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Naval Postgraduate School (U.S.)

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NPS IN THE NEWS

Weekly Media Report – July 26 - Aug 1, 2022

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FACULTY:

[New FAOs Attend Orientation at IWTC Monterey](#)

(DVIDS 25 July 22) ... YN1 Ryan Bradford

The Navy foreign area officer (FAO) community welcomed 18 new FAOs and five spouses during the Joint Foreign Area Officer Orientation Course (JFAOC) in Monterey at the end of June.

The Joint Foreign Area Officer Orientation Course is a week long course providing a FAO community-specific introduction, and is required for full qualification as a FAO...“JFAOC is always a great event, introducing our new officers to this internationally focused, and strategic competition-oriented community,” said Capt. Sean Hays, the Navy FAO chair at the **Naval Postgraduate School**. “These FAOs will leave Monterey and assume roles as the Navy’s strategic operators, ensuring the fleet’s network of allies and partners is strong and ready.”

[Political Science Student Goes from Introvert to ASI President](#)

(CSUMC 27 July 22) ... Bri Phillips

When Julia Glorioso was in third grade, she took a field trip with her classmates to visit Cal State San Marcos... As ASI president, Glorioso had the opportunity this summer to be a student representative at the Panetta Institute for Public Policy where she met state legislators, politicians and members of Congress. Glorioso was encouraged by Ann Elisabeth Rondeau, the president of the **Naval Postgraduate School** in Monterey, to direct the upcoming goals for the school year toward connecting, communicating and focusing on ways to reach students.

[From the Lighthouse to the Christmas Tree: Enabling Distributed Innovation in the U.S. Military](#)

(MWI 27 July 22) ... Leo Blanken, Jason Lepore, and Cecilia Panella

During the Cold War, when both the United States and the Soviet Union considered the strategic environment to be one of “permanent crisis,” the two great powers concluded that outcomes in modern warfare would be determined, in large part, by the capacity to equip their forces with technologically advanced weapons and platforms. As these sociotechnical systems became larger, more complex, and more expensive, innovative change became an integral part of national security. Militaries could no longer rely on random strokes of genius to prevail in future wars, but instead needed to systematize innovation. This is what Martin van Creveld labeled “the invention of invention”: “A process of technological competition arose, one that was sometimes relaxed but never halted. . . . There could be no question that each country’s effective military power depended on its armed forces continuously keeping abreast technologically.” This trend of purpose-driven military innovation had been evolving over the previous century, but was crystalized in the postwar period. As Michael J. Hogan argues, “American leaders emerged from the Second World War absolutely convinced that science had saved the day by achieving dramatic breakthroughs in military technology.”... Leo Blanken is an associate professor in the Defense Analysis Department at the **Naval Postgraduate School**, where he also serves as the deputy director of the Consortium for Robotics and Unmanned Systems Education and Research (CRUSER) and as the academic lead for the Applied Design for Innovation program. He is the author of *Rational Empires: Institutional Incentives and Imperial Expansion* and is coeditor of *Assessing War: The Challenge of Measuring Success and Failure*. He also collects and DJs rare funk and soul records from the 1960s.



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U.S. Marines with II Marine Expeditionary Force attended the Basic Analytic Wargaming Course, culminating into a wargame scenario on Marine Corps Base Camp Lejeune, North Carolina, July 18-22. The BAWC is a 5-day course that provides students a hands-on experience with designing, executing, and analyzing a wargame in an instructor led environment...“The idea is we bring a group of students up to speed on wargaming and what it does to allow us to examine the human decision-making process,” said Dr. Jeff Appleget, a senior lecturer from the Naval Warfare Studies Institute, **Naval Postgraduate School**, and a retired U.S. Army Colonel, “which is key to executing plans, getting ready to go into theater, and doing the things we have to do in wartime.”

[Defense Analysis Professor Awarded Oxford Dissertation Prize](#)

(Navy.mil 28 July 22) ... Matthew Schehl

(NPS.edu 28 July 22) ... Matthew Schehl

A **Naval Postgraduate School** (NPS) professor has been awarded the Society for the History of American Foreign Relation's (SHAFR) Oxford University Press USA Dissertation Prize in International History.

[Helping Partners Help Themselves Through Grassroots Innovation](#)

(Small Wars Journal 30 July 22) ... Ernest John C. Jadloc, Leo Blanken and Kevin Jones

Security cooperation with partner nations is increasingly important for the success of American security policy in an era of strategic competition. After twenty years of large-scale counterinsurgency operations, during which security cooperation largely consisted of the rapid building of (often inappropriate) “mirror imaged” partner forces, new thinking is required. We provide a novel and scalable mechanism for partner force enablement efforts here: grassroots innovation among partner force personnel through the leveraging of commercial-off-the-shelf (COTS) technologies. More specifically, we show the potential for partner forces to create affordable, sustainable, and tailored solutions to their own capability gaps as a mechanism for better partnering... In response to this operational challenge, Colonel Jadloc has prototyped a solution to this capability gap while he earned a Master’s degree at the **Naval Postgraduate School**. His Maneuverable Aerial Identification Friend-or-Foe (MAIFF) system uses a quadcopter drone mounted with infrared lamp and other electronic and non-electronic parts. The illumination provided by the lamp is invisible to the naked eye and can only be seen using a night vision device. It can operate for six hours and is visible up to at least one mile away. The lamp’s mounting design is stable and versatile, enabling the lamp and the drone to fly as one unit. The design parameters of this project sought to create an affordable and sustainable solution, utilizing COTS components, and are tailored specifically to the needs of the AFP ground and air forces. The sub-250 gram drone used in this prototype is a combination of hobby parts that are available anywhere in the world along with a few bespoke parts that were designed and manufactured in an on-campus maker-space. Quad-copter designs such as this are very forgiving when it comes to configuration changes – substitutions to the motors, propellers, camera gear, et cetera. This improves the chances of producing and maintaining these systems as the availability of COTS materials in the marketplace change over time. Total cost of the materials for these airborne platforms starts at around \$100 and can include features like starlight cameras (providing near IR visibility at night) for about \$30. For an additional \$50 or so, high-level autonomy can be introduced, which allows for waypoint navigation, position hold, and RF-free operation for stealth.

ALUMNI:

[Navy Supply Corps School Holds Change of Command](#)

(DVIDS 25 July 22) ... PO2 Derien Luce

Family, staff, students and guests witnessed a time-honored military tradition, the change of command, at the Navy Supply Corps School (NSCS) in Newport, Rhode Island, July 22, 2022...Warner, a native of Warren, Ohio, earned his commission in 1998 through Officer Candidate School. He earned a Master of Business Administration in Supply Chain Management from the **Naval Postgraduate School** in 2008.



[Hascall Tackles New VP Role On Dulles Corridor Metrorail Project](#)

(Patch 26 July 22) ... Michael O'Connell

Andrew "Drew" Hascall has been named the new vice president for engineering support and the Dulles Corridor Metrorail Project, according to a release from the Metropolitan Washington Airports Authority... A graduate of the Illinois Institute of Technology with a bachelor's degree in mechanical engineering, Hascall also earned a master's degree in business administration (finance) from the **Naval Postgraduate School** and completed the Business Executive Program at the University of Virginia's Darden School, according to the release.

[Sea Control 366 – Cybersecurity and Strategic Sealift with Jason Iletto \(Audio Interview\)](#)

(CIMSEC 28 July 22) ... Jared Samuelson

Jason Iletto joins us to discuss cybersecurity, cyber warfare, and the potential impact on strategic sealift capability.

Commander Jason Iletto is a supply officer in the US Navy. He earned a master of science in operations research from the **Naval Postgraduate School** in 2011 and is currently pursuing a graduate degree at the Naval War College. He has conducted a directed research project under the Cyber and Innovation Policy Institute (CIPI) Vice Admiral Samuel L. Gravely Jr. Program.

[Artel, LLC Taps Nigel Sutton to Accelerate Artel Growth](#)

(Yahoo! 28 July 22)

Artel, LLC, a leading supplier of classified secure government connectivity, today announced Nigel Sutton has joined the company as Senior Vice President, Business Development. In this new role, Nigel will be responsible for Artel's move to expand into adjacent markets. "We are thrilled Nigel joined the Artel team," said Paul Domorski, Artel Chief Executive Officer. "His extensive knowledge and experience make him the right leader to help accelerate our growth. Network convergence with best of breed solutions is enabling work from anywhere. Customers don't want to be tied to one platform; they want connectivity as a service. Artel is perfectly positioned to deliver it."... Nigel holds a BS in Computer Science from Park College, an MS in Aviation Systems from the University of Tennessee, Certification in Aircraft/Avionics Flight Test from the U.S. Navy Test Pilot School, an MS in Aerospace Engineering/Avionics from the **Naval Postgraduate School**, an MBA from the Florida Institute of Technology, an Executive Masters in International Relations, a Certificate of Advanced Study in Public Administration from Syracuse University. As a seasoned Board Member, he has held board positions with organizations including Orbital ATK Middle East, World Affairs Councils of America, Precision Strike Association, Alliant Techsystems Operations Saudi Arabia, and the US-ASEAN Business Council.

UPCOMING NEWS & EVENTS:

Aug 8-12: [Center for Executive Education NSLS Workshop](#)

Aug 15-19: [JIFX 22-4](#)

Aug 30- Sept 1: [Emerging Technology Awareness \(ETA\) for the Warfighter](#)



FACULTY:

New FAOs Attend Orientation at IWTC Monterey

(DVIDS 25 July 22) ... YN1 Ryan Bradford

The Navy foreign area officer (FAO) community welcomed 18 new FAOs and five spouses during the Joint Foreign Area Officer Orientation Course (JFAOC) in Monterey at the end of June.

The Joint Foreign Area Officer Orientation Course is a week long course providing a FAO community-specific introduction, and is required for full qualification as a FAO.

This summer's JFAOC was hosted by Information Warfare Training Command Monterey. On Navy day, new FAOs received an introduction from Rear Adm. Philip Yu, senior defense official and defense attaché to Moscow; and Rear Adm. Michael Baker senior defense official and defense attaché to India. The Navy FAO Council of Captains and Community Leadership Management Team also shared their insight into the new life FAOs would embark upon as they are stationed around the world.

In Yu's introduction he described his time in Moscow and told the group that while serving in their assignments overseas to maintain a continuously competitive mindset.

"JFAOC is always a great event, introducing our new officers to this internationally focused, and strategic competition-oriented community," said Capt. Sean Hays, the Navy FAO chair at the **Naval Postgraduate School**. "These FAOs will leave Monterey and assume roles as the Navy's strategic operators, ensuring the fleet's network of allies and partners is strong and ready."

During the course 150 new joint FAOs interacted with senior instructors, facilitators, and representatives from all of the services. The representatives helped the new FAOs to understand what will be expected of them, and explained the community's mission, values, duties, and lifestyle.

IWTC Monterey, as part of the Center for Information Warfare Training (CIWT), provides a continuum of foreign language training to Navy personnel, which prepares them to conduct information warfare across the full spectrum of military operations.

With four schoolhouse commands, two detachments, and training sites throughout the United States and Japan, CIWT trains over 26,000 students every year, delivering trained information warfare professionals to the Navy and joint services. Center for Information Warfare Training also offers more than 200 courses for cryptologic technicians, intelligence specialists, information systems technicians, electronics technicians, and officers in the information warfare community.

[DVIDS - News - New FAOs Attend Orientation at IWTC Monterey \(dvidshub.net\)](https://www.dvidshub.net/news/25-july-22/18-new-faos-attend-orientation-iwtc-monterey)

[Return to Index](#)

Political Science Student Goes from Introvert to ASI President

(CSUSMC 27 July 22) ... Bri Phillips

When Julia Glorioso was in third grade, she took a field trip with her classmates to visit Cal State San Marcos.

The trip was a way of getting young students to think about their educational futures. But for Glorioso, this was a trip to remember. A photo of Glorioso with other students on CSUSM's Mangrum Track & Field during the visit even made it into the local Valley Center newspaper.

The experience certainly had a lasting impact. A decade later, Glorioso made her way back to campus, this time as a university student.

"Cal State San Marcos has provided me more than I could have ever thought possible," said Glorioso, a political science student who will graduate next May. "All the opportunities that I've been able to be a part of, I don't think it would have been the same if I went to another university."

Glorioso has certainly made the most of those opportunities. As the fall semester approaches, she is preparing to serve the CSUSM student body as the president of Associated Students, Inc.

As ASI president, Glorioso had the opportunity this summer to be a student representative at the Panetta Institute for Public Policy where she met state legislators, politicians and members of



Congress. Glorioso was encouraged by Ann Elisabeth Rondeau, the president of the **Naval Postgraduate School** in Monterey, to direct the upcoming goals for the school year toward connecting, communicating and focusing on ways to reach students.

Glorioso never could have imagined in high school that she would be in a position that seemed to be made for extroverts. As a teenager, Glorioso didn't find herself to be involved and mostly kept to herself.

"I was a more introverted person in high school," Glorioso said. "I really wanted to be like the other students that were involved in ASB, but I felt like in high school you have your cliques. It's just a much different environment, and I couldn't really find my place. After graduating high school, I really regretted not just getting out of my comfort zone more and taking advantage of opportunities. I told myself, 'When I get to college, I'm not going to do that. I'm not gonna let myself be held back by anything. It's a new, fresh start.'"

Glorioso wasted no time, talking to all the student organizations at her freshman orientation to see how she could get involved. She learned about ASI's volunteer groups and decided to try Lobby Corps, which is dedicated to advocacy in higher education policy.

Joining Lobby Corps was the push Glorioso needed to get comfortable sharing her thoughts and opinions. Glorioso had the opportunity to speak in front of state legislators when she attended a lobbying trip at the Sacramento Capitol, which was something she wouldn't have thought of trying in high school.

"I'm going to be in ASI for my whole four years, and that was my favorite experience that I've had because it did exactly what I wanted it to do," Glorioso said. "I was able to completely get out of my comfort zone. And I think I just learned from that experience that I really do enjoy public speaking. I just needed to build my confidence in that, and I think that ASI is a perfect opportunity to continue doing that."

Glorioso saw firsthand what it was like to be an ASI officer as a member of Lobby Corps. She always kept in mind how she would one day like to run for a position.

Michelle Tran, the former ASI vice president of student and university affairs, encouraged Glorioso to apply to be the College of Humanities, Arts, Behavioral and Social Sciences (CHABSS) representative. Glorioso took Tran's encouragement as a sign, and she made the application deadline the same day it was due. As the CHABSS representative, Glorioso advocated for students in the college.

Last year, Glorioso was elected vice president of student and university affairs where she led Lobby Corps, represented CSUSM at a systemwide level and led civic engagement.

Now, as ASI president, Glorioso has another opportunity to help students before graduating next May.

"I've seen Julia become an exceptional leader to ASI over the past year that I've gotten to work with her, and am so excited to grow professionally with her leadership," said Ernest Cisneros, vice president of student and university affairs.

When Glorioso is not fulfilling her duties as ASI president, she is working at the district attorney office in North County where she reviews restitution cases and reaches out to victims. Glorioso is also studying for the Law School Admission Test, commonly known as the LSAT, with plans to attend law school.

Glorioso's busy schedule calls for significant drive and determination, and she credits much of that tenacity to her grandparents.

"My grandparents were both Italian immigrants, and I think their values really influenced me," Glorioso said. "They were very hard workers who started from the bottom up. That always really impacted me and impacted my work ethic.

"They always put a large emphasis on education. They were not able to get an education. They stopped at third or fourth grade. So it will be really exciting to be the first to pursue a law degree in my family. And I think my mom and my dad are already excited for me."

[Political Science Student Goes from Introvert to ASI President \(csusm.edu\)](https://www.csusm.edu)

[Return to Index](#)



From the Lighthouse to the Christmas Tree: Enabling Distributed Innovation in the U.S. Military

(MWI 27 July 22) ... Leo Blanken, Jason Lepore, and Cecilia Panella

During the Cold War, when both the United States and the Soviet Union considered the strategic environment to be one of “permanent crisis,” the two great powers concluded that outcomes in modern warfare would be determined, in large part, by the capacity to equip their forces with technologically advanced weapons and platforms. As these sociotechnical systems became larger, more complex, and more expensive, innovative change became an integral part of national security. Militaries could no longer rely on random strokes of genius to prevail in future wars, but instead needed to systematize innovation. This is what Martin van Creveld labeled “the invention of invention”: “A process of technological competition arose, one that was sometimes relaxed but never halted. . . . There could be no question that each country’s effective military power depended on its armed forces continuously keeping abreast technologically.” This trend of purpose-driven military innovation had been evolving over the previous century, but was crystalized in the postwar period. As Michael J. Hogan argues, “American leaders emerged from the Second World War absolutely convinced that science had saved the day by achieving dramatic breakthroughs in military technology.”

The planning of peacetime American forces under the cloud of Soviet threat required processes and institutions to enable perpetual innovation. This included the mobilization of basic science, applied science, and engineering toward military problems. The resulting structure, which continues to characterize innovation processes and culture of the US military more than three decades after the end of the Cold War, came to resemble a lighthouse—tall, vertically oriented, with a single beam of light as its most purposeful and defining feature. In a lighthouse, every other component of the structure exists in support of the powerful lamp at its apex. Similarly in the in the US military, the drivers of institutional innovative capacity are largely centered at the top of the organization—once an opportunity for innovative change is identified, the directive for innovation flows down the vertical structure to predesignated entities tasked with research, development, and implementation. To work, this lighthouse model of military innovation requires three defining attributes: it is hierarchical in structure, due to relative omniscience of the threat space and control of relevant technologies.

The first feature of the lighthouse model of innovation—its hierarchical construction—refers to the centralization and strict division of labor that characterized Cold War planning. World War II had revealed the inefficiencies introduced by lack of coordination among the military services, national command authority, and national intelligence services. The National Security Act of 1947 was designed to rectify this problem by coordinating all these activities under a unified National Military Establishment, moving much authority for planning from the individual military services to the level of the Office of the Secretary of Defense. This drive toward centralization was part of a wider postwar effort to perfect all bureaucratic action and fulfill the Enlightenment goals of rationalization of state function. The culmination of this evolution would be a machine-like apparatus that would utilize elaborate planning and precise division of labor to produce optimal policy—which would include the leveraging of science to produce innovation: “By improving the orchestration of research, engineering, management, and policymaking . . . the rationales underlying practical decisions could be placed on firmer empirical foundations.”

The second feature of the lighthouse model is its reliance on near omniscience of the threat environment for which military innovation was being conducted. Though the international system is always complex, Cold War planners benefitted from a relatively simple and stable environment for which they had to design forces. First, the core weapons and platforms of conventional warfare of the era—including submarines, bombers, tanks, fighter planes, and mechanized infantry—had all been developed and tested extensively during World War II. Other than a steady flow of sustaining modernizations around these technologies, the only truly disruptive military technologies of this era were strategic nuclear weapons and their delivery systems. And while these new weapons had a deep impact on the way each side would devise and implement its deterrence strategies, they had a much more muted effect on military operational planning, which continued to emphasize large-scale, conventional combat.



The second source of simplicity was the limited number of scenarios around which planning had to be conducted. More specifically, the scenario that took ultimate priority in US and allied Cold War planning was the potential Soviet invasion of Western Europe through the Fulda Gap. This projected battle took precedence over any other contingency that might arise, thereby greatly simplifying force planning. Finally, the Soviet military establishment was largely comparable to that of the United States as they shared the same basic structures, goals, and tools. Taken as a whole, the Cold War provided a very known—or at least knowable—strategic environment in which to design military forces; this meant that reasonable assumptions could be used to replace gaps in factual information regarding Soviet capabilities and intention. Thomas McNaugher describes this level of near omniscience succinctly: “Soviet forces provided a well-understood, slowly advancing focal point for long-range planning.”

The third feature of the lighthouse model, the control of technology, refers to the capacity of the Department of Defense to exclusively possess, shape, or at least intimately understand all strategically relevant advances in science and technology. This control had always been achieved through money—American defense spending in research and development attracted all relevant nascent technologies to it like moths to a flame. This system was optimized during the Cold War, when the United States government mobilized the civilian university system, university-affiliated research centers, national laboratories, and federally funded research and development centers through the massive spending of R&D dollars. In 1960, for example, the Department of Defense alone accounted for 36 percent of all R&D dollars spent around the globe. This tremendous flow of dollars ensured that the Department of Defense often outright controlled—or was at least intimately aware of the implications of—all science and emerging technologies that related to military power.

The three features of the lighthouse model of innovation fitted neatly with the historical era in which it was developed: the Cold War. The strategic landscape, however, has changed significantly since the Soviet Union’s final dissolution in 1991, and the purely hierarchical structure of the lighthouse is no longer suitable for generating innovation. Instead, US military innovation should look more like a Christmas tree, with innovative activity dispersed throughout the Department of Defense like lights on a festively decorated tree, rather than being controlled and directed solely from above.

One important change since the end of the Cold War is the loss of relative omniscience of the strategic environment. When the Cold War ended, the United States struggled to understand the role its unchallenged military forces would play in the world. Moving from planning around specific scenarios against a mirror-imaged opponent, the United States now struggled with violent extremist organizations, rogue states, nuclear proliferation, peacekeeping, and humanitarian missions. All of these were assumed, to some degree, to be “lesser-included” tasks that could be handled with the overwhelming conventional forces created and sustained by the lighthouse—a mistaken attitude that was reinforced by the lopsided battlefield success of the Gulf War. As the Iraq and Afghanistan conflicts turned sour in the decades after 9/11, it became clear that the US military establishment’s understanding of the environment was inadequate, but the lighthouse continued to produce capabilities and concepts that were (at best) incremental improvements of the Cold War force.

A second change is a loss of control over technology. The chief mechanism of that previous control, research money, has dried up. Whereas the Department of Defense accounted for 36 percent of all R&D dollars spent around the globe in 1960, by 2016 that number had shrunk to 4 percent (and continues to decline). Even when the Department of Defense has money to spend, it still fails to connect meaningfully to emerging tech sectors. As a recent Council on Foreign Relations report lamented:

The pace of innovation globally has accelerated, and it is more disruptive and transformative to industries, economies, and societies. Second, many advanced technologies necessary for national security are developed in the private sector. . . . The ability of the U.S. Department of Defense (DOD) to control [such] activity using traditional policy means has been greatly reduced.

A deeper, point is embedded in this account of loss of control of technological advancement: a lack of comprehension. The Council on Foreign Relations report notes that current technologies emerging from the private sector are “disruptive and transformative”—the implications of which are often not readily apparent for the Department of Defense. The types of innovation that may spring from these disruptive—and alien—technologies is simply beyond the capacity of the lighthouse to meaningfully leverage.



The loss of omniscience and control implies the poor fit of the third aspect of the lighthouse: hierarchy. The rigid, vertical structure and hyper compartmentalization of the US national security apparatus, though well suited to the relatively simple and stable environment of the Cold War, is ill-suited to the current strategic landscape. A new, distributed approach to innovation and adaptability is required. As Williamson Murray argues, “Innovation demands officers in the mainstream of their profession. . . . The bureaucratization of innovation . . . guarantees its death.” This means moving the onus for innovation from isolated specialists to those men and women who comprise the operational force.

Distributed innovation, however, relies on two things for success: (1) incentives that enable innovations to emerge and (2) organizational capacity to identify and scale up these innovative solutions. First, innovation and adaptation should be recognized and rewarded across military institutions. Though bottom-up innovation and adaptation have occurred in military organizations throughout history, it usually occurs for modern American military forces only on wartime battlefields and rarely results in systemic change for the broader organization. If distributed innovation were to occur in the steady state—outside of the crucible of combat—incentive structures and cultures would need to be in place to foster new ideas. This is a challenge for culturally bound organizations that typically respond to novel problems by narrowing their apertures to traditional approaches in the face of adversity, rather than becoming more creative. The second condition for successful distributed innovation relates to scaling. Distributed innovations must be identified and scaled up. Candles of innovation are often trapped under the bushel basket of organizational status quo and better mechanisms are needed to locate and enact wider adoption of innovations that may occur anywhere throughout an organization as large as the US military services.

Given this, a Christmas tree model would better enable innovation in the American military. There are two characteristics of this construct that distinguish it from the Cold War lighthouse. First, there are lights of innovation distributed throughout the tree in addition to the star at the top. This means that, even though major innovation projects are coordinated and resourced from a central location, units and individuals throughout the organization can play an active role in innovation. They can do so by acting as distributed sensors who assist in detecting emerging opportunities, gaps, or threats. They are also empowered to engage in efforts to ideate, prototype, and collaborate around innovative solutions at the lowest level. Second, the branches of the tree act as pathways that allow information and ideas to flow in multiple directions. This is necessary for leadership to learn from the distributed network—both for increased understanding and to harvest and scale up appropriate innovative solutions.

What barriers stand in the way of the United States military adopting the Christmas tree model of distributed innovation? These can be roughly binned into two categories: structural reform and human capital development. Structural reform is, by far, more difficult and may need to entail an entire reformation or abandonment of the Cold War–era Planning, Programming, Budgeting, and Execution (PPBE) system and its onerous requirements process, which was identified by the former chair of the Defense Innovation Board, Eric Schmidt, as “now the single greatest barrier to rapid technological advancement.”

Until these structural reforms occur, however, we can turn to human capital development as an immediately actionable lever to enable innovation. More specifically, professional military education (PME) provides a ready mechanism by which service members can become the distributed lights of innovation. This can be accomplished through three mechanisms.

The first mechanism is through updated curricular content that enables innovative thinking. The current PME system does not lend itself to critically examining previously understood doctrine and domains. This should change. Hard sciences, engineering, history, and social sciences should be complemented by coursework on wicked problems, design disciplines, and prototyping to provide a modern understanding of the complex and rapidly evolving sociotechnical systems that comprise the modern strategic environment.

The second mechanism is through graduate research that is based in innovation. This is accomplished by embedding PME student research into actual innovation projects drawn from operational needs. Doing so will not only professionally develop the students but will improve those ongoing innovation efforts. These efforts would showcase the degree to which PME students can combine their newly acquired



academic skills and rich professional experience to contribute to innovation projects that may otherwise be conducted solely by civilian engineers and scientists.

The third mechanism is indirect; it is through improved future leadership throughout the force. As PME students experience the challenges of innovation firsthand—from ideation, through design and engineering, to acquisition and adoption—they will carry these lessons forward to their future roles as leaders. Their education and experience as innovators will, in turn, allow them to empathize with and enable grassroots innovators in their future commands. This will produce a steady stream of more lights to brighten the Christmas tree.

The lighthouse model of innovation was optimized for a bygone strategic environment and no longer meets the needs of America’s military. In its place, a Christmas tree model of distributed innovation would be better fitted to the current environment. Though deep structural reforms would need to be enacted to update the antiquated PPBE system, an actionable path to enabling distributed innovation in the joint force lies in human capital development via PME. As education is a service responsibility, we suggest that these entities increasingly prioritize education for their personnel in an era of shrinking budgets. Additionally, we offer that—with minimal investment and moderate planning—PME student research could be linked directly to ongoing innovation efforts across the DoD ecosystem. In sum, PME programs provide a ready location to enable distributed innovation by turning their students into the lights that lead the way—both as today’s innovators and tomorrow’s innovative leaders.

Leo Blanken is an associate professor in the Defense Analysis Department at the **Naval Postgraduate School**, where he also serves as the deputy director of the Consortium for Robotics and Unmanned Systems Education and Research (CRUSER) and as the academic lead for the Applied Design for Innovation program. He is the author of *Rational Empires: Institutional Incentives and Imperial Expansion* and is coeditor of *Assessing War: The Challenge of Measuring Success and Failure*. He also collects and DJs rare funk and soul records from the 1960s.

Jason Lepore is a professor in the Economics Department of the Orfalea College of Business at California Polytechnic State University and a visiting research professor in the Defense Analysis Department at the **Naval Postgraduate School**. He has published articles on defense economics, game theory, and industrial organization and he is coeditor of *Assessing War: The Challenge of Measuring Success and Failure*.

Cecilia Panella is a faculty associate for research in the Department of Defense Analysis at the **Naval Postgraduate School**, where she coleads the Applied Design for Innovation curriculum. She holds a graduate degree from Johns Hopkins SAIS in American foreign policy and international economics.

[From the Lighthouse to the Christmas Tree: Enabling Distributed Innovation in the US Military - Modern War Institute \(usma.edu\)](#)

[Return to Index](#)

II MEF Marines Apply Future Concepts in Wargaming

(DVIDS 22 July 22) ... Cpl. Eric Ramirez

(Marines.mil 22 July 22) ... Cpl. Eric Ramirez

U.S. Marines with II Marine Expeditionary Force attended the Basic Analytic Wargaming Course, culminating into a wargame scenario on Marine Corps Base Camp Lejeune, North Carolina, July 18-22. The BAWC is a 5-day course that provides students a hands-on experience with designing, executing, and analyzing a wargame in an instructor led environment.

Wargaming is a form of strategy game that simulates warfare in a realistic tabletop environment which can replicate historical military scenarios or create new ones. It assists military personnel to train the mind in the art of strategic thinking as well as to study real-world battles and future fights, essential to applying Marine Corps concepts of the 21st century.

“The idea is we bring a group of students up to speed on wargaming and what it does to allow us to examine the human decision-making process,” said Dr. Jeff Appleget, a senior lecturer from the Naval



Warfare Studies Institute, **Naval Postgraduate School**, and a retired U.S. Army Colonel, “which is key to executing plans, getting ready to go into theater, and doing the things we have to do in wartime.”

Appleget said students in the BAWC learn the scope, objectives and issues of the game as well as key constraints, limitations, and assumptions. He went on to say that learning wargaming is a crucial part of the military planning process, important to the future of the II MEF and ultimately, the Marine Corps’ implementation of Force Design 2030.

“Force Design 2030 has given us the Commandant’s vision,” said U.S. Marine Corps Lt. Col. Thomas Driscoll, the II MEF deputy assistant chief of staff for plans, “what the service will be able to provide in the future fight in terms of capabilities in certain conditions and certain capacities, integrated with the naval force”

Wargaming was an important contribution to the Force Design 2030 Annual Update published in May, and is included in the directed actions and areas of further analysis. Wargaming gives the Marine Corps insight into future operations and new concepts being developed so the force can better anticipate how to adapt to challenges that may be overlooked. “If we don't utilize wargaming, we're much more likely to be surprised on the battlefield with decisions that we don't anticipate,” said Appleget.

It is important for II MEF personnel who have a key role in decision making or planning processes to know how to wargame properly and use it as a tool benefitting the force in the long term, especially as the Marine Corps postures to compete and win against adversaries of the 21st century.

“II MEF is building its wargaming capability,” said U.S. Marine Corps Maj. Daniel Yurkovich, II MEF modeling and simulations officer, “it helps us to take generally broad questions and distill them down into detailed questions in which we can then place players into an experiential learning environment to answer the questions that senior leaders may have.”

Wargaming is also a critical part of the Marine Corps Campaign of Learning, Marines can continue to learn in the fleet as they apply maneuver warfare tactics as well as scenarios that assess stand-in force concepts such as expeditionary amphibious base operations.

“As a student, I've learned a better understanding of how to think through designing a wargame which then will allow all of us students to be able to take this to future situations and replicate and build out new and different wargames,” said Driscoll.

[DVIDS - News - II MEF Marines Apply Future Concepts in Wargaming \(dvidshub.net\)](#)

[II MEF Marines Apply Future Concepts in Wargaming > United States Marine Corps Flagship > News Display](#)

[Return to Index](#)

Defense Analysis Professor Awarded Oxford Dissertation Prize

(Navy.mil 28 July 22) ... Matthew Schehl

(NPS.edu 28 July 22) ... Matthew Schehl

A **Naval Postgraduate School** (NPS) professor has been awarded the Society for the History of American Foreign Relations' (SHAFR) Oxford University Press USA Dissertation Prize in International History.

Thomas Jamison, assistant professor in the Defense Analysis Department, received the prestigious biennial award in June for his dissertation exploring limited maritime conflicts in the Pacific and their effects on the creation of the U.S. “New Navy,” the U.S. military’s first substantive peacetime expansion, from 1882 to 1898.

“Given the quality of the work in the field of international and diplomatic history, the recognition is at once gratifying and deeply humbling,” Jamison said. “In 2021, I received the Society for Military History's Coffman Prize for best dissertation in military history; this Oxford University Press prize on top of the Coffman is a better coda for the six years it took me to complete my dissertation than I could have hoped for.”

“It's also a good reminder to get back to work on turning the dissertation into a book,” he added.



The Oxford University Press USA Dissertation Prize in International History recognizes the best dissertation by a rising historian in the field of international history.

The dissertation must have been completed within the previous two calendar years and must be multinational in framing and scope, preferably with a multilingual source base.

“In endowing this prize, Oxford University Press hopes to recognize the stellar work of junior scholars and to highlight works that have not been the focus of area studies and other regional and national approaches,” according to SHAFR’s website.

Jamison’s dissertation, entitled “Pacific Wars: Peripheral Conflict and the Making of the U.S. ‘New Navy,’ 1865-1897,” critically examines the transnational nature of limited maritime conflicts in the Pacific and their impact on U.S. policy.

In approaching the Pacific as a coherent whole rather than through conventional geographic and disciplinary boundaries, the dissertation identifies a nearly continuous series of industrial wars and naval races and their disproportionate influence in the formation of the New Navy.

“It does so in an effort to understand how technological shifts and regional wars created opportunities for competition and exchange between the industrialized ‘core’ of the North Atlantic and the ‘semi-peripheral’ Pacific world,” Jamison wrote.

Jamison’s research for the dissertation required him to study literary Chinese, the classical language used in official circles in Qing China. It took him to four continents and included work in New York, London, Newport, Newcastle, Liverpool, Beijing, Santiago de Chile, Valparaiso, Lima and “a few other places besides.”

He finds his home at NPS, however, and the award is a reflection of the caliber of young scholars joining NPS faculty.

“In the last few years, some of the most promising junior scholars in the fields of history and security studies have found homes at institutions like NPS,” he said. “For folks interested in the intersections of policy and history, it is pretty much ideal.”

[Defense Analysis Professor Awarded Oxford Dissertation Prize - Naval Postgraduate School \(nps.edu\)](#)

[Defense Analysis Professor Awarded Oxford Dissertation Prize > United States Navy > News-Stories](#)

[Return to Index](#)

Helping Partners Help Themselves Through Grassroots Innovation

(Small Wars Journal 30 July 22) ... Ernest John C. Jadloc, Leo Blanken and Kevin Jones

Security cooperation with partner nations is increasingly important for the success of American security policy in an era of strategic competition. After twenty years of large-scale counterinsurgency operations, during which security cooperation largely consisted of the rapid building of (often inappropriate) “mirror imaged” partner forces, new thinking is required. We provide a novel and scalable mechanism for partner force enablement efforts here: grassroots innovation among partner force personnel through the leveraging of commercial-off-the-shelf (COTS) technologies. More specifically, we show the potential for partner forces to create affordable, sustainable, and tailored solutions to their own capability gaps as a mechanism for better partnering.

We begin our story with a real operational challenge for an important partner force in the Pacific region. The southern Philippines is largely covered with dense vegetation. Although Armed Forces of the Philippines (AFP) ground troops are equipped with identification-friend-or-foe (IFF) devices, the tree cover can prevent the identification of these troops by friendly aircraft. The situation is aggravated when firefights happen at night, in vegetated areas, and when troops seek concealment and cover while engaged with the enemy. This all presents significant challenges for Filipino Air Force pilots to distinguish friend from foe when conducting close air support (CAS) operations, resulting in the significant potential for fratricide. Given this challenge, AFP ground troops need to be able to deploy a visual reference for pilots above the canopy of vegetation while they remain concealed physically. Moreover, this visual



reference should not have a direct back azimuth to the soldier's specific location. The absence of such visual reference may result in the delay of pilots positively identifying the friendly forces, provide additional time for enemy action, unnecessarily expose aircraft to enemy fire, and potentially cause fratricide. Our co-author, Colonel Jadloc, has lived this experience. In a recent operation, he led units of the Philippine Army to neutralize a terrorist group who were positioned in rough and highly vegetated terrain. Attack helicopters were sent to support his troops. The helicopter pilots, however, had trouble demarcating friendly from enemy forces on the ground. This delayed their ability to provide supporting fires, as it took considerable radio conversation and repositioning of troops before friendly force location was clarified.

In response to this operational challenge, Colonel Jadloc has prototyped a solution to this capability gap while he earned a Master's degree at the **Naval Postgraduate School**. His Maneuverable Aerial Identification Friend-or-Foe (MAIFF) system uses a quadcopter drone mounted with infrared lamp and other electronic and non-electronic parts. The illumination provided by the lamp is invisible to the naked eye and can only be seen using a night vision device. It can operate for six hours and is visible up to at least one mile away. The lamp's mounting design is stable and versatile, enabling the lamp and the drone to fly as one unit. The design parameters of this project sought to create an affordable and sustainable solution, utilizing COTS components, and are tailored specifically to the needs of the AFP ground and air forces. The sub-250 gram drone used in this prototype is a combination of hobby parts that are available anywhere in the world along with a few bespoke parts that were designed and manufactured in an on-campus maker-space. Quad-copter designs such as this are very forgiving when it comes to configuration changes – substitutions to the motors, propellers, camera gear, et cetera. This improves the chances of producing and maintaining these systems as the availability of COTS materials in the marketplace change over time. Total cost of the materials for these airborne platforms starts at around \$100 and can include features like starlight cameras (providing near IR visibility at night) for about \$30. For an additional \$50 or so, high-level autonomy can be introduced, which allows for waypoint navigation, position hold, and RF-free operation for stealth.

Colonel Jadloc's efforts to prototype this innovative solution were based on his access to the expertise and facilities at the **Naval Postgraduate School**. These included the time and space to tinker, prototype, and fabricate in the school's maker-space (the "Robo-Dojo"), access to a wide-range of faculty expertise from multiple departments on campus, and the leveraging of COTS components to produce an effective and affordable military capability. Further, his project built directly upon the research project of a previous Filipino military officer, Major Romulo Dimayuga, whose own innovation project inspired the design of the drone upon which the MAIFF system is mounted. This cumulative evolution among projects by Filipino students at the **Naval Postgraduate School** serves to maintain continuity, increases the likelihood of innovation adoption, and serves to build a network of innovators among AFP personnel over time.

What does the story of Colonel Jadloc and Major Dimayuga tell us about the future of building partner capacity writ large? It is a story of opportunity for improving American security assistance efforts in an era of rapidly changing technology, strategic competition, and constrained resources through the enablement of grassroots innovation among partner force personnel. Given that not all partner force personnel enjoy access to graduate research opportunities, how could their experiences be scaled up to achieve strategic impact? We argue that there would be four necessary components to scaling this concept:

The first component is access to subject matter expertise. Colonel Jadloc and Major Dimayuga benefitted from pursuing their work while graduate students at the **Naval Postgraduate School**, as this gave them access to wide range of engineering and applied science expertise. Scaling up these efforts by partner force personnel within their home countries would provide new opportunities to leverage local academic and private sector expertise to fulfill this need, thereby energizing a wider web of relationships and deepening the host nation's own innovation ecosystems.

The second component is synchronization with inter-agency partners relevant to economic and technical development in the partner nation. This is "a feature not a bug," as it would invigorate inter-agency efforts to engage the host nation across multiple socio-technical domains. This knitting together of



a wider array of American capabilities and authorities would not only improve the number and quality of innovation projects but would broaden and deepen the relationships between American actors and the host nation.

The third component is deconflicting this activity with existing security cooperation efforts and foreign military sales. It would be important to convey to all actors involved that such grassroots innovation efforts may not be appropriate for all the partner force's needs and that existing mechanisms of support would not be threatened or undercut. If planned and executed thoughtfully, these efforts should, in fact improve existing security cooperation efforts by giving a greater voice to partner force personnel in articulating their needs and concerns.

The final component is embedding grassroots partner force innovation into the doctrine of those units tasked with building partner capacity. US Army Special Operations Forces (ARSOF) and Security Force Assistance Brigades (SFABs) would be the ideal entities to spearhead the implementation of this concept. Existing capabilities, such as the US Army Special Forces (SF) Groups' Technical Information Support Companies (TISCs), could be utilized as springboards to pilot and prototype these activities for the broader units.

[Helping Partners Help Themselves Through Grassroots Innovation | Small Wars Journal](#)

[Return to Index](#)

ALUMNI:

Navy Supply Corps School Holds Change of Command

(DVIDS 25 July 22) ... PO2 Derien Luce

Family, staff, students and guests witnessed a time-honored military tradition, the change of command, at the Navy Supply Corps School (NSCS) in Newport, Rhode Island, July 22, 2022.

Chief of the Supply Corps Rear Adm. Peter G. Stamatopoulos presided over the ceremony where Capt. Jason C. Warner relieved Capt. Michael A. York as NSCS' commanding officer.

Warner, a native of Warren, Ohio, earned his commission in 1998 through Officer Candidate School. He earned a Master of Business Administration in Supply Chain Management from the **Naval Postgraduate School** in 2008.

At sea, Warner was a division officer aboard USS Enterprise (CVN 65), the pre-commissioning supply officer aboard USS Mesa Verde (LPD 19) and supply officer aboard USS John C. Stennis (CVN 74). He has served in a wide range of shore and joint staff assignments with the U.S. Naval Academy, Naval Supply Systems Command, the Office of the Chief of Naval Operations Programming Division (N80), Defense Logistics Agency Land and Maritime, and The Joint Chiefs of Staff. As a Navy Individual Augmentee, he was the manpower and personnel branch chief (J-1) and theater-wide construction deputy branch chief of the Joint Contracting Command – Iraq/Afghanistan, supporting Operations Enduring Freedom and Iraqi Freedom.

Warner's last assignment was as the director of operations and plans, Defense Logistics Agency – Troop Support, in Philadelphia, Pennsylvania.

NSCS, located at Naval Station Newport, Rhode Island, offers a range of career-long training for the Supply Corps community. For more on NSCS, visit <https://www.netc.navy.mil/NSCS/> and <https://www.facebook.com/NavySupplyCorpsSchool>.

[DVIDS - News - Navy Supply Corps School Holds Change of Command \(dvidshub.net\)](#)

[Return to Index](#)



Hascall Tackles New VP Role On Dulles Corridor Metrorail Project

(Patch 26 July 22) ... Michael O'Connell

Andrew "Drew" Hascall has been named the new vice president for engineering support and the Dulles Corridor Metrorail Project, according to a release from the Metropolitan Washington Airports Authority.

After serving nearly 28 years as a Civil Engineer Corps officer in the U.S. Navy, Hascall joined MWA in August 2020 as a deputy vice president in the Office of Engineering. In that role, he was responsible for the authority's design and planning functions. One the last year, he was also the acting senior vice president for the Dulles Corridor Metrorail Project.

While in the Navy, Hascall served as the operations officer for the U.S. Naval Facilities Engineering Command. In that role, he oversaw facility planning, design, construction and operations services for both the Navy and U.S. Marine Corps worldwide, according to the release.

Other large-scale construction projects Hascall worked on included the Walter Reed National Military Medical Center Addition and the Presidential Aircraft Replacement Hangar. In addition to assisting in Hurricane Katrina recovery efforts, he also oversaw U.S. military construction projects in northern Italy in 2020.

A graduate of the Illinois Institute of Technology with a bachelor's degree in mechanical engineering, Hascall also earned a master's degree in business administration (finance) from the **Naval Postgraduate School** and completed the Business Executive Program at the University of Virginia's Darden School, according to the release.

[DVIDS - News - Navy Supply Corps School Holds Change of Command \(dvidshub.net\)](#)

[Return to Index](#)

Sea Control 366 – Cybersecurity and Strategic Sealift with Jason Iieto (Audio Interview)

(CIMSEC 28 July 22) ... Jared Samuelson

Jason Iieto joins us to discuss cybersecurity, cyber warfare, and the potential impact on strategic sealift capability.

Commander Jason Iieto is a supply officer in the US Navy. He earned a master of science in operations research from the **Naval Postgraduate School** in 2011 and is currently pursuing a graduate degree at the Naval War College. He has conducted a directed research project under the Cyber and Innovation Policy Institute (CIPI) Vice Admiral Samuel L. Gravely Jr. Program.

[Sea Control 366 – Cybersecurity and Strategic Sealift with Jason Iieto | Center for International Maritime Security \(cimsec.org\)](#)

[Return to Index](#)

Artel, LLC Taps Nigel Sutton to Accelerate Artel Growth

(Yahoo! 28 July 22)

Artel, LLC, a leading supplier of classified secure government connectivity, today announced Nigel Sutton has joined the company as Senior Vice President, Business Development. In this new role, Nigel will be responsible for Artel's move to expand into adjacent markets. "We are thrilled Nigel joined the Artel team," said Paul Domorski, Artel Chief Executive Officer. "His extensive knowledge and experience make him the right leader to help accelerate our growth. Network convergence with best of breed solutions is enabling work from anywhere. Customers don't want to be tied to one platform; they want connectivity as a service. Artel is perfectly positioned to deliver it."

Nigel is an accomplished Senior Business & Operations Executive with more than 35 years of success across aerospace, defense, and manufacturing industries. Throughout his executive career, Mr. Sutton has held leadership positions at companies including General Motors Defense, Orbital ATK, AeroVironment,



and Raytheon. As VP of Business Development for General Motors Defense, he stood up and developed a capture management organization for new business growth. Since 2015 Nigel was the VP of International Business/Defense Systems Group for Orbital ATK, a defense avionics and armament manufacturer. He led operations, new program strategy, and corporate development. This followed his role as VP of Unmanned Air Systems International Business Division with AeroVironment from 2013 to 2015, and multiple senior roles with Raytheon from 2005 to 2013. As Director of International Business Development & Operations for Raytheon from 2007 to 2012, he oversaw bookings of more than \$7.5 billion and coordinated export control policy with trade organizations in Washington D.C. He previously served 18 years in the U.S. Navy, rising to Program Director of Engineering. He has been responsible for executing international equity investments and global partner alliances for aircraft and weapon system program management, and has 23 years of professional leadership experience in the Department of Defense.

Nigel holds a BS in Computer Science from Park College, an MS in Aviation Systems from the University of Tennessee, Certification in Aircraft/Avionics Flight Test from the U.S. Navy Test Pilot School, an MS in Aerospace Engineering/Avionics from the **Naval Postgraduate School**, an MBA from the Florida Institute of Technology, an Executive Masters in International Relations, a Certificate of Advanced Study in Public Administration from Syracuse University. As a seasoned Board Member, he has held board positions with organizations including Orbital ATK Middle East, World Affairs Councils of America, Precision Strike Association, Alliant Techsystems Operations Saudi Arabia, and the US-ASEAN Business Council.

[Artel, LLC taps Nigel Sutton to accelerate Artel Growth \(yahoo.com\)](#)

[Return to Index](#)

