigorously used to justify renaming these bases.

On the surface, the charge of “treason” seems unequivocal. But in the mid-19th century reality was more complicated. The story can be traced to the 1787 Constitutional Convention. The Convention was dominated by debate over the power, rights, and sovereignty of states versus the power to be allocated to a federal government. Edmund Randolph’s early proposal for a “national” government was followed by silence on the Convention floor. State representatives were stunned. Two of the three delegates from New York quit the Convention. Randolph’s proposal was viewed as an attempt to overthrow state governments. State loyalty had been American loyalty from the beginning.

The term “federal” replaced national but the states-rights issue remained front and center. The delegates ultimately acknowledged the need for a strong central government after James Madison helped alleviate some of the concerns by advocating the federal congress be granted distinct, enumerated, and hence restricted powers only. Madison also made it clear that using force against a state was impractical and unjust and would look “like a declaration of war.”

From the ratification of the Constitution through the Civil War loyalty to state almost always superseded loyalty to the federal government. The states effectively granted the federal government its authority and for many of the nation’s political leaders that authority could be withdrawn. Dual sovereignty allowed this. Today it is easy to claim the attack on Ft. Sumter was a treasonous act. But in 1861, the sovereign rights of states versus the supremacy of the federal government was still an open question. Therefore, for the South Carolinians, attacking Ft. Sumter was an act of securing the state, not treason. The Union’s victory partially settled the dual sovereignty issue.

The more important issues that are either underappreciated, unknown, or willfully ignored in current discussions are the decisions affecting surrender and reconciliation. The war’s termination and securing the country’s future was a remarkable achievement that required the active support of defeated Southerners. Obtaining this support was a non-trivial matter. It is not inconceivable to imagine that the Union might have failed in its goal to bring the country back together if shortsighted leaders had prevailed.

Lincoln’s Second Inaugural Address, 701 words long, contains some of the most memorable phrases in American political oratory. The war was near its end, along with the institution of slavery. Lincoln did not speak of happiness, but of sadness. He did not judge the South. It offered Lincoln’s most profound reflections on the causes and meaning of the war. The “scourge of war,” he explained, was best understood as divine punishment for the sin of slavery, a sin in which all Americans, North and South, were complicit.

The President sought to avoid harsh treatment of the defeated rebels by reminding everyone of how wrong both sides had been in imagining what lay before them when the war began four years earlier. The speech was a call for compassion and reconciliation and a justification for his pragmatic approach for binding the nation’s wounds. Lincoln rejected triumphalism while recognizing the unmistakable evil of slavery.

The President’s words provided the direction for Gen Grant when he met with Gen Lee in Appomattox a month after the inauguration. Lee’s aide de camp, Col Marshall, provides an account of the famous scene. The mood was solemn but friendly. There was small talk between Lee and Grant and their parties. The terms of surrender were exceedingly generous. Grant instructed his quartermaster to deliver food to the hungry Confederates. The next day many Union officers rode over to Lee’s headquarters to pay their respects. The leaders had begun to bind the wounds of war and start down the road to reunion. The scene was like an estranged family coming back together.



Gen Chamberlain, the hero of “Little Round Top,” was designated to receive the formal surrender on behalf of Gen Grant. As the defeated Confederate Army stood before him, he was deeply moved and took it upon himself to call the Union forces to attention and render a salute of arms as a token of recognition to a worthy foe. Chamberlain’s own words best describe the scene. “Before us in proud humiliation stood the embodiment of manhood; men whom neither toils and suffering, nor the fact of death, nor disaster, nor hopelessness could bend from their resolve; standing before us now, thin, worn, and famished, but erect, and with eyes looking level into ours, waking memories that bound us together as no other bond;-- was not such manhood to be welcomed back into the Union so tested and assured?...How could we help falling on our knees, all of us together, and praying to God to pity and forgive us all!”

Lee’s military career ended, and his civilian life began when he returned to Richmond and his family on April 15th. The solitude did not last long. He was asked to become president of Washington College in Lexington. Lee was the perfect choice. He had been superintendent of West Point earlier in his military career, and he had a very recognizable name in 1865. Lee hesitated, but eventually accepted the position. He wrote to the college’s trustees that he believed, “it is the duty of every citizen, in the present condition of the Country, to do all in his power to aid in the restoration of peace and harmony.” Lee’s personal involvement with many of his students reflected his desire to create a new generation of Americans.

In response to the bitterness of a Confederate widow, Lee wrote, “Dismiss from your mind all sectional feeling, and bring [your children] up to be Americans.” Lee’s efforts after the war were genuine, necessary, and critical for the future of our country.

In a letter to Thurlow Weed a few days after he delivered his Second Inaugural Address, Lincoln stated that his message would not be “immediately popular,” with its inclusive message and refusal to lay blame. For Lincoln, “It is a truth which I thought needed to be told.”

The truth needs to be told today too. The wholesale renaming of everything linked to the Confederacy ignores the legitimate decisions of the past. The decisions and actions of many of the key Civil War leaders laid the foundation for reconciliation, reconstruction, and the very visible and tangible presence of African Americans today in the commercial, political, cultural, and social fabric of our society. Today’s leaders are not more virtuous than yesterdays. Renaming the bases will not erase centuries of racism. History must be studied with all its twists and turns to understand the context of its times. Doing so improves our ability to navigate the future. Now, “What is past is prologue” may become a reality when even more “virtuous” future leaders find fault with the people whose names will soon adorn many military bases replacing those names selected a century ago. Even Fort Liberty may someday require a name change.

Hy Rothstein recently retired from the faculty of the **Naval Postgraduate School** in Monterey, CA. He is a graduate of West Point and holds a Ph.D. from Tufts University in International Relations. He has written and edited numerous books on war as well as book chapters and journal articles on national security topics.

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## **The Navy Needs a Sea Change in Ship Design**

*(USNI 17 Oct 22) ... David H. Lewis*

Maritime warfare has always been defined by the relationship between sailors and their machines. From the Roman corvus to the birth of ocean-going sailing warships, to the cannon, to the airplane, and onto the computer and radio, sailors have always grappled to incorporate new technologies into their warfighting repertoire.

The birth of naval aviation, now celebrating its 100th anniversary, was no different. How should sailors use the new technology of airplanes in a naval context? Putting one or two or three land-based aircraft on cruisers and battleships seemed to be an effective way of using naval aviation to enhance those ship’s normal warfighting duties: scouting and long-range gun combat. In the end, sailors quickly



determined that masses of land-based airplanes operating from a new form of ship held the most promise. The aircraft carrier, a form of ship never seen or conceived before, has dominated naval combat ever since.

With the advent and slow growth of uncrewed vehicles, how should sailors incorporate them into current concepts of maritime dominance? As with the birth of aviation, land based uncrewed or unmanned vehicles (UxVs) dominate today's conceptual and operational implementation. Some ships and submarines, and perhaps a few aircraft are now adopting UxVs in at-sea operations, mirroring the seaplane era of naval aviation.

Surface combatants have been largely unchanged in form since the HMS Devastation was launched in 1871. Engines mounted deep in the hull, mechanical drive train with propellers and propeller shafts, guns in centerline turrets, and a high midships superstructure for height of eye and fire control. Subsequent warships added radio, airplanes, sonar, radar, missiles, satellite communications, digital computers, and electronic warfare systems. Narrow hulls were designed for tactical speed and maneuverability and prodigious fuel capacity was added for range. However, nothing has really changed in their general layout (i.e., form)—for 151 years!

Today, we face a far different world in technology. Electric propulsion, drones, ubiquitous computing, additive manufacturing, and—most of all—constant, unrelenting technology change, everywhere and in everything. It is time to move away from the 19th century surface combatant form.

### **Not Your Father's Warship**

As a thought experiment, what form might future surface combatants take?

Warships can be built low and flat; think of a double-wide USS Zumwalt (DDG-1000) with the superstructure lopped off. A boogie board with a flat top, jutting wave-piercing bow, tumblehome sides, a deep, high-volume underwater hull, a full stern gate, side access ports for wet uncrewed surface vehicles (USVs), hot refueling and rearming, many uncrewed aerial vehicles (UAVs), elevators or ramps to the flight deck from the hanger bay and the boat bay, an internal moon pool for clandestine deployment of unmanned underwater vehicles (UUVs), and possibly small port and starboard off-axis electromagnetic catapults to launch strike UAVs. A centerline low-profile navigation bridge right forward married to a large, aft-facing flight control facility. Peripheral vertical missile launchers. Gas-turbine generators mounted above the waterline for peak power demands and one or more small nuclear reactors buried deep in the hull for cruise power. A peripheral electric propulsion system.

Long-range air and missile defense radar faces can be installed low and at the extreme outboard corners of such a ship, once they are relieved of the burden of surface horizon detection and terminal self-defense missions. "Beamy" ships are more stable, so the emitters would have improved accuracy and range.<sup>1</sup>

Low, flat, beamy, stable warships can mount more vertically oriented antennas, increasing their access to space-based assets across a broader spectrum of frequencies without compromising the ship's radar signature. Commercial as well as military satellite connectivity can be substantially improved. Ships of that form could accommodate the high-volume, high-power pulse-forming networks supporting electric weapons. Low, flat, beamy ships are structurally stronger, more damage resistant, and inherently stealthy.

The term "sea change" was first coined by William Shakespeare.<sup>2</sup> His meaning was like the modern concept of a "paradigm shift"—underlying facts and/or understanding of them changes markedly.<sup>3</sup> The need for surface-borne sea power persists. The ocean environment is unchanged. What has changed is how navies meet those needs. Thus, the form of the ships required to meet those needs must now undergo a sea change.

### **Electric Weapons**

First, lasers and high-power microwave systems are emerging as "electric" weapons as opposed to the existing chemically propelled weapons (guns, missiles, and rockets). Electric weapons require large, near-instantaneous bursts of electrical power. Substantial pulse-forming networks are required to support their operation; future weapons are high-volume consumers of shipboard space as well as power.



## Propulsion

Electric propulsion is mature enough to proliferate through the fleet. In fact, the U.S. Navy is one of the few navies yet to widely adopt electric propulsion for warships. Electric propulsion removes the requirement for a linear arrangement of prime mover to propeller. Reduction gears are unnecessary. Propulsion motors can be located where needed and can drive propellers or propulsors. Motors can even be located outside the hull or distributed along the hull. Instead of large, singular machines, multiple small-power generators can be combined in artful ways. The advent of electric propulsion for airplanes has created a new research ecosystem for gas turbine electric generators, so what used to be a niche shipboard market is now an emerging, dynamic commercial market for small, powerful gas turbine electric generators.<sup>4</sup> Mixed-fuel generators can be used in combination (diesel, hybrid, gas turbine, nuclear, etc.) without complex gearing or long, coupled, damage-susceptible, energy-wasting drive trains or high-volumetric combustion air-handling systems. Most important, there is no need to differentiate between propulsion power and ship's service power to weapons. "Scotty, put more power to the shields" could become a viable command in a future electric warship.

## Unmanned Platforms

Uncrewed (or unmanned) vehicles are maturing. UxVs are rapidly proliferating as off-ship vehicles for surveillance, intelligence, weapons deployment, and other maritime warfighting missions. They can be controlled, autonomous, or semiautonomous. However, these devices bring substantial shipboard infrastructure requirements. Launch and recovery, fueling, battery charging/swapping, mission-module-change capability, repair and maintenance requirements, communications, remote data-processing requirements, and weapons handling will dominate future warship design and form.

Just as they do today in aircraft carrier designs.

## Recommendations

Today's warships are built with high masts and elevated superstructures to maximize radar and antenna height-of-eye to extend detection ranges for surface, subsurface, and sea-skimming threats. With UAVs and USVs, however, height of "ship's eye" is largely irrelevant. UAVs can be flown as high or as far as necessary to search the maritime domain. USVs can be placed at range in threat sectors to provide surface-based sensors and weapons. Armed UUVs can patrol the seas far beyond shipboard sonar ranges. Low-power radars can be flown or carried, but high-power airborne sensors would require ship's power; hence, the need for tethered flight for specially configured UAVs carrying powerful radars at altitude.

Modern warships are built slim and long and have powerful engines for tactical speed. With UAVs and USVs able to search and attack hundreds of miles simultaneously in every direction, however, warships may no longer need that speed. UxVs provide the necessary tactical sprint capability. Strategic movement can be conducted at lower, more fuel-efficient speeds with less horsepower. Unrefueled global transits and unrefueled local operations become possible, reducing demand on potentially tenuous fuel supply chains. Warships can be built to maximize volume and stability to ease and enable UxV operations. Prodigious ammunition and fuel capacity for UxVs, UxV weapons, and shipborne ordnance would also dominate.

Today one, two, or three UxVs embark in a warship. In the future, how many uncrewed vehicles might be needed?

## Consider the following scenario:

- A future surface combatant needs to maintain comprehensive 360-degree surface surveillance out to 200 miles. Eighteen UAVs placed in 20-degree sectors at an altitude of 5,000 feet, at range, could provide that coverage. With an average battery life of two hours, 216 such drones would be required.<sup>5</sup> Assuming 25 percent losses because of mishaps, failures and weather, the future warship might carry as many as 270 surveillance UAVs, launching and recovering about six every hour.



- The same surface combatant conducts 20 UAV strikes, with each strike having a 50 percent attrition rate. Thirty-eight heavy strike drones could conduct five strikes (20+10+5+2+1). Adding 25 percent for wastage would yield a required capacity of 48 aerial strike drones, plus weapons.
- One tethered UAV carrying a high-power radar emitter could be deployed at a time, with three or four available as spares.
- The same surface combatant places a surface USV picket line at the horizon, each assigned to a 40-degree sector. Each has enough fuel to support an eight-hour patrol. Thus, 27 USVs would be required, or, with attrition, 34 USVs, with one or two launching every watch.
- If those same USVs have a strike capability, then an additional nine would be prudent, without impacting the picket line.
- If the same warship was to place UUVs on a 180-degree submarine threat axis with 30-degree sectors, and a 24-hour battery life, then six UUVs would be required. If they also had a strike mission, then another two (25 percent) would be needed, all with torpedo or missile capability. Such UUVs might displace five to ten tons, each.<sup>6</sup> Launches and recoveries would occur a few times a day.

Thus, a future surface combatant should theoretically carry up to 373 UxVs: 318 UAVs plus four tethered UAVs, 43 USVs, and eight UUVs.

A famous European shipbuilder noted that, “Steel is cheap and air is free.”<sup>7</sup> Certainly, it is true when compared with the price of silicon, turbines, and technology dense UxVs. A future surface combatant will be big, beamy, low riding, volume-blessed, flat topped, with moderate horsepower, and stealthy. Given the high rate of change for these technologies, it must also be modular and flexible. Weapons stations, radars, UxV workstations, data centers, communication antennas, and self-defense weapons must all be removable, changeable, and reconfigurable between deployments and even between missions. Power generators must be similarly configured; today’s five-megawatt generator must be upgradable to the next model 10-megawatt generator after five years and, later, the next decades’ 15-megawatt (but similarly sized) generator. Nuclear reactors must also be modular, containerized, and easily replaced or refueled.

Data and structural interface standards for equipment stations must be well defined and ironclad. Ship margins must be high. Today’s ships have 5 to 25 percent margins for displacement, power, cooling, and berthing. The new form warship must have 100 to 300 percent margins; what new technology awaits next year or in the next decade? Nobody knows.

Shipboard high-power radars, still needed for long-range air and space missions, would become force assets along with their long-range missiles, lasers, and rail guns. Self-defense would be conducted at today’s tactical ranges by UxVs and possibly vestigial shipborne terminal defense weapons, many of which might also be electric rail guns or lasers. It may even be appropriate to armor some parts of the ship; not to stop threat missiles, but to protect parts of the warship from its own chemically kinetic force-level missiles and copious UxV ammunition stocks.

Many shipboard support systems are already technically mature with well decks, moon pools, modular weapons stations, radars, and vertical launchers, self-forming networks and hyperconverged data centers. UxVs, rail guns, edge computing and lasers are still maturing—though rapidly. Surface combatants went from cannons firing 100 yards to naval rifles firing 12 miles in just 40 years (1865–1905). Those guns were subsequently replaced by supersonic missiles flying hundreds of miles in another 40-year burst (1950–1990).

### **A Change in Form, not Mission**

The Navy must start experimenting with this emerging-form warship and develop an at-sea prototype. This is not a new concept. The USS Langley (CV-1) was converted from a collier as the Navy’s first sea-based test bed in the early days of naval aviation. USS Norton Sound (AVM-1) was converted from a seaplane tender to be the original afloat test bed for the Aegis combat system. Today’s Navy needs a large, new-form ship to test UxV, rail gun, and laser capability. Perhaps a decommissioned LHA/D with



electric propulsion replacing her steam plant or a cut-down, decommissioned LPD or LSD; a ship with a well deck and expanded aviation capabilities. There must be enough room to allow for an integrated electric distribution system capable of supporting rapid experimentation, modular edge processing, and copious satellite communications—all to enable rapid UxV prototyping, operational evaluation, and assessment and fielding of new shipboard and off-board UxV support capabilities—enough to define a new production form for the Navy by the end of this decade.

Mr. Lewis is a retired U.S. Navy surface warfare officer and engineering duty officer. He currently serves as the acquisition chair and professor of the practice at the **Naval Postgraduate School** in Monterey, California. His afloat tours were in USS Spruance (DD-963), USS Biddle (CG-34), and USS Ticonderoga (CG-47), all in combat systems and communications assignments.

[The Navy Needs a Sea Change in Ship Design | Proceedings - October 2022 Vol. 148/10/1,436 \(usni.org\)](#)

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## ALUMNI:

### Ms. ‘STING’ Ignites Teen Ambition From 90 Miles UP

*(Aerotech News 11 Oct 22) ... Larry Grooms*

When Jessica “STING” Peterson took the stage at Antelope Valley College the morning of Oct. 5, 2022, she commanded the attention of the 250 high school and college students, many of whom imagined themselves filling a flight suit or a lab coat.

Peterson was, like them, a local kid who went to Quartz Hill Elementary, Joe Walker Middle School and Quartz Hill High, and never dreamed back then of becoming a flight test engineer who flew at twice the speed of sound and at altitudes 9.5 miles above ground level.

Now Technical Director of the 412th Operations Group at Edwards Air Force Base, Calif., and Flight Test Engineer Instructor at the USAF Test Pilot School, she delivered a gripping narrative about her life’s journey and the fulfillment that comes from developing new technologies that save the lives of pilots, aircrews and passengers.

She described in detail the challenges and risks faced by team members with whom she worked in developing and conducting the flight testing of two computer systems at Edward. One, the Automatic Ground Collision Avoidance System (GCAS), was designed to prevent an aircraft from crashing to the ground when the pilot is unconscious. The other, the Automatic Collision Avoidance Technology (ACAT) is designed to prevent midair collisions between military aircraft.

Reminding the audience of her talk’s title, “Flight Test Engineering and Saving Lives, Peterson reported that since the ground avoidance system was installed in the F-16 fighter aircraft, lives of the pilots and their aircraft were saved, and newer fighters, including the F-22 and F-35 have the systems designed-in. She personally knows of a dozen fighter pilots who are alive and well today because the ground avoidance system worked.

The challenge in testing, she said, comes with fundamental rules that the systems must do no harm to the pilot, don’t interfere with the pilot doing the job, and still prevent a collision. Added to those rules are processes to be avoided, among them what flight test pilots call, “The Mad Scientist.” In other words, don’t trust the system to be flawless.

And then there’s the need for patience. She said, for example, it took two years of testing to plan for a five-second maneuvering window of opportunity to save the pilot and the plane. In another instance, the automatic system gives a stricken pilot a vital extra three seconds to survive what was previously fatal.

Ending her presentation, “Sting” opened to question, and the audience complied, seeing the personal side of their new role model.



No, she didn't start out to be an engineer. She first thought of becoming a patents attorney, but an internship in a law office changed her mind. She was drawn to mechanical engineering, got a BS degree at Cal Poly San Luis Obispo and a MS degree from the **Naval Postgraduate School** in Monterey.

She's a civilian employee of the Defense Department, and wasn't in the Air Force. Her first flight was in 2014, "and I was airsick." She later learned to fly in civil aviation and underwent Air Force Altitude Chamber and Ejection Seat training to qualify for backseat flight engineer duties in more than 40 aircraft types. She loves to fly and no longer gets airsick.

Weather permitting, she'll be in the back seat of a T-38 trainer in a special Antelope Valley Salute to STEM Education scheduled for Oct. 12 [STEM flyover is coming to Greater AV as part of Edwards Air Show ñ please make this a hyperlink to Air Show Flyover Story].

Students and older folks who still have questions for Jessica "STING" Peterson can find her in the STEM exhibition inside Hangar 1600 at Edwards.

[Ms. 'STING' ignites teen ambition from 90 miles UP - Aerotech News & Review](#)

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## **Inflation and Its Impact on the Midterm Elections**

*(Stormlake 12 Oct 22) ... Rick Morain*

With the midterm elections less than five weeks away, and absentee voting set to begin in only two weeks, Republicans across the nation are hammering away at one of their most powerful campaign issues: inflation.

When the inflation rate first started to spike several months ago, economists both inside and outside the government expected the higher prices to subside in a short time. They were wrong – inflation has held firmly above 8% since late spring or early summer, and most experts look for it to remain relatively high for many months more.

When that happens, the party in power gets the blame, no matter what. Inflation is always caused by a number of factors, but in a campaign year it's invariably linked by the "outs" to the policies of the "ins." This year the Republicans have a tailor-made opportunity to tar President Biden and the Democratic Congress with causing inflation through overspending, or runaway spending, or foolhardy spending, or some other colorful description.

The Republican attack has some legs. Inflation, simply put, happens when demand outstrips supply. When people have more money to spend, and goods and services are in short supply, prices rise. That's where we are now.

On the supply side: the Ukraine war has shrunk the availability of foodstuffs worldwide. In addition, the Covid pandemic shrank the ability of the economy to produce things, and businesses consequently cut back on their productivity infrastructure.

On the demand side: in order to get the economy moving again after Covid, Congress and the President pushed through massive spending programs to put money into Americans' pockets. For example, the Paycheck Protection Program infused businesses with cash to maintain employment levels. Pent-up personal spending momentum spiked after Covid subsided – people had money to spend on what Covid had prevented them from buying.

But because it takes a while for the supply chains to gear back up to pre-Covid levels, and with people eager to return to their pre-Covid standard of living, demand is outstripping supply. The federal infusion of money into the American economy, although it was done for worthy purposes, added to the supply/demand imbalance and therefore to the heightened inflation rate.

The Federal Reserve, by raising the interest rate it charges the banking system, is trying to counter inflation by making borrowing more expensive. That should somewhat reduce demand, but it's not likely to have much effect before the November election.

With all this said, Democratic U.S. Senate candidate Michael Franken needs to respond to the TV attack that incumbent Republican Senator Chuck Grassley's campaign is running.



Video in the ad shows Franken apparently saying that the Senate has no role to play in fighting inflation. I've asked three people who are trained in economics, all of whom lean Democratic, whether that is true. Their unanimous opinion is that it's not – that federal taxing and spending actions directly affect supply and demand, and therefore the rate of inflation.

Congressional economic-related activity is called "fiscal policy," as opposed to Federal Reserve activity which is called "monetary policy." Both have an effect on the inflation rate.

The missing all-important factor in the Grassley ad, and the point that Franken needs to answer, is the context in which he made the remark. The video is simply a one-sentence statement. It doesn't even mention the word "Senate" or "Congress."

Conventional wisdom in politics is that when you're defending yourself, you're losing. Most of the time that's probably true. But some charges need to be answered.

Mike Franken holds an engineering degree from the University of Nebraska and is a graduate of the **Naval Postgraduate School's** college of physics. He retired a few years ago as a three-star Navy admiral after a decades-long career as a naval officer, serving in key command positions around the world. He's not uneducated.

To me, it's highly unlikely that he sees no connection between federal fiscal policy and the inflation rate.

He would do well to explain the context in which he made the statement in the ad. I'm writing this column on Tuesday of this week. By the time you read it Franken may have cleared up the context of his remark.

If not, I hope he does so soon.

[Inflation and its impact on the midterm elections - Storm Lake Times Pilot](#)

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## **Lockheed Martin Names Michael Williamson as Senior Vice President of Global Business Development & Strategy**

*(Yahoo Finance 12 Oct 22)*

Lockheed Martin (NYSE: LMT) announced today that Michael Williamson will be the new senior vice president of Global Business Development & Strategy. The appointment is effective Nov. 1.

"The focus on deterrence internationally is greater than even before, and Lockheed Martin brings unrivaled capability to replenish and upgrade the defense of nations around the world from emerging threats. As we develop the 21st Century Security technologies and capabilities to ensure our customers remain ahead of ready, I can't think of a better leader than Michael Williamson to grow our business worldwide and support our international priorities," said Lockheed Martin Chief Operating Officer Frank St. John. "Michael is an accomplished leader and is an example of the deep bench of talent at our corporation."

Williamson is currently vice president and general manager for Lockheed Martin Missiles and Fire Control (MFC), where he leads operational excellence, a diverse portfolio of products and business enabling initiatives. He also provides strategic oversight of technical, cost and schedule performance execution for the MFC lines of business and enterprise performance.

"I'm so honored and pleased to be part of a great company and team during a unique time in history," said Williamson. "Our 21st Century Security offerings and portfolio will help our global customers deter future conflict and keep their citizens safe."

Williamson joined the company in 2017 following a distinguished career as a lieutenant general with the U.S. Army. He served as the principal military deputy to the assistant secretary of the Army for Acquisition, Logistics and Technology and director of Acquisition Career Management. He also served as a congressional fellow on Capitol Hill.

Williamson holds a bachelor's degree in business administration from Husson University, a master's in systems management from the **Naval Postgraduate School**, and a Ph.D. in business administration



from Madison University. He is also a graduate of the Advanced Management Program at the Harvard Business School. Williamson also serves as the chairman for the Army's Science Board.

He will replace Tim Cahill who was appointed as the new executive vice president of the company's MFC business area.

About Lockheed Martin

Headquartered in Bethesda, Maryland, Lockheed Martin Corporation is a global security and aerospace company that employs approximately 114,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services.

[Lockheed Martin Names Michael Williamson as Senior Vice President of Global Business Development & Strategy \(yahoo.com\)](#)

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## Wyoming Highway Patrol Announces New Colonel

*(County 10 13 Oct 22)*

Sheriff Timothy K. Cameron, Sheriff of St. Mary's County, Maryland, has been selected as the next Colonel and Administrator of the Wyoming Highway Patrol, effective early January 2023.

Cameron's appointment was announced today by WYDOT Director Luke Reiner.

Cameron brings over 40 years of policing experience to the Wyoming Highway Patrol.

Advertisement

"Cameron's commitment to training and education are attributes that will help him succeed in his service to Wyoming," said Luke Reiner, director of WYDOT. "He has the demonstrated skillset, experience, and character to lead the best highway patrol organization in the nation."

Cameron is a proven leader who brings a wealth of experience, certifications, and knowledge to his new post as Wyoming Highway Patrol Colonel. Cameron served an unprecedented four terms as the Sheriff of St. Mary's County, Maryland, which officially ends this December.

He earned an undergraduate degree at Johns Hopkins University and a postgraduate degree from Johns Hopkins University in Baltimore, MD. In addition to his degrees, Cameron is a graduate of the National Sheriff's Institute, the FBI's Law Enforcement Executive Development course, the Maryland Police and Corrections Training Commissions Leadership Challenge, the Executive Leaders Program at **Naval Postgraduate School's** Center for Homeland Defense and Security in California, and the Police Executive Research Forum's Senior Management in Policing Course at Boston University.

Cameron is also a member of various stakeholder groups and associations, working on crucial issues and committees like the Heroin and Opioid Emergency Task Force and the Emergency Management Advisory Council, among others.

[Wyoming Highway Patrol announces new Colonel - County 10™](#)

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## Former Investigator Prepares for New Role

*(Moberly Monitor 14 Oct 22) ... Winona Whitaker*

Sid Conklin hadn't even thought of running for the Randolph County Commission when he was elected county coroner two years ago.

At the request of county residents, Conklin threw his hat in the ring this year for the role of Presiding Commissioner, a position currently held by John Truesdell, who did not run for reelection.

"I think I bring a level of managerial experience," said Conklin.

A former Army drill sergeant and a retired Missouri State Highway Patrol Lieutenant with more than 35 years experience in law enforcement, Conklin has worked with the FBI, the Federal Bureau of



Alcohol, Tobacco and Firearms and the Drug Enforcement Administration, according to his official biography.

Conklin grew up in Audrain County and graduated from Mexico High School, he said. He spent seven years in the United States Army, which included serving as a casket bearer in Arlington Cemetery as part of the Army's ceremonial unit, The Old Guard.

Conklin served as Deputy Sheriff in Monroe County for three years before taking a position with the Missouri State Highway Patrol. During the last 10 years of his Highway Patrol career, he served as the Assistant Director of the Patrol's Criminal Division and supervised the Anti-Terrorism Unit, Violent Crime Support Unit and Criminal and Narcotics Investigative Units covering a 44-county region.

Conklin retired, four months shy of 32 years, as assistant director of the Patrol's criminal division.

For the next five years Conklin investigated complaints against physicians and other health licensees for the Missouri Board of Registration for the Healing Arts.

Then he became Randolph County Coroner.

As coroner, Conklin has become familiar with county government, he said. Unopposed in the Nov. 8 general election, Conklin has attended commission meetings on a regular basis to learn how the county commissioners operate.

"The way I view myself is, I'm a public servant," Conklin said. Becoming a county commissioner is a way "to serve the people of Randolph County for the betterment of every citizen," he said.

"I've already talked to the commissioners," said Conklin. "I've been shadowing them."

Conklin is a graduate of Moberly Area Community College. He attended Northeast Missouri State University, **Naval Postgraduate School**, the Center for Homeland Security and Defense Executive Leaders' Program and Washington University's Mini-Med Schools.

Conklin moved to Randolph County in 1983 and owns an acreage north of Huntsville. He has three grown sons—graduates of Westran High School—and eight grandchildren.

Conklin enjoys hunting and fishing and riding his 2020 Harley Ultra Classic, he said. He enjoys traveling—sometimes on the Harley and sometimes not.

"About the only places I haven't been are the true west coast and the northwest," Conklin said.

He especially likes the mountain states, Wyoming and Montana. "I certainly like the Black Hills," he said, and the Sturgis, South Dakota area.

"The Gulf Coast is nice too."

[Former investigator prepares for new role - Moberly Monitor-Index](#)

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## **NSWC Dahlgren Division's Isel Caro: From a Small Town in Texas to the Naval Academy and Beyond**

*(NAVSEA 15 Oct 22)*

Capt. Isel Caro's life began in a single-wide trailer in the "Land of Heart's Delight," otherwise known as Falfurrias, Texas. Depending upon who you ask, the town either derived its name from the Lipan Apache language or from the name of a desert flower.

Life was cramped for Caro's family in the trailer where he lived with his parents and brother. The trailer was the heart of his grandparents' farm where they raised crops, cattle, horses, chickens and pigs on a total of 1,000 acres. His parents were both teachers. His dad taught high school mathematics and physics and coached basketball while his mom was an elementary school teacher.

The Caros moved their young family from the farm, stopping first in another small town by the name of Kingsville before eventually settling in the Woodlands, a suburb of Houston, Texas. A school counselor in Woodlands initially didn't believe that Caro should be placed in advanced classes despite his record of academic excellence. "They didn't believe that a small-town kid could be that smart," he said. "By the end of the first semester, I had hundreds on all of my work." The school administrators soon realized their mistake and Caro started taking an advanced curriculum the following year.



Coming from South Texas, the Caro brothers didn't know much about the Naval Academy or the nation's other service academies. Caro's older brother, Vique, paved the way when he first learned about and then earned an appointment to the Naval Academy Preparatory School before gaining full admission to the U.S. Naval Academy. "One summer, Vique brought back all these things and experiences from a Baltic Operations cruise that included visits to Russia," Caro explained. "I was like 'hey, this is a good deal.' You don't have to pay for college, you get to travel during the summer and you have a guaranteed job when you graduate."

Soon after, Caro submitted his own application, hoping to follow in Vique's footsteps. His stellar academic record that included valedictorian honors, serving as student body president, National Honor Society membership and playing school sports earned him invitations from both the Naval Academy and West Point.

Caro earned a bachelor's degree in mechanical engineering while at the Naval Academy. He later earned a master's degree in National Security and Strategic Studies from the U.S. Naval War College and a certificate in Space Systems from the **Naval Postgraduate School**.

After his commissioning in May of 1996, he served aboard the USS Paul Hamilton (DDG 60) as a communications officer. He qualified as a surface warfare officer during that time and supported Tomahawk launches into Iraq during Operation Desert Fox. During his career, Caro also sailed aboard the USS John F. Kennedy (CV 67) and served in numerous other positions including as a sound underwater surveillance watch officer and training department head. He left active duty in 2004, but continues to serve in the Naval Reserve.

It was also in 2004 when he began his career at Naval Surface Warfare Center Dahlgren Division (NSWCDD). While stationed in the United Kingdom, Caro interviewed and was hired for a job at Dahlgren while attending a service academy career fair in Washington D.C. He began his NSWCDD career working in critical infrastructure protection. Starting in 2006, he moved over to the Joint Warfare Analysis Center to provide intel analysis.

Caro is currently a branch head for the Warfare Analysis and Digital Modeling Department and is in his fourth Navy Reserve command serving as commanding officer in the Office of Naval Intelligence at the Hopper Headquarters Reserve unit. He believes that the work he does in both positions provides beneficial support to the other. "Hopper is one of the five centers for the Office of Naval Intelligence providing Joint Worldwide Intelligence Communications System services," Caro explained. "NSWCDD is one of the organizations that Hopper provides services to, so I'm in a great position to help ensure that the connections between the two are well maintained." The intelligence briefs he's privy to while serving helps him better understand the threat capabilities in the world today and he can use that knowledge in his work here at Dahlgren.

The small-town kid who grew into a decorated naval officer and engineering leader believes that his roots never stunted his future opportunities. "You're not limited based off of where you started," he said. "What matters most is having parents and family that care about you. People who will ensure that you focus on what's going to put you in a better position in the future."

Caro said his parents built the foundation for his future success. "They were both teachers. They placed an emphasis on education and pushed for college for myself and my brother. They made sure we achieved our goals through mentoring and providing opportunities that put us in position for success."

These days, Caro has a family of his own. When he's not spending time with his wife and six children, Caro volunteers as an assistant scout master in the Boy Scouts.

[NSWC Dahlgren Division's Isel Caro: From a Small Town in Texas to the Naval Academy and Beyond > Naval Sea Systems Command > Saved News Module \(navy.mil\)](#)

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## Woodbridge Native Named Executive Officer in Navy

*(Inside Nova 16 Oct 22) ... Cameron DeLean*

Commander David Hooper graduated from the Naval Academy in 2006 with an economics degree and received a commission as a surface warfare officer. He joined the USS Whidbey Island after graduating and served as the main propulsion division officer. He later earned his Surface Warfare designation.

Hooper was redesignated into the human resources community in 2008 and earned a master's degree in operations research at the **Naval Postgraduate School**. He then served as the assistant recruiting operations officer in Raleigh, N.C.

He served as an operations research analyst at the Navy Recruiting Command headquarters in 2014 where he was tasked with helping the command undergo analytic transformation. In 2016, he became the technical advisor for analytics at the Navy's nascent Office of Talent Optimization, and during his tenure earned a second master's degree in predictive analytics from Northwestern University.

His personal awards include the Navy and Marine Corps Commendation Medal, the Defense Meritorious Service Medal, and the Navy and Marine Corps Achievement Award. He has also maintained his Professional Human Resources certification since 2013.

Hooper's responsibilities as executive officer aboard Navy Talent Acquisition Group will include helping attract high-quality candidates to the Navy. He lives in New Orleans with his wife and three children.

[Woodbridge native named executive officer in Navy | Military | insidenova.com](#)

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## Colorado House District 19: Jennifer Lea Parenti

*(Yahoo Sports 16 Oct 22)*

Age: 49

Family: Two children

How long have you lived in Erie: Three years

Professional background: I'm a career (retired) military officer.

Political/community experience: I have dedicated my time to serving the community by protecting voting rights and democracy, fighting for racial justice, LGBTQ rights and advocating for veterans and our environment.

Education: Graduate of the U.S. Air Force Academy, U.S. **Naval Postgraduate School**, U.S. Air Command and Staff College and the French Institute of Higher Defense Studies.

Do you have any thoughts on how the state can lessen the financial burden of child care that is placed on families while ensuring that child care providers make enough to live in Colorado or the Weld County area?: I'm a big fan of (U.S. Senator) Elizabeth Warren's plan for universal child care and think we can start implementing some of these measures here in Colorado to help relieve the burden on Colorado families. More importantly, we need to acknowledge the dramatic shift our economy has taken in the past 40 years toward benefitting only those at the top while leaving working families in increasingly stressful situations. A living wage must be enough to support a small family on a single income in a modest home within a reasonable distance the workplace using publicly available transportation means. Otherwise, addressing the issue of child care alone will only address a small piece of the puzzle.

Do you have any thoughts on how the state can expand the light rail and bus system to serve Carbon Valley residents as well as the rest of the state?: For too long, the residents of (House District 19) have been neglected in the state's transportation plans. Now, as one of the fastest-growing parts of the state, it's more important than ever that we fight for the services we've been promised. That means a fully functional light rail system up/down the Northern I-25 corridor and appropriate bus lines and bicycle lanes to connect our communities to the rail system. This issue is not just about transportation — it will have an impact on preserving affordable housing, promoting job growth, protecting our environment and ensuring the economically vulnerable among us have access to jobs, health care, education and more.



What needs to be done to better protect Colorado's climate from worsening air quality and the ever-increasing risk of wildfires? How would you support initiatives to improve these issues?: We must continue to pursue policies that will ensure a thoughtful, but swift, transition away from fossil fuels as a primary energy source. That means developing infrastructure now to support more electric vehicles and alternative transportation options, including in low-income communities where it's most needed. It also means taking care of our impacted workers and the small businesses who rely deeply on our local oil and gas options (by providing) assistance in transitioning to other careers or customer-bases to make sure our local economy remains stable. We need to start aggressively exploiting the two sources of energy we are never in short supply of here in District 19: sunshine and wind with massive investment that will provide additional sources of jobs, income and energy for our community.

[Colorado House District 19: Jennifer Lea Parenti \(yahoo.com\)](#)

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## College of Business Honors Alumni, Welcomes Executive-in-Residence

*(UMW 17 Oct 22)* ... Laura Moyerleave

Several business leaders shaped by their University of Mary Washington educational experiences returned to campus last week as College of Business (COB) honorees.

Alumna Jennifer Clift is newly inducted into the College of Business Hall of Fame.

At an evening ceremony Friday, Oct. 14, in the Cedric Rucker University Center, the COB inducted one alumna into its hall of fame, named three distinguished alumni and recognized three up-and-coming young alumni.

Jennifer Clift '00 enters the COB Hall of Fame as senior scientific technical manager and chief technology officer for the Naval Surface Warfare Center Dahlgren Division (NSWCDD) in King George County. An innovator and technology expert, she drives advancement of NSWCDD technical capabilities through investments, partnerships and education including academic partnering.

One of Clift's favorite Mary Washington memories is her senior capstone project in a class taught by the late Gano Evans, in which she interviewed Southwest Airlines executives as part of an analysis of a successful business model. "It was a fun and rewarding experience, and provided many leadership lessons that I have carried with me throughout my career," she recalled.

Clift holds a master's degree in engineering systems from the **Naval Postgraduate School** and is pursuing a doctorate in engineering at George Washington University.

This year's distinguished alumni honorees are Megan Shepherd '94, W. Lee Murray '04 and Krishna Sinha '08.

Shepherd is chief operating officer for SimVentions, leading day-to-day operations for the employee-owned Stafford County-based software company. She was named one of the top women in leadership for 2021 by Virginia Business magazine.

Murray is financial advisor and managing director of Cary Street Partners Wealth Management. A member of the UMW Board of Visitors, Murray has received accolades for his work in the financial industry and service to the community.

Sinha is vice president of market development for CACI International, providing expertise and technology in support of national security missions and defense, intelligence and civilian customers. He joined CACI after a successful career on Wall Street in which he was named a "rising star" by Institutional Investor magazine.

The young alumni honored are Rachel Lomax '15, a senior program analyst supporting NASA's Small Business Innovation Research program; entrepreneur Gerber Ortiz '17, owner of GO Masonry serving Northern Virginia; and Brittany McBride '18, a certified financial planner with Cary Street Partners who also serves on the advisory board of UMW's Women's Leadership Colloquium.

Alumnus Marc Logan of RSM Transaction Advisory Services returns to campus as College of Business Executive-in-Residence.



Additionally, the College of Business will welcome alum Mark Logan '04 to campus on Friday, Oct. 21, as this year's Executive-in-Residence (EIR). The EIR program is a chance for students to interact with established leaders in the corporate world and enhance their knowledge of the free enterprise system.

Logan has spent his entire career in professional services, and for the last 12 years has worked in New York for RSM, provider of audit, tax and consulting services focused on the middle market. Since joining RSM's Transaction Advisory Services group, he has played a key role in the group's growth from 40 employees to over 500.

He's a licensed CPA in New York and Virginia and has been recognized as an emerging leader in his field.

[College of Business Honors Alumni, Welcomes Executive-in-Residence - News \(umw.edu\)](#)

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## **The Best Defense is Alliance**

*(CIMSEC 17 Oct 22)* ... LTJG Andrew Bishop and 1<sup>st</sup> LT Alexander Huang

Perhaps it is instilled in the American spirit, or maybe the country has grown accustomed to it, but reliance on the offense-first mentality of the Navy and Marine Corps will cost the United States. From World War II to the mid-2000s, the U.S. Navy waged war on the premise that “the best defense is a good offense.” However, with the return of peer competitors, the Navy cannot merely rely on a “good offense” anymore — the country needs an impenetrable and unshakable defense based on reliable alliances. Advantage at Sea, the United States' Tri-Service Maritime Strategy, maintains that alliances and partnerships are key to long term strategic success. For the U.S. Navy to accomplish an “alliance-first” strategy, it must strengthen current relationships with Asian and South American countries, build a strong alliance with India, and incorporate more training for naval officers to become familiar with partner nations early in their careers.

The Navy and Marine Corps are the power projection arm of the U.S. military. For decades, the services have become comfortable with their position “commanding the seas.” However, this position is not guaranteed, and power projection through almost 20 years of continuous operation in Central Command and in the Western Pacific has stretched the U.S. Navy thin. Now, with the rise of China's military power, the United States' ability to claim offensive dominance, and by default a strong defense, is waning. In his ode to sea power, Alfred Thayer Mahan surmised that the key to power projection was control of the maritime domain. He believed the means of power projection were interlaced with the size of the fleet and its ability to blockade and overpower adversaries. China has adopted Mahanian thinking for use in the 21st Century, taking cues from former naval powers. China has the largest navy in the world, surpassing the United States in sheer number of vessels. Although this is by no means a signal of true naval dominance, it is one of many indicators of a rapidly advancing naval force. Despite the American fleet's comparative advantage in the ability to project power far beyond the homeland, war games against China in a kinetic fight for Taiwan often end in a sobering military defeat for the United States.

According to the recently declassified “U.S. Strategic Framework for the Indo-Pacific,” the United States is determined to maintain “strategic primacy” in the maritime domain. However, in doing so, the United States could easily overextend its capabilities, while China simply needs to focus on raising the costs of U.S. power projection into its sphere of influence. Therefore, unilateral force projection and an offense-based mindset may no longer be the answer. Senator Bernie Sanders cautioned that “organizing our foreign policy around a zero-sum global confrontation with China ... will fail to produce better Chinese behavior and be politically dangerous and strategically counterproductive.” With serious issues such as ship collisions and aircraft crashes plaguing the U.S. Navy, many of these due to an overextension of the force and significant operational demands, it would be beneficial to rely on our international partners to shoulder more of the burden.



The recent conflict between Ukraine and Russia has shown the NATO alliance is a powerful deterrent. Additionally, U.S. intelligence sharing with the “Five-Eyes” countries has been useful in countering China, often drawing China’s ire. The success of the U.S. alliance network demonstrates that it should be at the forefront of the National Defense Strategy, as should the Navy’s role in building this network. With the capability to move thousands of miles in a matter of days, the Navy can project diplomacy anywhere. Some examples of the Navy’s tools to build alliances include port calls, transits, freedom of navigation operations, and force-level changes. These tools can help build alliances by demonstrating U.S. support for specific countries or regions. For example, the USS Carl Vinson visited De Nang, Vietnam in 2018. This was the first carrier visit since the Vietnam War and a signal to China that ties between the United States and Vietnam are improving. Furthermore, the mere presence of a U.S. vessel close to smaller island nations in the Pacific is significant because these countries have serious concerns about China’s illegal fishing activities, backed by a naval militia, taking a major part of their livelihood. The Navy also has the capability to provide humanitarian aid and exert influence by the presence of ships or forces in a disputed area. Notorious British General Oliver Cromwell famously stated, “A man o’ war is the best ambassador.”

An alliance-first strategy centered on the U.S. Navy should focus, first and foremost, on strengthening existing alliances. If the United States can count on its allies in the Pacific, such as Taiwan, Singapore, and Japan, it can hold less of the responsibility for directly countering China while forcing China to deal with several different offensive problems at once. Bolstering these alliances is essential, especially through enhanced defense cooperation and helping these allies utilize technology, such as autonomous swarms, smart mines, and cheap anti-ship missiles. A clear purpose with respect to China is key, and this can be achieved through focusing on an interest-centric alliance versus a threat-based one.

Simultaneously, the United States must seek to build more robust relationships with core South American countries, such as Chile, Ecuador, Peru, and Colombia. This can also be done through defense cooperation; however, investment in capital projects and infrastructure improvement would help bolster the relationship between the United States and key South American countries as well. China has already shown significant economic and military interest in much of this region, which aligns with its goal of total global influence, especially in the western hemisphere. China will often build commercial ports in a specific region and then expand the projects into use as “strategic strong points” with potential for the Chinese Navy to access. There are currently port projects underway in several countries, including Peru and Ecuador. If the U.S. Navy wishes to counter the Chinese threat within the first and second island chain, it cannot allow China to exert pressure through a growing presence, maritime or otherwise, in countries so close to home.

Second, an alliance-first strategy should focus aggressively on creating new alliances to counter China directly. For example, India’s military has rapidly grown into a capable force, and China has recently shown it is willing to antagonize India over its border dispute. Additionally, India has taken significant steps to overhaul its military forces and defend against China and Pakistan. With its number of forces second only to China and a huge population, India is a growing economic and military power and could prove an asset in the future. Right now, the United States’ relationship with one of the largest democracies in the world is classified as a strategic partnership, but it is time to make it a real alliance. The Navy can help forge this partnership by directly increasing participation in Indian-led exercises, such as Exercise Milan. In 2022, the first year that the U.S. Navy has participated, the USS Fitzgerald and a P-8A Poseidon were sent, showing the potential to increase maritime cooperation.

Finally, an alliance-first strategy should include training naval officers to become better “diplomats” on the international stage. This can be done through officer exchange programs and devoting more of basic officer training to the study of U.S. partners and their priorities. For example, in the Naval Academy curriculum, the required courses and learning objectives barely touch on the state of current alliances and partners. There are excellent opportunities to become involved in learning about international affairs through study abroad programs, foreign affairs conferences, and summer training; but there is no standardized curriculum or course. Midshipmen learn about U.S. Navy capabilities and goals, but an emphasis on the capabilities and primary concerns of U.S. partners would be beneficial. A required course could be added to the curriculum and taught by a Foreign Area Officer or former civilian diplomat.



The harsh reality is that, simply due to proximity, a conflict near the South China Sea would give a distinct advantage to China. An alliance-first strategy focused on bolstering existing alliances in Asia, building new alliances in South America, and aggressively nurturing an alliance with India would diminish this advantage, forcing China to extend itself beyond its comfort zone both financially and geographically while dealing with multiple problems at once. More emphasis needs to be placed on alliances in U.S. Naval strategy. The United States cannot do it alone.

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## Ukraine Lessons for Naval Intelligence's Next War

(USNI 18 Oct 22) ... LCDR David Ellison and CDR Daniel Vardiman

Russia's war in Ukraine revealed substantial combat weaknesses across all domains, unified NATO to a level not seen since the immediate aftermath of 9/11, if not the collapse of the Soviet Union, and exposed poor leadership practices that failed to identify problems up and down the chain of command. Russian leaders did not anticipate one resounding issue: the comprehensive, spectacular failure of their intelligence services. Most significantly, Russian President Vladimir Putin failed completely to understand the resolve of the Ukrainian people, believing he could win a quick war by cutting off the political leadership while the Ukrainian people welcomed him with open arms. The results were the same whether Putin was given bad intelligence or acted on bad assumptions never challenged by his intelligence services. The question remains if Russia can adapt to these intelligence failures and change the trajectory of the war.

The lessons learned in this conflict will directly affect how the U.S. military understands its Russian competitor, which will drive planning assumptions and force employment. For U.S. naval intelligence, identifying the lessons is an easy first step, but applying them and creating a cultural shift to adapt to future conflicts requires deliberate action and intention. Below are three lessons from the conflict and ways the naval intelligence community can make changes to avoid the same fate as Russia.

### Improve and Prioritize Cultural Understanding

Russia mostly ignored the existence of a distinct Ukrainian cultural identity and was thus surprised the Ukrainians continued to fight despite Russia's overwhelming conventional force advantage. To avoid this outcome in the next war, naval intelligence should begin by revisiting its most prominent heroes: then-Lieutenant Commander Edwin Layton and the reasons for his success. At the time of this writing, the 80th-anniversary celebrations of the Battle of Midway had just concluded. In any such gathering, naval intelligence personnel can be found extolling Layton's famous assessment of the Japanese fleet's advance toward Midway. The communications intelligence work of then-Commander Joseph Rochefort and the Station Hypo team receives top billing for cryptologic warfare personnel, including the renowned water supply ruse that exposed Midway as the target designated as AF. Most discussions of operational intelligence (OpIntel) begin and end with this case study.

Rarely mentioned in these OpIntel discussions is the extensive Japanese cultural expertise wielded by both Rochefort and Layton, which they mainly acquired during their prewar multi-year Japanese cultural immersion assignments. Both men spoke fluent Japanese, and Layton socialized with Admiral Yamamoto



himself multiple times.<sup>1</sup> In his memoirs, Layton recounted multiple prewar intelligence successes directly enabled by his Japanese language abilities, including revealing Japan's treaty-violating fortification of Pacific islands, and catching a U.S. Navy radioman in the act of espionage for Japan.<sup>2</sup> Without this level of understanding, Admiral Chester Nimitz would never have given him the job "to be the admiral commanding the Japanese forces and tell me what is going on."<sup>3</sup> Given the extensive lead time required to build this expertise, naval intelligence should begin adjusting personnel management processes now.

A review of the public biography sheets of the 18 active-duty information warfare flag officers listed in the Navy register yields only three who have foreign language ability, attaché duty, or other indicators of cultural expertise. Further, discussions surrounding promotion boards at the O-4 to O-6 level continue to reflect the Navy's preference for generalization and an all-encompassing focus on operational tours, usually at sea, and leadership tours ashore as executive and commanding officers. The inherent demands of these assignments preclude the in-depth cultural study necessary to develop a deep understanding of the adversary. While some progress shows promise with a recent focus on IndoPaCom expertise, the guidance remains too generic to proactively produce Layton-level cultural knowledge. Given that reach-back communication capacity in the next war is expected to go from low to an absolute minimum, naval intelligence leaders afloat will have to rely on themselves and their teams to mitigate the loss of access to cultural expertise from civilian analysts ashore.

Naval intelligence can develop a cadre of experts via proactive adjustments to existing personnel management processes. Incrementally strengthening the wording of O-4 to O-6 and E-7 to E-9 promotion board precept letters and convening orders to emphasize deep knowledge of Russia, China, or Iran could yield the desired result. Adding this focus to promotion boards will prompt ambitious naval intelligence professionals to seek assignments in which they expect to face the same adversary. Including Russian or Chinese language ability in the list of "best qualified" attributes also is essential. Naval intelligence can continue to meet the Navy-wide preference for well-rounded personnel by requiring diversity in organizational assignments marked by warfare area, echelon of command, et cetera. Geographic diversity can be maintained via rotations between the waterfronts, Beltway-area billets, and overseas duty. Leaders of large intelligence centers, such as ONI and DIA, must support this process and manage internal tasking assignments accordingly. To develop Layton- and Rochefort-level experts, naval intelligence must prioritize development of extensive knowledge of one adversary over shallow knowledge of them all.

### **Put PowerPoint in its Place**

Russian planners also failed to anticipate how Ukrainian forces would employ a mix of high and low technology to stall the Russian advance. Employing a combination of the newly developed Neptune antiship cruise missile and possibly World War II-vintage naval mines, Ukraine precluded any amphibious assaults, which reduced the Russian Black Sea Fleet's campaign contribution to nothing beyond long-range missile strikes. Ukraine landed an information-domain body blow by sinking the flagship, the Slava CG Moskva. Ukraine thus far has overperformed all Western intelligence estimates, calling into question conventional processes for analyzing combat capability.

In War on the Rocks, Christopher Dougherty highlighted a need to improve threat modeling beyond using a system's maximum effective range as the radius of a circle to be plotted on a map, which is then declared a no-go zone. He also advocated for a more holistic approach to combat capability assessments, working across warfare areas to better characterize adversary performance in the real world. Finally, Dougherty also recommended stating and frequently revisiting limits of understanding. Naval intelligence suffers from these shortcomings, aggravated by the disproportionate focus on PowerPoint. Analysts spend unnecessary time agonizing over formatting minutiae like colors, font sizes, and slide counts. Revisiting anything in PowerPoint requires a pain-staking process of manually reviewing historical files.

Naval intelligence can address many of these shortcomings by shifting to a Geospatial Information System (GIS) solution for data analysis and presentation, building on the promising start from the NGA shiprider program. Under this program, NGA geospatial analysts embarked with deployed carrier strike groups, leveraging naval intelligence programs of record to import data into ArcGIS for in-depth analysis of multiple adversaries and environmental data sets. Tailored datasets are disseminated in GeoPDF file format via TerraGo publishing software. These GeoPDFs can be tailored for file size to minimize



bandwidth concerns and for content to satisfy requirements for analysts, watchstanders, and briefers. This approach significantly improves situational awareness and understanding of the operational environment across all participants.

Instead of an interesting aside, naval intelligence needs to make this the standard way of doing business. Applied to the Black Sea, a GeoInt analyst can combine positions of ships, land-based missile launchers, and airbases with environmental modeling of electromagnetic propagation, cloud cover, and sea currents to more accurately model nodes across the kill web. Snapshots in time can be disseminated widely via compressed GeoPDFs. If a commander requires a PowerPoint brief, then any slide with a map should be a screenshot from the GIS foundation. Analysts and planners can then focus on leveraging the environment to achieve a decisive advantage vice fighting to force-fit cartoon shapes and text boxes on top of flat map graphics. If it is impossible to overcome ArcGIS licensing costs and system limitations, multiple open-source alternatives should be explored with the help of naval intelligence's information warfare brothers and sisters in the information professional community.

Naval intelligence also must embrace the open-source intelligence (OSInt) phenomenon rather than competing with it out of fear that it will put its practitioners out of a job. Naval intelligence will have to contend with open-source intelligence because of its extensive inclusion in press reporting, and commanders will continue to require their intelligence officers to comment on what they see in the media. With an accompanying improvement in cultural knowledge, OSInt analysts will mitigate OSInt's weaknesses through better understanding of the sources' underlying biases and the subsequent omissions and/or exaggerations and how to mitigate them. The strikes against the Moskva and Alligator LST Saratov received extensive media coverage, demonstrating the relevance of OSInt to the maritime domain. In addition, Bastion cruise missile launch vehicles transiting between their garrison and deployment sites in Crimea were among the many vehicle movements posted to social media in the weeks before the Russian Ministry of Defense announced their employment for land strikes.

### **Improve Proficiency in Coalition Operations**

The open-source revolution aided and amplified the comprehensive strategic-level sharing of intelligence with NATO allies, providing a shared understanding of the situation and driving NATO's robust response to the incursion. The extensive international support provided to Ukraine has bolstered force morale and enabled its forces to continue outperforming nearly everyone's prewar expectations. Though it was sufficient for enacting sanctions and sending weapons, this intelligence sharing would have come too late for effective NATO-wide planning for direct combat against Russia. Russia's struggles to coordinate combined arms operations across its services, mostly on land, demonstrate the likely outcome when leaders underestimate the difficulty inherent to planning across units with disparate functions and garrison-environment leadership. Executing combined maritime air, surface, and undersea operations in a coalition environment will present NATO with an even more significant challenge. To have any hope of successfully working together, our coalitions must have a detailed and accurate shared intelligence picture. Naval intelligence must seize this opportunity to build the working-level ties necessary to sustain this intelligence picture and leverage our partners' expertise before the shooting starts.

Building these ties has been hindered by an overly complex, bureaucratic foreign disclosure process and tenuous connectivity between the United States and partner enterprise IP networks. Although foreign disclosure requirements touch all areas of naval operations, the tasking to lead the process usually falls to an intelligence officer. Afloat intelligence teams need more support from higher headquarters to reduce this burden on their ability to nurture tactical-level partnerships across the coalition. Naval intelligence as an enterprise must develop a unified approach to coalition information exchange that spans the strategic to tactical levels of war. The current political environment presents an opportunity for this effort to receive backing from the Director of National Intelligence and other Cabinet-level and senior congressional leaders, which will be indispensable to overcoming the inertia present in the three-letter national intelligence agencies.

Nearly all naval intelligence teams rely on these agencies for all manner of intelligence products published under their Original Classification Authority (OCA), very little of which is written for release to a broad set of partners like NATO. Getting OCA approval to share more broadly requires remotely



navigating a bureaucratic process designed not to facilitate efficient sharing of intelligence but to minimize risk to the OCA from any information compromise. If this approval is achieved, then the authors must receive approval from the local foreign disclosure officer, whose function is to manage risk on the Navy by second-checking homework on compliance with dissemination controls. Naval intelligence community leaders should engage the OCAs in a series of working groups to revisit policies designed to mitigate this risk and address other impediments to coalition-wide information sharing. The first step should be defining persistent coalitions of partners with whom we expect to fight against each major adversary. NATO already constitutes a Russia-focused coalition, but the challenge will be more difficult against China because of regional political sensitivities.

Once defined, each coalition should have its own working group to address the specific limitations pertaining to its members. It should begin with an honest discussion of the risk of compromise by a foreign partner, whether from traditional espionage or sanctioned exchanges with an adversary. Regarding espionage, allied personnel should receive the same presumption of innocence given to U.S. personnel. Further, active coalition participants are unlikely to receive national tasking for information exchange with adversaries. National intelligence managers can further mitigate the risk via intermediate dissemination controls prohibiting the distribution of certain products beyond participants. Having established a risk agreement, the working groups should examine ways to improve efficiency. Prioritizing original production approved for coalition-wide release is one possibility. Or the group could develop detailed editing guidance, perhaps on topic areas or accuracy of measurements, for U.S. participants to use as sourcing when producing for the coalition.

Thus, equipped to share broadly, naval intelligence teams at the numbered fleet level and below must remedy the insufficient IT architecture connectivity inhibiting close working-level ties with counterparts. Too often, U.S. partner expertise on the adversary is neglected because the products are unavailable on SIPRNet, or there are minimal available workstations on the Battlefield Information Collection and Exploitation System (BICES) and other networks that U.S. partners can access directly. Naval intelligence must work closely with information professionals to reliably connect the enterprise networks. Soon-to-be NATO partners Sweden and Finland have provided an example in interoperability that naval intelligence should aspire to follow. If the United States cannot talk to its partners now, it will never achieve the proficient interoperability necessary to fight together.

Naval intelligence is unlikely to fail as Russia has in Ukraine. Still, the United States cannot allow itself to believe it is immune to similar failures. Some actions to remedy these weaknesses have already begun, but much more is needed to capitalize on the opportunity to use the Ukraine crisis as a catalyst for change. Naval intelligence needs to incentivize development of specialized cultural expertise on U.S. adversaries via specific language in the pathways to promotion. The Navy must move beyond PowerPoint as the foundation of intelligence dissemination and leverage the tools already used elsewhere in government and the OSInt world. Finally, the United States must stop talking about how it will never fight another war alone and become proficient in coordinating with its critical allies and partners. The change must begin now to have any hope of emulating the success of Edwin Layton and Joseph Rochefort and ensuring victory in the next war.

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