Ms. Anne Elise Reiffenstein, Royal Roads University, Command Rewired: AI, Distributed Cognition, and the Reconfiguration of Military Leadership

As military operations increasingly incorporate artificial intelligence (AI) and autonomous systems, the traditional human-centred model of command needs to be reconfigured. This paper applies the Pigeau-McCann command model, describing command as the balanced integration of competence, authority, and responsibility, to examine how human-machine teaming (HMT) alters the nature of military decision-making. Drawing on the theory of distributed cognition, I argue that command is no longer solely a human function but a socio-technical process distributed across commanders, operators, AI systems, and algorithmic tools. In this context, competence is redefined as tactical knowledge with the ability to supervise, interpret, and integrate machine-generated outputs. Authority is influenced by the persuasive force of algorithmic recommendations and the opaqueness of AI logic. Once clearly held by human commanders, responsibility becomes diffused, raising significant challenges for accountability and ethical oversight. Military command doctrine must evolve to maintain operational effectiveness and ethical decision-making in AI-enabled environments. Command in the era of human-machine teaming requires more than hierarchical authority—it requires leaders capable of navigating distributed decision environments and ethically governing intelligent systems.