

Rethinking Leadership in the Context of Multi-Domain Operations

Vitor Conceição^{1,2} Pedro B. Água¹

¹CINAV, Escola Naval, Instituto Universitário Militar, 2810-001 Almada, Portugal

²Chalmers University of Technology, SE - 412 96 Göteborg, Sweden

Military Leadership, Command and Control have increasingly adapted throughout times. These adaptations are being fostered by the fast pacing technological innovations concerning a broad spectrum of Emergent Disruptive Technologies (EDT). Therefore, modern warfare leadership faces challenges that will hardly be solved by the traditional hierarchical or even matrix way of thinking, also due to a growing number of multiple scales domains integration, fast dynamics, and huge cognition requirements beyond human performance capabilities. For instance, Artificial Intelligence (AI) is already within the decision loop at different levels to help mitigate the impacts of hypersonic weapons and other complex operations, as would be the case of the ones involving drone swarms.

The question is when will the human be out of the decision loop, and how will the leadership of such sociotechnical systems be affected?

Considering the five warfare domains – army, navy, air force, space and cyberspace – it is legitimate to place questions such as:

- In the context of Multi-Domain Operations (MDO), how should fast situational dynamics and variability be harmonised with the distributed decision-making processes?;
- Is there any one domain best placed to be the overall Mastermind of a whole Multi-Domain Operation?;
- Would it be possible to have a coherent decision model across the domains?

These questions are far from trivial when one considers the current sociotechnical system dynamics regarding military affairs and all the technological developments humankind has achieved so far, where the increasing complexity is at the core of any human endeavour.

To our understanding, it urges us to retake control of this free-running train, which demands further understanding of the decision-making and leadership processes involved in this new paradigm. To deal with such recurrent complexity within operations, we must embrace a decision-making framework sensitive to these properties, such as the *Cynefin* one proposed by David Snowden and Mary Boone¹.

¹ Snowden, D., and Boone, M.E. (2007). A Leader's Framework for Decision Making. *Harvard Business Review*. Nov.