Time to Think About Design: Reconciling Operation Design with Navy Planning

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Since the inception of the Maritime Operations Center (MOC) concept in 2005, fleet staffs have matured in their ability to plan, prepare, execute, and assess at the operational level of war (OLW). During this timeframe MOCs could turn to existing doctrine to help them successfully plan and execute their missions, to include the Navy Planning Process (NPP) outlined in the 2007 Navy Warfare Publication (NWP) 5-01. However, while the current NPP effectively outlines a process to conduct detailed planning to help commanders and their staffs deal with familiar problems, it lacks any discussion of conceptual planning considerations to help them solve more complex, unfamiliar problems.

As evidenced by Operations Tomodachi and Odyssey Dawn, today’s naval commanders must plan for a myriad of problems across the range of military operations. In the context of highly interconnected, multifaceted environments, simple solutions often fail to accomplish the mission. Design is a commander-led process, with a supporting methodology to develop an operational approach for solving these more complex problems. This article argues that fleet commanders and their staffs would be well served by incorporating design into their planning process and offers a methodology to do so. The approach recommended in this article combines the conceptual planning aspects from existing joint and Service doctrine and adapts them for application in concert with the NPP. Of note, the next version of NWP 5-01, which is scheduled to be published in 2013, includes design as a methodology for conceptual planning.

Planning Major Operations

Conducting warfare at the OLW is inherently complex, made more so by the evolving nature of war in the 21st Century. The challenge for fleet commanders is one of understanding. Traditional detailed planning processes assume the commander understands the problem and possesses the experience required to guide the staff through the planning process. However, is this always going to be the case? What if the uniqueness and complexity of the problem clouds the commander’s understanding? Design is a cognitive process, rooted in experience, intuition, and training, which provides commanders and planners “the intellectual breathing space” for designing, planning, and executing operations. Therefore, the goal of design is to develop a shared understanding of a complex problem so planners can move on to detailed planning and execution as efficiently and effectively as possible.

The planning process is divided into two components: conceptual and detailed. Marine Corps Doctrine Publication (MCDP) 5 defines conceptual planning as “establish[ing] aims, objectives, and intentions and involves developing broad concepts for action,” while conceptual planning is common at the outset of all planning, when the problem is well understood such thinking is typically overcome by detailed planning. However, when the problem fails to conform to established patterns, or is beyond the commander’s experience, commanders and their staffs are at a disadvantage and often default to developing plans from habit rather than a deep understanding of the problem. Design is a conceptual thinking methodology that can help overcome this limitation.

Essentially, design involves discourse between the commander and select staff members. Working with strategic and higher headquarters (HHQ) guidance, as well as the initial intelligence preparation of the operational environment (IPoE) as a starting point, the commander and staff discuss in more depth the guidance, the operational environment, and the nature of the problem(s) presented. The staff’s collective education, expertise, and ingenuity increase the commander’s capacity to understand the nature and complexity of the problem. The tools outlined for conceptual planning are not prescriptive but are purposefully “free form.” The lack of a process or format is meant to encourage critical and creative thought without definitive boundaries in determining “what to do and why.”

Figure 1 compares aspects of conceptual and detailed planning and the activities which occur along the planning continuum. Effective planning employs both conceptual and detailed planning. The focus of conceptual planning is problem setting while the focus of detailed planning is problem solving. The interaction between conceptual and detailed planning is subtle and even underappreciated when the problem is well understood. When commanders are familiar with a given problem they rapidly and intuitively apply conceptual thinking to quickly identify and propose solutions to the problem. On such occasions the transition from problem setting to problem solving is almost imperceptible. However, when faced with complex, unfamiliar problems, like those during Operations Odyssey Dawn and Tomodachi, commanders and their staffs should take the time to consciously apply the conceptual planning methodology known as design to help them better understand the environment and discern the true nature of the problem to be solved. Only then can commanders provide adequate guidance to their staffs for detailed planning and execution.
Design Methodology

Joint and Service doctrine use slightly different language to describe a methodology for design. However, all agree the goal of design is to identify the underlying problem in complex, unfamiliar situations. A survey of design language from joint and Service doctrine divides design into five related cognitive activities: understanding the operational direction, understanding the operational environment, defining the problem, determining an operational approach, and reframing (See Figure 2). When employed together, they lead to an actionable operational approach that provides guidance for detailed planning and execution.

Understand the Operational Direction

At the outset of conceptual planning, the starting point is to consider the overarching strategic and operational direction. Insight can be gleaned from an analysis of all available guidance to include written directives, oral instructions from HHQ, security cooperation guidance, and HHQ orders or estimates. Analysis of the strategic direction should yield a deeper understanding of both the desired strategic and military end states.
Joint Publication (JP) 5-0, Joint Operation Planning, defines the OE as “the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander.” These influences cover a wide-range of actors, relationships, functions and tensions present in the current environment. Discourse must occur between the commander and select staff representatives to piece together the multiplicity of factors to form a holistic picture of the interactively complex environment. At the numbered fleet level, while the commander is primarily concerned with those aspects that affect the maritime domain, he must also consider the impact of the air, land, space, and information environments on the pending operation as well.

Figure 3 suggests a number of key inputs commanders should consider in order to develop an in-depth understanding of the OE. Analysis and discussion of these inputs by the commander and his key staff results in a more thorough understanding of the OE, which in turn helps to define the aspects of the problem to be reconciled when transforming current conditions into the desired end state. Understanding the OE should result in a newly developed appreciation for the actors, relationships, challenges, tensions, competitions, and opportunities which, when identified, may be acted upon to create the desired effect.

### Defining the Problem

"Defining the problem is essential to solving the problem." Although this seems intuitive, the purpose of design is to efficiently and effectively identify the root cause(s) of complex, unfamiliar problems to support problem setting. The knowledge gained from understanding the OE and defining the problem make the situation less complex than at the commencement of design and lead to a determination of those thing(s) in the current environment that will likely impede the establishment of the desired environment.

Figure 4 lists key inputs that must be considered prior to defining the problem. "A concise problem statement clearly defines the problem or problem set to be solved." This aspect of design also helps commanders identify the elements within the OE that must be changed in order to achieve the desired end state. Lastly, striving to clearly define the problem allows the commander greater insight regarding how operational variables can be expected to either resist or facilitate the transformation of the environment and how environmental inertia can be applied to ensure the desired conditions are achieved.

### Developing the Operational Approach

The operational approach (Figure 5) is the commander’s visualization of how the operation will transform current conditions into the desired conditions at the conclusion of the operation. As previously discussed, an in-depth examination of both the OE and the problem helps commanders understand and identify the broad conditions which must be removed, provided, or changed to transform the current state to the desired end state. Knowledge of the OE and problem set enhances the commander’s ability to understand, visualize, and direct how the problem can be resolved. The operational approach underpins the commander’s vision and is communicated to planners through his initial planning guidance and intent. The results from the application of operational design methodology lead to the operational approach.
The operational approach provides a summary of select products to assist the transition from conceptual to detailed planning. A suggested format is one that captures the critical elements of design to include essential elements of the OE, tensions between current and desired end state conditions, a concise problem statement, the use of lines of operation or effort to describe a broad operational approach, and initial intent and planning guidance to be used by those who will conduct detailed planning. The commander’s operational approach is the key output of design as it pulls together all the discussions, narratives, and models into concise summation for planning.

Reframing

The final aspect of design is reframing. Reframing is a continuous process of refining and assessing the deductions and decisions made from the application of design methodology during conceptual planning, throughout detailed planning, and during execution. A subtle, yet important, aspect of reframing is its continuous nature. Reframing allows the commander to revisit decisions made throughout conceptual planning, during detailed planning, and again in execution. When analyzing complex, unfamiliar problems this aspect keeps conceptual planning from going into an endless planning loop for fear of missing critical information. Consequently, reframing’s recurring nature acknowledges that commanders cannot afford to think endlessly about the problem. During conceptual planning, "perfect is the enemy of good enough." Movement through the planning process is critical and reframing allows the commander to decide and transition the staff to detailed planning and execution in the shortest possible time.

Finally, due to the uniqueness of each situation, commanders are likely to get things “wrong” during the planning process and in execution due to the changing nature of the environment, the network of actors, and the interactive complexity of the problem. Changes taking place in the environment during design or subsequent detailed planning and execution may require reframing at any time during the operation. While responding to change is nothing new during planning, its impact on conceptual and detailed planning and during execution has to be assessed. Reframing accounts for change. It is the recurring step within design, the NPP, and execution where changes are continuously analyzed to mitigate their impact throughout the operation.

Conclusion

The interaction of conceptual and detailed planning throughout the planning process is critical to effective planning. Figure 6 below outlines a holistic perspective of the planning process. The model shows a linkage between conceptual and detailed planning and highlights the impact that both the level of complexity and the commander’s experience have in solving problems. Complexity and familiarity regulate the relationship between conceptual and detailed planning and affect the way planners work through the planning process. If the commander’s experience and expertise make the problem familiar, he’ll move the staff rapidly from conceptual to detailed planning. If not, commanders should take the time to consciously apply the conceptual planning methodology known as design.

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**Figure 6**

3 Chairman, Joint Chiefs of Staff, Joint Operation Planning, Joint Publication (JP) 5-0, (Washington, Headquarters Joint Chiefs of Staff, August 2011), p. III-5.
U.S. Army, The Operations Process, Army Doctrinal Publication (ADP) 5-0, (Washington, Headquarters, Department of the Army,
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