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Evolution of Decision Making Processes in Command during Irregular Warfare Operations

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Abstract

Stability operations and irregular war are increasingly complex and continually changing constructs which are no longer served by the traditional processes of the western military forces. This essay examines the significant work that has been carried out in recent years in an effort to develop new problem framing constructs that hope to offer the commander processes for utilizing and manipulating complex adaptive systems. What is becoming apparent is that the process of developing frameworks will not be of value to the military commander unless these frameworks can be embedded in the decision making process at an instinctive and experiential level. For the past 5 years The technical cooperation programme (TTCP) has been operating with the objective of harnessing complexity within the defense arena. The introduction of unknown risks associated with the incomplete and shifting information, and continuous readjustments due to the multi cell structure of irregular warfare would create significant base level noise in an adaptive system framework. This low noise introduced into the operational art of command would have the potential to damage the measurement schemas and feedback systems of the immediate adaptive framework and alter the responsiveness and sustainability of advancements based on these decisions. At present, significant work has been done to translate the science of complex adaptive systems into tools the commander can incorporate into his decision making process in high pressure scenarios. This has not yet been successful.

Keywords: Military; Irregular war; Framework; Operational art

Introduction

Traditional military processes have been ineffectual and short sighted in recent contemporary conflicts yet modern developments which begin to explore processes for enabling quick, flexible decision-making are beginning to be incorporated into the command toolbox. Contemporary challenges of war significantly differ from previous models of conflict. Stability operations and irregular war are inextricably intertwined through adapting social phenomenon, socioeconomic ambiguities, and the shifting, morphing identities modern globalized and technologically astute populations adopt. Irregular warfare pits nation-states against non-state actors in many forms; and because it involves very large numbers of continually changing interdependent variables it is increasingly complex. According to Mirra 'More recent non-state actors do not fit into traditional great powers constructs, and are categorically invalidated as 'terrorists" [1]. Here I interpret the use of the word 'terrorist' as a potentially ethnocentric approach to understanding local, tribal or political actions from disenfranchised non-state actors that leads to invalidation within the region. To court global success modern military strategy should be embedded in the local culture within which it is expected to operate, rather than attempting to import measures of success or failure based upon our own culturally infused determinants. Co-operation, globalization, multilateralization, and the blurring of boundaries between security and defense contribute to high levels of complexity as well as the yardsticks used for success or failure. Stability operations are primarily complex multi-actor cooperation exercises across multiple ethical frameworks due to organizational, cultural and political identities involved in the effort. Mirra believes that the utilization of frameworks to understand actors in stability operations confuses the understanding of 'movements and peoples' and prevents a clear understanding of the adversaries [1]. While the adoption of frameworks may appear to simplify and dehumanize 'movements and peoples' this is a mirage. Through modelling the chaotic and evolving systems that the individual represents, as well as the system the groups of actor's forms, and the introduction of the military unit into these systems (who are themselves fully functioning adaptive systems) it is possible to truly represent the complexity of human nature. A classic experiment by Domangue [2] suggests that tolerance for complexity and ambiguity influence the effect on an individual by nonverbal cues. This sublevel of communication between individuals in cooperative networks has shown to be fluid, with participants influenced at varying levels by combinations of positive/negative verbal communication combined with positive/negative nonverbal communication. Even the addition or omission of head nodding during communication can influence the reception of a message and processing of content, without the awareness of the participant, and contribute to perceived complexity and ambiguity in instructions. To embed military campaigns within the local culture from implementation throughout execution may assist with the reduction of perceived ambiguity by adding a level of exposure to the methods and style of communication. Greco and Roger [3] found a relationship between the level of uncertainty or ambiguity and health. They observed changes in blood pressure of participants during periods of anticipation prior to the occurrence of a possible threat. The threats were presented as varying levels of ambiguity during an experiment that was intentionally uncertain in duration and intensity. Increase in blood pressure was found to increase anxiety levels, which reduced tolerance of ambiguity and complexity of scenarios [4].

Referring to the work of Spaans, et al. [5] there have been advances in the development of approaches that are more suited to evolving and chaotic environments with multiple actors and unconstrained or multiple level domains. In my previous work I highlighted three main areas needed to operate within the current model of modern conflict; the capability to work within and across situations with high levels of uncertainty, secondly high levels of adaptability utilizing multi-level, multi scale agencies and domains and thirdly, the ability to integrate multiple information sources into situation models with information outputs providing the necessary sharing but limiting the noise created within the model by the sharing process. These approaches have significant value when applied to both stability operation and irregular warfare. Modern stability operations have a high level of uncertainty and complexity, having the potential to leak over to other operations despite the commander's judgement, insight and experience. Irregular warfare provides challenges in managing fast changing environments with missing or incomplete information.

This could be introduced into the organizational structure and culture of the military force. Spaans et al. present the following table outlining the potential for military organizations to create adaptiveness in complex evolving environments at both an individual level and an organizational level. The table was developed under a grant from the Australian Defense Force in 2009 and recently trailed by the Australian Army. It was based on a programme developed by Dr. Dietrich Dörner, professor, author and researcher of psychology specializing in complex decision-making processes. The programme was trailed in 2014, indicating a willingness by the military to reframe command paradigms in the modern contexts of war as previously mentioned Table 1.

Individual decision or action Outcome	"Unacceptably" wrong	"Acceptably" wrong	Right
Catastrophe	Sanctions or punitive Measures	Learn about context. Learn about the boundaries of what is/isn't acceptable	DON'T SCAPEGOAT!! Review boundaries between "wrong" and "right". LEARN RESILIENCE Learn about complex dynamics that led to outcome
Wrong	Sanctions or punitive Measures	Corrective measures (individual learning)	DON'T SCAPEGOAT!! Review boundaries between "wrong" and "right". Improve decision process and support. Learn about complex dynamics that led to outcome
Right	Review how 'unacceptable' is defined. Sanctions or punitive measures	STOP BLAME GAME "near misses" Learn about tolerances, and robustness of processes. Learn about complex dynamics that led to outcome	Confirm what is already known, or guessed

Table 1: Spaans et al. Learning to be adaptive. Paper presented at the 14TH ICCRTS C2 and Agility [5].

This table demonstrates the changing culture of the military (Australian Army in particular), in understanding the equal parts that decision making and outcomes have in the understanding of learning. Experiential learning builds the internal schemas that Dr. Dörner has established are present during high pressure, high stakes decision making by experienced personnel. It is within this schema that the intuitive understanding of the adaptation process of multiple actors and systems must merge. Dörfler-Dierken's review piece on the mental homogeneity of the German Armed Forces verbalized what has been a juxtaposition of the military forces since Frenkel-Brunswik's post-war research in 1950; primarily the fixation on authority and conformity that is one of the primary attractions of the military services, and the need for ambiguity tolerance [6]. The research of Spaans et al. is dependent on cultural similarities and mental homogeneity in understanding outcomes and actions, and having a similar cultural construct within which to prioritize such outcomes. While the possibility exists that such cognitive processes can be mapped out and predicted, the individual psychoneurological responses of the commander and the impact this has on perceived ambiguity and cultural frameworks during an undefined scenario cannot.

It is the author's belief the integration and implementation of the above framework methodology into military training is not likely to achieve success. I mentioned earlier the evolution of warfare to its current state of multi-cultural, multi-contextual, international operations which creates multiple levels of understanding success/failure results, and competing yardsticks by which priorities can be assigned accordingly. The above matrix has the potential to be effective in traditional warfare due to the strict and defined boundaries within which it operates, including the implementation of the law of armed conflict (LOAC). Modern conflict is a very different beast, with constantly shifting parameters and political influences, usually conducted within the territory of local civilian populations. I previously outlined the need for decision making to be framed within the cultural context it is operating in, and not the culture of the military commander. This need for duality within the mind of a commanding officer under stress and working with shifting

parameters, particularly if objectives include attempting to 'win hearts and minds' or operate within a 'friendly and receptive' local population. The matrix above is simple, yet it is strictly delineated by the implementing military's measure of their internal culture and self-appointed definitions of successes and failures which may not be shared by cooperating staff from other military or ethnic cultures. It may be possible to create such a framework, we are still faced with the conundrum of the matrix attempting to capture fixed points in time, with the assumption that all future situations will meet the set requirements of such a matrix with clarity. Evolution of complex systems is a natural phenomenon, therefore it is inevitable, and when matching scenarios with criteria becomes a guessing game, the value of matrices and frameworks becomes nominal.

The search for a 'theory of everything' within the field of physics led to the discovery of complexity theory, the interconnectedness of all processes and the upwards evolution of self-organizing networks. As defined problems increase in both size and complexity the emergence of intelligent networks that self-organize also increases. The dilemma lies in establishing a connection between the theoretical understanding of complex adaptive systems and the practice of utilizing and manipulating complex adaptive systems for advantage. In complex systems, responses emerge by self-organization: patterns at the global level emerge solely from interactions among the lower-level components acting on rules which are executed using only local information, and without reference to the global pattern [5]. For the past 5 years The Technical Cooperation Programme (TTCP) has been working hard to understand the potential to harness complexity within the defense arena, with significant time and resources being allocated to unpick the adaptation process. While the output of TTCP was initially received with enthusiasm by many defense forces the conceptual framework for adaptation (CFA) was the only programme that successfully made the leap from scientist to soldier. Even with the enthusiastic reception, it is evident from the outcome of the programme that parts of the message were lost in translation.

What is becoming apparent is that the process of developing frameworks will not be of value to the military commander unless these frameworks can be embedded in the decision making process at an instinctive and experiential level. Due to the complexity and empiricism of the current models this is not likely to take place without significant investigation into the internal schemas and meta-decision processes adopted by military commanders involved in strategic decision making, and uncovering how this internal architecture might integrate with adaptive feedback processes. The question still remains as to how a military commander can be educated on adaptation architecture in the complex environments of irregular warfare and stability operations. Assuming that the military commander has the space to make the decision (i.e. the 'no blame' framework suggested by Spaans et al. developed by Dr. Dörner in conjunction with the DSTO), has the information required to make a decision, and the appropriate insight and experience to be making such a decision, the potential for the adaptive framework to add value exists. Conjectural decisions and their role in complex decision making in the command process was also mentioned in my previous article. Again, this has been briefly explored via the defense force through examination of Gary Klein's model of primed decision making in experienced decision makers, and in his modelling of rational analysis and hyperrationality in team decision making [7]. This information was incorporated into the DSTO work on complex adaptive systems. It is not yet clear as to how this would translate to operational decision making in irregular warfare campaigns. The introduction of unknown risks and readjustments due to the multi cell structure and complex identities associated with irregular warfare tactics would create significant base level noise in an adaptive system framework. This low noise introduced into the operational art of command would have the potential to damage the measurement schemas the commander has adopted. This, in turn, would damage the feedback systems of the immediate adaptive framework and alter the responsiveness and sustainability of advancements based on these decisions. No feedback system exists in isolation, and the adaptations would affect the processes and upwards evolution of neighboring systems, and the cooperation and coordination of joint interagency actions.

Research and funding of Complex System research at the DSTO halted following the development of the Complex Framework for Adaptation. Only partial information was being implemented due, in part, to a lack of capability to translate the science into solid tools the commander could incorporate into their decision making process in high pressure scenarios. The challenge of translating the 'Theory of Everything' into practical training solutions with the capability to be implemented in the field has not yet been entirely successful.

For the past five years, TTCP has been operating with the objective of harnessing complexity within the defense arena. Significant efforts were made to understand the role that adaptive systems played in collective actors. The difficulties that emerged were in creating a system that enables commanders to utilize and manipulate complex adaptive systems for advantage while engaged in incomplete scenarios such as counterinsurgency operations. Stability operations and irregular war are increasingly complex and continually changing constructs which are no longer served by the traditional processes of the western military forces. Work carried out over recent years hoped to offer the commander processes for utilizing and manipulating complex adaptive systems.

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