LETTER FROM THE EDITOR

Dear Reader,

Over the past six months, the world has witnessed a profusion of announcements of advances in artificial intelligence by leading global technology firms. The propagation of generative artificial intelligence in the form of chatbots, video, and graphics is another example of the speed with which our national security systems must adapt and change to realities posed by technology and innovation. But to be effective and meaningful, implementing such rapid change demands a close examination of existing processes and organizational cultures to determine what is best retained and what must evolve. Without such examination, we run the risk of embarking on transformation that ignores long-standing lessons learned, leading to the repetition of past mistakes. Above all, technological advances in warfare may even more urgently require that warfighters, serving alone or as humans-in-the-loop of a technological partner, further develop their human capabilities such as empathy and retain key elements of human autonomy in the battlespace.

The first forum in our Spring issue, Artificial Intelligence, Machine Learning, and Digitalization in the Military, leads with an article by Ayla Reed. She argues that quantifying uncertainty in artificial intelligence and machine learning through a process of metadata tagging, bound by military standards, will enable a practical digital implementation of Boyd's OODA loop that also addresses the ethical dilemmas posed by their use. In the second article, Robert Newton and Robert Masaitis present their findings from a study using a deep neural network to improve the efficiency of Air Force Special Operations Command screening and selection boards, creating time for more effective collective consideration of candidates. The forum concludes with an article by Paul van Fenema and Pieter Soldaat. They consider the impacts of digital innovation on the battlefield and propose a reframing of the approach to such technological investments to improve human-machine processes and practices across the boundaries of permissive and nonpermissive environments.

In our second forum, Elements of Future Warfare, Thomas Cantrell examines Joint all-domain command and control from a pyramid framework in which technology and command and control are supported by a foundational cultural layer. For this initiative to be successful, the Air Force must can transform this layer now, focusing on domains, partners, the kill web, and connectivity. Jennifer Rudolph concludes this forum and the issue with findings and recommendations from an Air National Guard study on empathy. The Department of the Air Force can help Airmen prepare for the demands of future warfare by incorporating the skill of empathetic communication into officer and enlisted training programs at multiple levels throughout the service.

Thank you for taking the time to read through our Spring 2023 issue.

~The Editor