Looking Beyond Traditional Tools: Systems Thinking for Adaptive Decision-Making and Complex Problem Solving in the Nepali Army

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Abstract

This paper underscores the significance of Systems Thinking for adaptive military decision-making and problem-solving in complex operational environments. By using analytical and descriptive approach, this paper reiterates the fact that traditional approaches often fall short to address the interconnected nature of contemporary complex security challenges. Therefore, Systems Thinking presents holistic tools and frameworks to enhance situational understanding, anticipate second- and third-order effects, and foster organizational agility. It also discusses key principles, practical tools, identifies cognitive biases and institutional barriers and recommends useful measures to deal with it in the Nepali Army's context. Furthermore, it concludes that Systems Thinking emerges as an institutional necessity for enhancing skills for decision making and problem solving given the Nepali Army's formal adoption of IOPP and TPP.

Keywords

Bias, Cognitive Tools, Complex Adaptive System, Decision Making Framework, Heuristics and Fallacies, Problem Solving, Systems Thinking

Introduction

Today's military commanders and decision-makers no longer just traverse threats-they must navigate systems of threats, where every action crisscross through political, social, and informational domains. This is because the modern operational environment is increasingly shaped by Volatility, Uncertainty, Complexity, and Ambiguity (VUCA)-conditions that challenge conventional military thinking and demand more adaptive, integrative approaches (Senge, 2006). Therefore, traditional decision-making models,

rooted in linear logic and doctrinal rigidity, often may fail in addressing the complicated nature of contemporary problems. This is also particularly true for institutions like the Nepali Army, which operates in a multidimensional security environment encompassing both traditional and non-traditional threats, including external and internal security challenges, disaster response, peace operations, etc. In such contexts, the risk of cognitive rigidity-where familiar tools are applied extensively-can lead to strategic errors.

The objective of this paper is to analyze why the institutions like the Nepali Army needs to embrace and promote the use of cognitive tools like Systems Thinking? This paper argues that the contemporary threats are becoming more complex, hybrid, adaptive, nonlinear, and deeply interconnected. Therefore, cognitive tools like Systems Thinking can be an effective supporting tool for the Nepali Army leaders, planners, and decision-makers to effectively operate in complex environment. Moreover, with the Integrated Operation Planning Process (IOPP) and the Tactical Planning Process (TPP) serving as the Army's primary frameworks for decision-making and problem-solving, the need for cognitive thinking tools-particularly critical and Systems Thinking-has become increasingly vital. But the Nepali Army lacks a sufficient amount of systematic education and training in these aspects. Therefore, it is necessary for the Nepali Army to promote this aspect in Professional Military Education (PME) at all levels.

To support the arguments, this study adopts a descriptive and analytical approach. Positioned within a qualitative, interpretivist paradigm, the study seeks to draw conclusion based on study of existing ideas and subjective reflections. While this paper does not claim to introduce significantly new ideas to the field, it informs the readers that by incorporating Systems Thinking cognitive frameworks, the Nepali Army can strengthen the individual and organizational insight, logical planning, decision-making skill, and institutional agility which are crucial for enhancing operational efficiency of the Nepali Army.

The Nature of Contemporary Problems: Complex Adaptive Systems (CAS)

Today's security issues often exhibit the characteristics of CAS-dynamic and interconnected networks composed of numerous agents (e.g., individuals, groups, technologies, and institutions). In CAS, interactions among agents produce evolving behaviors, patterns, and outcomes that cannot be understood by simply examining individual components in isolation. Furthermore, adversaries in modern conflicts also can be interpreted through a systems-thinking lens, highlighting complex interactions, ambiguity, and adaptive strategies (Bosio, 2022). Therefore, it is logical to conclude that

contemporary military operations unfold across multiple domains, including cyber, urban, hybrid threats, and irregular warfare etc.**,** each bringing a unique mix of political, economic, social, ethical, and technological complexities.

Relationships among actors are adaptive and evolutionary in modern operational environment, because of which, traditional reductionist approaches in problem solving are insufficient. Behaviors of actors of contemporary issues continuously evolve and adapt in response to both environmental changes and one another (Holland, 2014; Moffat, 2003). Therefore, decision makers and leaders must cultivate an understanding of cognitive tools like systems dynamics, appreciating how small interventions can reverberate through interconnected political, social, informational, and military subsystems. However, there are several factors which prevents effective implementation of such cognitive tools in existing environment of military institutions.

Environment in Military Institutions

Decision-making in military organizations, even when guided by structured processes, remains prone to a range of cognitive biases. Biases are systematic errors in thinking that can distort perception, misframe problems, and lead to defective judgments. These biases are particularly dangerous in high-stakes, time-sensitive environments where uncertainty and ambiguity are prevalent (Rodman, Hardy, & McClary, 2015, p. 12). Cognitive biases in military decision-making may often be amplified by the structural and cultural characteristics of military organizations. Military operations frequently demand rapid, decisive action favoring intuitive, experience-based shortcuts in decision making that may increase proneness to bias. Some common cognitive biases in military contexts are:

- **Anchoring Bias.** It is one of the most common biases and occurs when decision-makers overly depend on an initial piece of information. In military operations, this bias can cause commanders to anchor strategic plans on early estimates, even after receiving more accurate information. Such fixation can distort operational decisions and risk mission effectiveness (Li et al., 2022).

- **Availability Heuristic.** This is the tendency to rely on recent, vivid, or emotionally salient experiences rather than objective data. For example, a recent ambush might disproportionately influence threat assessments, even when broader intelligence indicates a declining threat (Rodman, Hardy, & McClary, 2015).

- **Confirmation Bias.** The tendency to seek out or give more weight to information that confirms pre-existing beliefs or assumptions, while ignoring contradictory evidence. In military contexts, this bias can reinforce flawed operational assessments or strategic misjudgments (Rodman, Hardy, & McClary, 2015).

- **Groupthink.** It is defined as a desire for consensus within a unit or group that can suppress dissenting opinions and critical analysis, potentially resulting in unchallenged and flawed decisions (Rodman, Hardy, & McClary, 2015). This is one of the most common biases in military organizations due to the inherent culture in military institutions.

- **Hammer and Nail Bias.** The tendency to apply familiar tools or solutions to all problems, regardless of their relevance and draws influence from the Law of the Instrument, coined by Abraham Kaplan in 1964. In military contexts, this often manifests as overreliance on kinetic force or doctrinal templates, even when situations demand political, informational, or economic approaches (Rodman, Hardy, & McClary, 2015).

- **Hasty Generalization.** This is a tendency to conclude hastily from a small or unrepresentative sample of evidence. In military contexts, this bias can lead to flawed assumptions about enemy capabilities or civilian attitudes based on limited encounters or anecdotal reports, potentially skewing operational planning and strategic decisions (Rodman, Hardy, & McClary, 2015).

- **Overconfidence Bias.** This is the tendency to overestimate the accuracy of one's own judgment or the likelihood of success. This is particularly common among experienced commanders who may rely excessively on intuition (Janser, 2007). This can lead to underestimating risks, and potentially mission failure.

- **Sunk Cost Fallacy.** It leads individuals or a group to continue a course of action due to already invested time, effort, and resources-even when objective analysis suggests that future costs will outweigh benefits. In military contexts, this manifest when leaders maintain failing strategies based on previous sacrifices, rather than focusing solely on evaluated outcomes moving forward (McQuillan, 2021).

Another factor that may limit logical decision-making in military organizations is culture of strict hierarchical command structures and doctrinal inertia. Deference to rank and authority can hinder open dialogue, suppress dissenting opinions, and discourage the

surfacing of alternative perspectives. This dynamic can lead to groupthink, where critical analysis is sacrificed for the sake of consensus. Moreover, rigid adherence to doctrine can constrain systems-level thinking and hinder the military's ability to respond effectively to dynamic challenges (Barno & Bensahel, 2020). Furthermore, institutional reliance on established standard operating procedures may also prevent planners from exploring context-specific solutions.

Similarly, growing risk-averse tendency leading to analysis paralysis is another growing hindrance in decision making modern militaries, including the Nepali Army. Moreover, with excessive information and a growing risk-averse tendency, the possibility of excessive data analysis and delayed decision-making is ever-growing. "Excessive modeling or data analysis can delay decision-making, especially in complex environments - a risk increasingly recognized in modern militaries as they adopt data-driven planning tools" (Forester, 2023).

Systems Thinking as a tool to deal with CAS: A Brief Concept and Principles

Promoting practice of cognitive tools and frameworks like Systems Thinking may be helpful to mitigate challenges in military institutions. Systems Thinking is a holistic approach to understanding complex problems by examining the relationships and interactions among components within a system. It provides a conceptual and practical framework for engaging with a CAS. Reynolds (2011) explains that Systems Thinking builds on and extends critical thinking by shifting the focus from isolated analysis to holistic, relational, and contextual analysis. It encourages leaders to move beyond linear cause-and-effect reasoning and to consider interrelationships, feedback dynamics, and multiple perspectives when designing and implementing strategies (Cabrera & Cabrera, 2018; Senge, 2006).

A clear understanding of the following principles is central to applying Systems Thinking in military context:

- **Feedback Loops.** Feedback loops describe how actions and events influence future states of a system through reinforcing (positive) or balancing (negative) cycles. They explain why systems behave dynamically over time and why interventions often have delayed effects (Meadows, 2008; Sterman, 2000). Example: In counterinsurgency operations, increased security measures may initially reduce violence (balancing loop), but if perceived as oppressive, they can fuel resentment and insurgent recruitment (reinforcing loop).
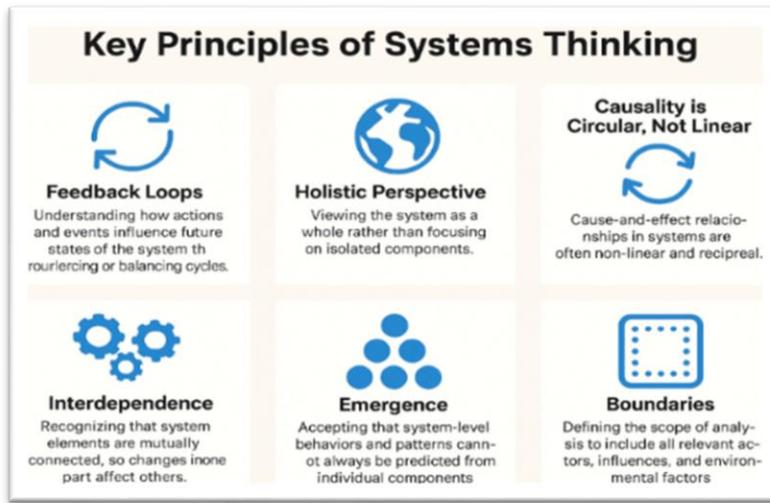
Figure 1: Key Principles of Systems Thinking
Adapted from Meadows (2008), Senge (2006), Richmond (1994), and Sterman (2000). Generated with MS Copilot.

- **Holistic Perspective.**   Viewing the system as a whole rather than focusing on isolated components helps avoid unintended consequences (Senge, 2006). Example: Planning a joint operation requires considering logistics, intelligence, and civilian impact-not just combat power-to ensure mission success.
- **Causality is Circular, Not Linear.**   Cause-and-effect relationships in systems are often non-linear and reciprocal. For example, leadership style influences morale, which in turn affects leadership effectiveness. Addressing dynamic complexity requires moving beyond linear thinking (Richmond, 1993). Example: Poor morale reduces operational effectiveness, which further undermines leadership credibility, creating a feedback cycle.
- **Interdependence.** System elements are mutually connected, so changes in one part may affect the behavior of others and vice versa. This principle underscores why isolated solutions often fail to address root causes (Senge, 2006). *Example:* Adjusting air support without coordinating ground maneuvers can compromise mission integrity and increase risk to forces.
- **Emergence.**   System-level behaviors and patterns cannot always be predicted from individual components. Emergent properties arise from interactions among system elements and create unique outcomes (Sterman, 2000). Example: Coalition operations often produce unexpected coordination challenges and cultural dynamics.

- **Boundaries.** Defining the scope of analysis to include all relevant actors, influences, and environmental factors is essential. Clear boundaries help identify what is inside or outside the system, enabling effective problem-solving and decision-making (Senge, 2006). *Example:* When planning stabilization efforts, boundaries must include local governance structures, economic conditions, and external actors to avoid blind spots.

An understanding of Systems Thinking principles enables military leaders to move beyond tactical symptoms and address strategic root causes, fostering deeper understanding. By viewing military operations as part of a dynamic and adaptive system, commanders can design iterative, flexible strategies that emphasize learning, adaptation, and resilience. This mindset enables them to anticipate unintended consequences, recognize emerging patterns, and adjust their approach in real time-qualities essential for success in today's unpredictable security landscape. Moreover, it helps to overcome the common biases in thinking, and decision-making. Understanding and applying the systems approach may be helpful in enhancing thinking and decision making in the Nepali Army.

Some Models and Frameworks in Systems Analysis Useful for Military

There are several models and frameworks used for systems analysis. Some of the common and useful models and frameworks for the Nepali Army are mentioned in this paper.

- **Causal Loop Diagram (CLD).** CLDs are systems-thinking tools that visualize how variables in a system influence one another through feedback loops-either reinforcing (amplifying change) or balancing (stabilizing the system) (Haraldsson, 2004; Barbrook-Johnson & Penn, 2022). For example, in counterinsurgency, increased security operations may affect locals, which in turn influences insurgent recruitment - creating a loop that can either escalate or de-escalate conflict depending on the dynamics.
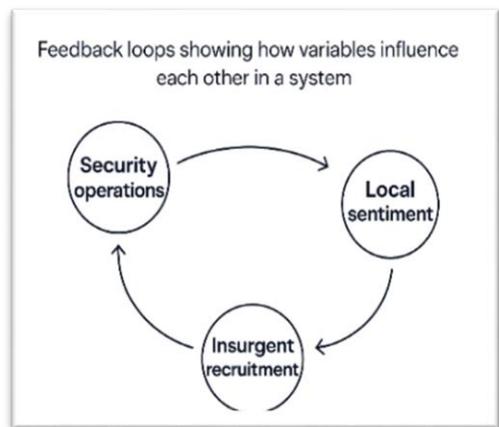

Figure 2: Causal Loop Diagram. Created using Microsoft 365 Copilot.

- **DSRP Framework.** DSRP framework is a cognitive model that helps individuals analyze complex situations by applying four universal patterns of thinking: distinctions, systems, relationships, and perspectives. These elements guide how we separate concepts, group them, understand their interactions, and view them from different angles. In military decision-making, DSRP

Figure 3: DSRP Framework.
Created using Microsoft 365 Copilot.

  enhances clarity and depth of analysis, enabling planners to better grasp multifaceted operational environments (Cabrera & Cabrera, 2022).

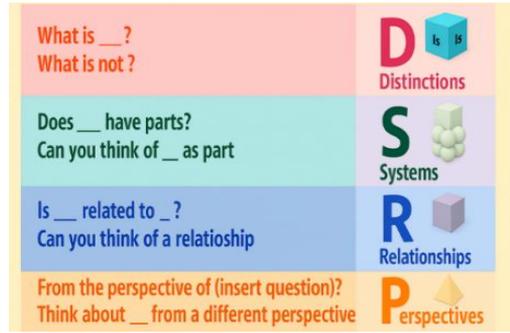- **Mission Analysis.** This is the second step in the TPP that can be considered as a cognitive framework. It helps commanders and staff to develop a comprehensive understanding of the operational environment and the problem. Mission Analysis applies a systems approach by examining the relationships among various operational variables-such as political, military, economic, social, information, infrastructure, physical environment, and time-to identify constraints, assumptions, and specified and implied tasks. By doing so, it ensures that planning is grounded in a holistic appreciation of the situation rather than isolated factors, thereby enhancing adaptability and decision quality in complex environments (U.S. Department of the Army, 2019).

- **OODA Loop.** Observe, Orient, Decide, Act is a decision-making cycle developed by U.S. Air Force Colonel John Boyd, emphasizing rapid adaptation in dynamic environments. By continuously cycling through observation, orientation, decision, and action, military units can outpace adversaries, disrupt their decision-making processes, and maintain operational initiative-especially in
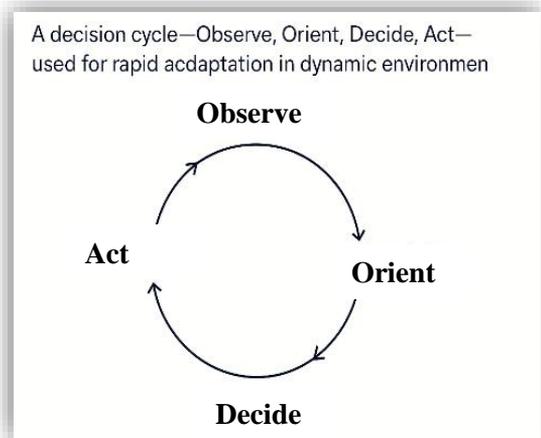

Figure 4: OODA LOOP.
Created using Microsoft 365 Copilot.

fast-moving counterinsurgency or hybrid warfare scenarios (Boyd, as cited in Tremblay, 2015**).**

- **Operational Design Framework.** This Framework provides a structured approach to strategic planning. It includes key activities such as environmental framing (understanding the context), problem framing (defining the challenge), developing an operational approach (strategic options), and campaign design (integrating efforts across domains). This framework supports the development of coherent, adaptive, and

Figure 5: Operational Design.
Created using Microsoft 365 Copilot.

effective military campaigns in complex environments (JP 5-0, 2011; Reilly, 2012).

- **Rich Picture.** These are qualitative visual tools that capture the complexity of a situation by illustrating key actors, relationships, processes, and emotions. They are especially useful in military contexts for mapping the sociopolitical landscape of conflict zones. By depicting entities such as government forces, NGOs, insurgents, and local populations, Rich Pictures
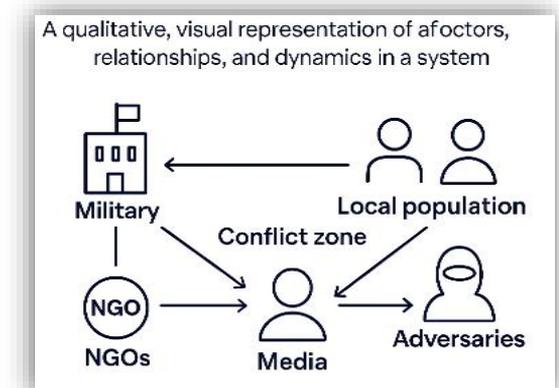

Figure 6: Rich Picture.
Created using Microsoft 365 Copilot.

foster shared understanding and support collaborative planning (Checkland & Poulter, 2006; DA MOD Systems Thinking Toolkit, 2019).

- **Soft Systems Methodology (SSM).** It is a structured approach for tackling ill-defined or "messy" problems. It involves seven stages: exploring the problem situation, expressing it (often using rich pictures), formulating root definitions, building conceptual models, comparing models with reality, defining feasible changes, and implementing improvements. SSM emphasizes stakeholder participation and iterative learning, making it particularly suitable for multifaceted operational environments (Checkland, 1981; Lester, 2008).
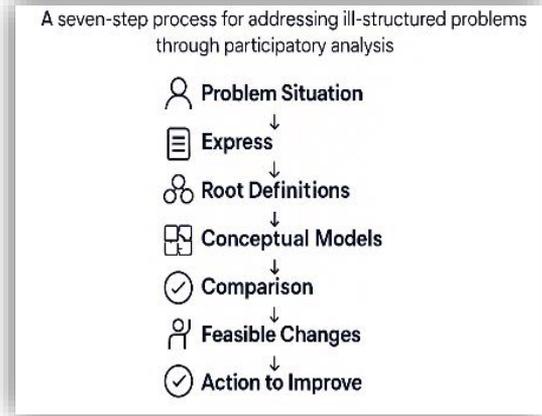
Figure 7: Soft System Methodology. Created using Microsoft 365 Copilot.

- **Stakeholder Mapping.** It is a strategic tool that plots stakeholders by their interest and influence, helping planners identify key actors, understand motivations, and prioritize engagement strategies. In operations involving civil-military cooperation, peacekeeping, or strategic communication, stakeholder mapping ensures efforts are aligned with the interests and power dynamics of relevant groups-such as NGOs, media, and international organizations (Defense Acquisition University, n.d.).
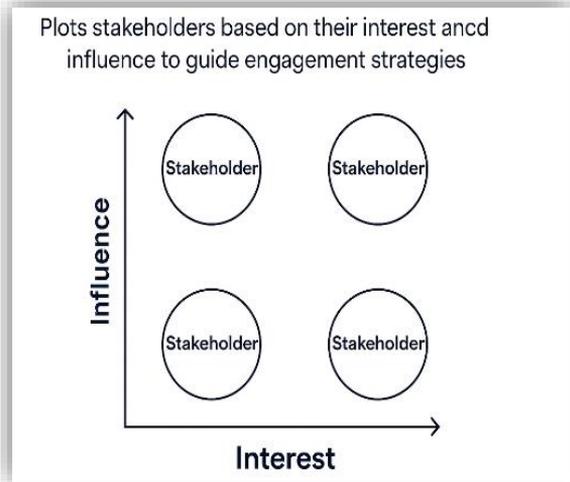
Figure 8: Stakeholder Mapping. Created using Microsoft 365 Copilot.

- **Stock and Flow Diagram.** These quantify elements within a system and track their changes over time. Stocks represent accumulations (e.g., troop strength), while flows represent rates of change (e.g., recruitment). These diagrams help military planners understand resource dynamics, forecast needs, and evaluate how operational decisions impact system stability (Dangerfield, 2021; System Dynamics, 2022).
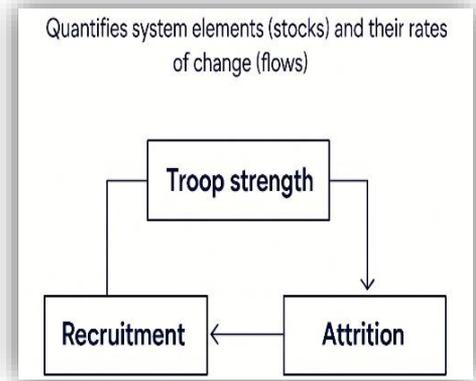

Figure 9: Stock and Diagram. Created using Microsoft 365 Copilot.

- **VMCL Framework**. The VMCL framework, developed by Derek and Laura Cabrera, is a model for designing and leading adaptive organizations. It consists of four interconnected components: Vision, Mission, Capacity, and Learning. It helps ensuring alignment and responsiveness of an organization to change. In general, vision shows the desired future state, and mission explains the system's core role. Similarly, a clear Vision and Mission establish the system's intent and scope. It supports leadership,
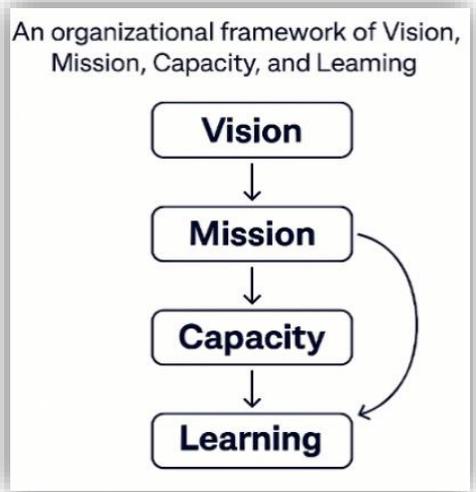

Figure 10: VMCL Framework. Created using Microsoft 365 Copilot.

organizational transformation, and planning, helping units maintain focus, coherence, and agility in dynamic environments (Cabrera & Cabrera, 2015). In the military context, Vision and Mission anchor the Commander's Intent, shape Measures of Effectiveness and Performance (MoE/MoP), and align Capacity and Learning towards achievement of the vision and missions. The same framework can be used in IOPP/TPP in which this linkage may help to ensure that the outputs and decisions remain coherent, and measurable across tactical actions and strategic ends.

Systems Thinking in the Nepali Army

The education of advanced cognitive disciplines, such as Systems Thinking in Nepal, including in the Nepali Army, is still in its evolving stage. Many Nepali institutions do not have well-articulated, clearly defined and operationalized vision, mission and objectives, which streamline a systemic institutional approach. Though the Nepali Army has adopted Systems Approach to Training (SAT) since last several years, its understanding and effectiveness in implementation is questionable. There is very limited teaching and practice of systemic approach in the PME of the Nepali Army. With the integration of the IOPP and TPP, the learning of cognitive frameworks related to Systems Thinking in the Nepali Army has become mandatory. Furthermore, as the operational environment grows complex, the promotion and integration of these subjects into all levels of the PME have become essential.

Why the Nepali Army needs to Promote Systems Thinking Education?

Systems Thinking can have practical applications across the spectrum of military operations, particularly in complex and uncertain environments. Military planners can better align tactical actions with strategic objectives, enhance adaptability, and improve mission effectiveness by applying Systems Thinking. Some arguments on why it is important in the Nepali Army:

- **Implementing IOPP/TPP and Design Methodology.** The Nepali Army has adopted the IOPP, TPP, and Design Methodology as the core frameworks for operational planning, decision making which requires comprehensive problem framing, analysis of multiple courses of action, and anticipation of second- and third-order effects. Similarly, the design methodology emphasizes understanding the operational environment as an adaptive system composed of interacting actors and variables (U.S. Department of the Army, 2015). Therefore, effectiveness of these frameworks relies heavily on planners' capacity for critical, creative, and Systems Thinking. Without systems literacy, these processes risk devolving into procedural exercises rather than conceptual explorations, and misses the deep understanding that Systems Thinking provides (Senge, 2006; Meadows, 2008). Therefore, it can be claimed that effective integration of Systems Thinking approach in the Nepali Army will enhance cognitive skills of planners and decision makers that fosters strategic adaptation, for navigating through uncertainty and ambiguity.

- **To Enhance Situational Understanding.** The Nepali Army operates in a multi-dimensional security environment-with both internal and external security threats. These threats and challenges are deeply interconnected and dynamic, shaped by political, social, economic, and environmental systems. Therefore, Systems Thinking can be a helpful tool to navigate complexity and enhance situational understanding. It also helps to design more adaptive, effective responses by fostering holistic analysis, challenging assumptions, and revealing hidden interconnections.

- **Enhancing Adaptive Decision-Making.** Systems Thinking strengthens adaptive decision-making by encouraging leaders to question assumptions, consider alternative perspectives, and anticipate ripple effects (Cojocar, 2011; Lingel et al., 2021). Therefore, it may be a helpful tool to enhance adaptive thinking and decision-making capability in the Nepali Army. Moreover, it may help subordinate commanders to make informed decisions aligned with higher intent and meaningfully link tactical actions to strategic objectives through a better understanding of the operational environment.

- **To Promote an Adaptive and Learning Culture.** Systems Thinking promotes institutional learning, feedback loops, and adaptive leadership. By encouraging reflective practices and double-loop learning-where underlying assumptions are questioned and revised-it helps the organization stay resilient, relevant, and future-ready (Argyris & Schön, 1996). The Nepali Army, itself being a dynamic system, must evolve with changing threats, technologies, and societal expectations, for which system thinking may be a useful and effective tool to promote adaptation and learning.

- **To Promote Coordination.** Nepal's security environment requires close cooperation among the army, civil authorities, people, and all internal and international partners--A Whole of the Nation's Approach. As Systems Thinking provides a shared language and framework for understanding how military, political, economic, and social systems interact (Senge, 2006), its understanding is essential for making such an approach a success. Furthermore, the Nepali Army can be the example for developing an understanding of the systems approach among Nepali government institutions.

Challenges in the Nepali Army's Context

Despite its conceptual appeal and practical utility, Systems Thinking faces several institutional and cultural challenges within military organizations, including the Nepali Army:

- **Military Culture and Limited Institutional Integration.** Hierarchical and decision-making, and strict adherence to doctrine in military organizations often discourage the kind of cross-functional collaboration and holistic analysis that Systems Thinking demands (Chen & Unewisse, 2016). Moreover, although Systems Thinking has influenced military theory and education, its formal adoption in doctrine, planning frameworks, and professional military education remains limited (Bosio, 2022). In the Nepali Army's context also, such culture can limit the flexibility required for systems-based approaches.

- **Time-Constrained Decision Cycles**. Military operational environments often demand rapid decision-making, leaving little room for the kind of reflective, iterative processes that Systems Thinking requires. Therefore, complex thinking, planning and decision-making frameworks and processes may often become impractical in high-tempo operating environment. Same challenge may be hindrance for application of similar frameworks and approaches in the Nepali Army.

- **Risk Averse Culture and Analysis Paralysis.** While Systems Thinking encourages comprehensive modeling of complex problems, it carries the risk of over-engineering and producing excessively thorough models (Anteroinen, 2014). In resource-constrained environments, this complexity can hamper operational clarity and delay decision-making. Additionally, a growing risk-averse tendency-driven by heightened scrutiny across all sectors-further compounds the challenge. Together, these factors can significantly hinder the effective adoption of innovative concepts like Systems Thinking.

Mitigating Cognitive and Institutional Hindrances

The Nepali Army should adopt strategies that promote critical reflection, intellectual humility, and systemic awareness. Some of the recommended approaches include:

- **Favorable Command Climate.** Encouraging constructive disagreement in the planning and decision making enhances intellectual curiosity and strategic agility. Commanders should look for creating a favorable command climate

which fosters a leadership culture that values diverse perspectives and encourages open, respectful dissent. It will help to promote the principle that disagreement is not disloyalty which is necessary for bringing out diverse perspective.

- **Enhancing Bias Awareness.** Integrating education on cognitive biases and structured cognitive thinking into PME system at the Nepali Army will help in enhancing awareness against harmful biases. Such training and education should be integrated across all levels of leadership to help officers recognize, and mitigate cognitive limitations.

- **Encouraging the use of Cognitive Tools.** It is useful to promote a creative use of cognitive tools during all kinds of planning processes to visualize interdependencies and anticipate second- and third-order effects. These tools help move beyond linear thinking, especially in complex operational environments. Furthermore, establishing formal policy and mechanisms to rigorously challenge assumptions, test operational plans, and expose analytical blind spots during training and routine activities, may be helpful. Red-teaming and devil's advocacy promote intellectual humility and reduce overconfidence, enabling planners to anticipate alternative interpretations and hidden risks.

Systems Thinking: Points for Consideration in the Nepali Army

Despite realizing the importance of critical, creative, and Systems Thinking, Nepal's education system has yet to embrace the creativity and critical thinking into every aspect of educational policy and practice (Ojha, 2023). The impact transcends to the Nepali Army also. To overcome the impacts, the Nepali Army needs to implement the following measures:

- **Doctrinal Reform and Curriculum Integration.** As the current operational environment is getting complex, the Nepali Army should emphasize integrating suitable doctrinal tools in thinking, planning and decision making. The TPP, IOPP and Design Methodology demands creative use of several of the frameworks mentioned in this paper. Moreover, effectiveness of these processes depends on the critical thinking and cognitive capability of the planners. Therefore, the PME system of the Nepali Army should include cognitive frameworks into its doctrinal publications, planning as well as into the curricula of all training institutions.

- **Creating a Conducive Environment.** The Nepali Army leadership should highlight and promote the value of systems-level insights and encourage perspectives drawn from diverse disciplines. The Army should empower a culture of studying history and other diverse subjects, critical self-reflection, open-mindedness, and intellectual humility. Promotion of this culture helps to establish institutional mechanisms that encourage, reward innovation, which is essential for dealing with complex problems and collaborative problem-solving.

- **Adopting Enhanced VMOCL Framework.** Modifying the existing VMCL framework by adding a separate layer to include objectives significantly simplifies and enhances its utility for institutions in the Nepal's context. Positioned between Mission and Capacity, this layer helps to ensure that an organization's purpose is translated into clear goals that can help and guide in planning, resource allocation, and decision making. Within this expanded model, rest of the layers retain their original meaning, i.e. the Vision sets the long-term direction, the Mission defines the core purpose, and the Objectives specify the concrete outcomes required to fulfill that mission. Capacity then focuses on developing the structures, capabilities, and resources necessary to achieve those objectives, while Learning ensures continuous reflection, adaptation, and system-wide improvement. The added layer acts as the bridge between intent and implementation which makes the framework more holistic and aligned with systems-thinking principles. Nepali Army institutions can use this framework to adopt a simplified systems-oriented approach that helps driving a holistic institutional development, decision making and problem solving while ensuring strategic focus.

Figure 11: VMOCL Framework Diagram created by the author, based on concepts from Cabrera & Cabrera (2015, 2018 and 2022)

Conclusions

In this era of complexity, volatility, and adaptive threats, military organizations must transcend traditional and reductionist models of problem solving and decision making. As the operational environment grows increasingly complex, Systems Thinking is no

longer optional-it is a *must know skill* for military decision-makers. Systems Thinking frameworks provide useful mechanisms for achieving cognitive clarity and organizational coherence. However, the state of education of these phenomena in the Nepali Army is still at the beginning phase. Therefore, the Nepali Army needs to promote an environment for the adoption, promotion, and implementation of critical, creative, and Systems Thinking not only in the training and education system but also in the day-to-day operations and planning processes.

Cultivating cognitive and organizational agility is essential for building a force capable of leading in Nepal's dynamic and evolving security environment. With the Nepali Army adopting the IOPP, TPP, and Design Methodology, the need for cognitive thinking approaches-particularly Systems Thinking-has become central to their effective implementation as well as promoting adaptive decision-making. These approaches enable leaders to move beyond reactive responses and rigid procedural compliance toward reflective analysis and adaptive problem-solving. In doing so, the army strengthens its ability to operate across the full spectrum of conflict, which is necessary for the Nepali Army in addressing complex and non-linear challenges in contemporary and future operational environment.

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