Mr Thomas Slensvik, Norwegian Defence University College, Anders Sookermany, Reimagining Joint Operational Planning: Systems Oriented Design and AI as Tools for Navigating Military Complexity

Contemporary military operations are increasingly shaped by a fragmenting world order, characterized by hybrid threats, volatile actors, and deep systemic interdependencies. This evolving operational environment challenges traditional planning methodologies rooted in linear doctrine. In response, this paper explores how Systems Oriented Design (SOD) (Sevaldson, 2022), supported by artificial intelligence (AI), can serve as a conceptual and methodological alternative within Joint Operational Planning. The empirical foundation of this paper stems from a comparative experiment that will be conducted during a three-week Joint Operational Planning course at the Norwegian Defence University College (NDUC), co-organized with the Swedish Defence University (SDU). As part of a NATO-style HQ simulation, three J5 planning groups are formed: one adhering to traditional doctrinal procedures, another combining doctrine with AI support, and a third employing SOD methodology with selected AI tools. This paper will focus on the latter—an autonomous J5 cell tasked with long-term planning in out-of-area operation using systems-oriented frameworks for situational understanding, problem structuring, and operational design. Building on insights from prior experimentations with SOD in military educational contexts (Slensvik, 2023; Slensvik & Sookermany, 2024), this study anticipates that design-led planning may demand a different cognitive and cultural orientation. Rather than merely adjusting existing processes, SOD may challenge the group's assumptions about what constitutes a military problem—and how such problems might be framed, engaged, or redefined (Heltberg & Dahl, 2019). Key questions include: How might SOD influence planning outcomes and the articulation of operational art? To what extent does its use require not just methodological adaptation, but a mindset shift within the JOPG—from problem-solving to systemic sensemaking (Ryan, 2016)? And how might AI support (rather than displace) this shift?The paper will analyze these questions through a comparative, exploratory lens, aiming to contribute to broader discussions in war studies about the evolution of planning cultures. In confronting operational complexity with alternative logics and tools, this experiment explores how militaries might think and plan differently amid the complexities of a fragmented and uncertain world.

References

Heltberg, T., & Dahl, K. S. (2019). Course of Action Development – Brainstorm or Brickstorm? Scandinavian Journal of Military Studies, 2(1), 165-177. https://doi.org/10.31374/sjms.30

Ryan, A. J. (2016, December 10th). A Personal Reflection on Introducing Design to the U.S. Army. The Overlap. https://medium.com/the-overlap/a-personal-reflection-on-introducing-design-to-the-u-s-army-3f8bd76adcb2

Sevaldson, B. (2022). Designing Complexity: The Methodology and Practice of Systems Oriented Design. Common Ground Research Networks. https://doi.org/https://doi.org/10.18848/978-1-86335-262-8/CGP

Slensvik, T. (2023). Introducing Military Art to Interventions in Systems Oriented Design. Proceedings of Relating Systems Thinking and Design, RSD12, 11. https://rsdsymposium.org/military-art-in-systems-oriented-design

Slensvik, T., & Sookermany, A. M. (2024). Unveiling the Two Stories: Contrasting Approaches to Systems Oriented Design in Design Universities and Military Staff Colleges RSD13: Rivers of Conversations, Oslo.