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"The Invention of Printing," anonymous artist, from print series *Nova Reperta*, design by Johannes Stradanus, circa 1590 (Courtesy Museum Plantin-Moretus)

Executive Summary

One of the driving factors in the publishing world since the widespread use of the Internet is digital content delivery. *Joint Force Quarterly* readers will note that *JFQ*—the journal of the Chairman of the Joint Chiefs of Staff—has been available digitally since summer 1997, with *JFQ* 16. We provide an online version of every issue of *JFQ* on our website, publishing this version in advance of the print copies we send out. In the past decade, we have seen

an explosive growth in *JFQ*'s online viewership, which is currently at more than half a million views per issue. A bit of "inside *JFQ* baseball" might help you see what makes up the team of teams behind the journal and what it takes to deliver today on General Colin Powell's mission statement from the inaugural issue of *JFQ* back in 1993.

Each issue of *JFQ* reflects the results of a double-blind peer review (the industry standard in academia) of author submissions, of which we receive some

300+ annually. Once the reviews are in, we select the best for publication, some 12 to 16 articles per issue. The NDU Press team professionally copyedits, fact-checks, and proofreads, and then hands over those edited articles to colleagues at the Government Publishing Office (GPO). The GPO Creative Services division designs the issue, and Quality Control reviews the journal for printing. GPO Contracting next finds a vendor for external printing and distribution. The selected contractor does the rest of the

work to print and distribute several thousand print copies in the United States and abroad, while the NDU Press team posts the edition online.

As you might suspect, the cost to perform this quarterly process has not remained static over the past 113 issues and some 31 years and counting. In 1993, *JFQ* distributed some 33,800 copies in print worldwide. Our most recent figures run approximately a third of that amount. While the NDU Press team has implemented a number of both design and physical changes to *JFQ* in recent years to keep costs as low as possible, I am now taking steps to ensure the long-term viability of the journal in line with best practices within the publishing industry and especially the small but powerful professional military education (PME) presses that operate on the taxpayers' dollar.

Beginning with this issue and continuing through the next several, we will be reducing the number of print copies of the journal. As you might expect, we are instituting a "cleanup" of our mailing lists for both individual and bulk print subscriptions to ensure that we are sending these copies to those who will read them. In doing so, we will dramatically reduce our overseas mailings, which are where the bulk of the rising costs to distribute *JFQ* have been in recent years. We will do our best to honor individual requests for print subscriptions. If you are not seeing print copies of *JFQ* and your mission requires them, let us know and we will do our best to accommodate you. Our online version is print-ready as needed through local means. This digital version makes the same world-class content available to you 24/7. The combination of our online version and a leaner mailing list for print copies provides a more sustainable and responsible production model for the 21st century.

This issue's Forum leans into current trends in technology and defense. Adding to the discussions on all-domain warfare, Benjamin Selzer argues that finding ways to better connect systems across the Services through machine learning will provide results previously not achievable and will put system complexity to

work for the joint force. Looking at applications of biotechnology to military supply chains, Henry Gibbons and Anna Crumbley see a place for the revolution now happening in this field to improve our ability to speed supplies to the front lines. Providing an emerging take on the war in Ukraine, Zachary Kallenborn and Marcel Plichta describe potential drone defenses that deserve consideration.

Adding to the round of voices in *JFQ* on joint and combined warfighting that was spurred by General Mark Milley's article "Strategic Inflection Point" in *JFQ* 110 (3rd Quarter 2023), Peter Rowell and Joe Fossey offer the United Kingdom's approach to future warfighting.

Our JPME Today section offers three different looks at where our classrooms are headed or possibly need to go. Always a constant issue across the colleges is what amount of content is devoted to history, which Thomas Duffy believes deserves more attention as a foundational element. From the Joint Forces Staff College, Charles Davis, Jeffrey Turner, and Mary Bell offer us a solid dose of jointness in their recommendations for joint warfighter development. From NDU's Center for the Study of Weapons of Mass Destruction, Justin Anderson and Paige Price suggest several ways to add experimentation to PME courses, as the Chairman has called for professional military education to do.

We offer two areas to consider in Commentary. After the massive natural disaster that Hurricane Maria brought to Puerto Rico, Aaron Horwood, the late Juan Vitali, Andrew Thueme, Rুদ্ধie Ibanez, and Travis Knight recommend that the Department of Defense develop large-scale microgrids for electricity needs under austere conditions. Adding their considerations of another region affected by climate change, John Kelley, Christopher Sarton, Scott Curtice, and Charles York survey the possibilities of how we can best approach Antarctica as a potential competitive space.

In Features, we have three equally important issues to consider. Looking to the ultimate high ground, Brian Britt investigates the debate over the draft Treaty on Prevention of the Placement of Weapons

in Outer Space and of the Threat or Use of Force Against Outer Space Objects (commonly referred to as the PPWT). Back here on Earth, Joseph McGiffin tries to help us find our way from traditional command and control to the ways the joint force is expected to employ forces through the Joint All-Domain Command and Control concept. Seeing the center of gravity in our acquisition systems, Matthew Cook targets changes to policies and platforms to better enable our acquisition professionals.

Our Recall article takes us back to World War II, as Robert Burrell describes the challenges encountered in the fighting in the Philippines. We also offer three new book reviews. Finally, Christopher Bolton and Matthew Prescott unravel joint doctrine on a commander's critical information requirements for better decisionmaking and synchronization.

JFQ is certainly the Chairman's journal, but it exists solely to give voice to you and your ideas on the joint force, jointness in general, and how best to fight and win our Nation's wars and secure the peace. For over 30 years, the best and brightest among us have sustained the dialogue within these pages, whether physical or virtual. Help us continue this great tradition by sending us your articles and adding to the growing body of knowledge that is *Joint Force Quarterly*. *JFQ*

WILLIAM T. ELIASON
Editor in Chief