

Enhancing Defense Visionary Capabilities: History, Requirements, Analysis and New Technologies

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ABSTRACT

Military history is replete with expositions of great visionaries and of the impact they had on their time and, often, for centuries after that. Advances in technology and in analysis have raised several issues concerning both how view those historical figures and how to best use the emerging capabilities to both assess that visionary ability and even to enhance it in current and future defense leaders. The authors take a multidisciplinary approach to these issues, representing as they do, government training, military service, academic research, and secondary education practice. The paper first addresses the not inconsiderable issue of what is meant by the term “visionary,” then moves on to review the names and impacts of a range of historical military visionaries, with a few salient biographical insights into what may have engendered the visionary aptitudes in the named individuals. The paper then briefly reviews current pedagogical theory and practice that may be applicable to increasing the visionary capabilities at varying stages in the development of military leadership. The authors then recount their experience in both military and civilian learning environments, utilizing some of the pedagogies mentioned above. As part of their analysis, the authors consider three issues: the benefit to the defense of the nation to be realized by increasing “visionariness,” the optimal number of visionaries for a given defense structure, and the potential for actually increasing this capacity. The authors discuss the alternative of focusing more on improving the recognition of persons who are naturally predisposed to visionary insights. The paper then offers emerging technological capabilities that would be instrumental in implementation of the listed training approaches. They report on their successes in comparable environments and adduce results data to support their contentions. The paper closes with a discussion of current research and the promise represented by future initiatives.

ABOUT THE AUTHORS

Dan M. Davis is a consultant for the University of Southern California, focusing on large-scale distributed DoD simulations. Prior to his retirement, for a decade he was the Director of USC’s JESPP Project for JFCOM. In the ‘90’s, as the Assistant Director of Caltech’s Center for Advanced Computing Research, he managed Synthetic Forces Express, bringing HPC to DoD simulations. Prior experience includes serving as a Director at the Maui High Performance Computing Center and as a Software Engineer at the Jet Propulsion Laboratory and Martin Marietta. He has served as the Chairman of the Coalition of Academic Supercomputing Centers and has taught at the undergraduate and graduate levels. As early as 1971, Dan was writing programs in FORTRAN on one of Seymour Cray’s CDC 6500’s. He saw duty in Vietnam as a USMC Cryptologist and retired as a Commander, Cryptologic Specialty, U.S.N.R. He received B.A. and J.D. degrees from the University of Colorado in Boulder.

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