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**MODEST DESIGN:  
A Conservative Approach to  
Enhancing Joint Planning Doctrine**

**by**

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**A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.**

**The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.**

**Signature: \_\_\_\_\_**

**27 October 2010**

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## Abstract

There exists substantial momentum within the military services to address perceived doctrinal shortcomings that will undoubtedly result in modifications, if not sweeping changes, to existing joint planning doctrine. One of the corrective constructs being actively considered for inclusion into joint doctrine is “Design.” Calls for Design emanate from a belief that existing doctrine for planning major operations and campaigns are no longer adequate and fail to provide commanders with the creative and collaborative planning tools they need to be effective in the face of current and emerging threats. There are significant redundancies within Design and existing doctrine, specifically with respect to how environmental framing and Joint Intelligence Preparation of the Operating Environment (JIPOE) generate an understanding of the operational environment that present risk that if left unmitigated, will have adverse impacts on planning and operations. However, Design does offer some unique and useful methodologies that emphasize the role of the commander and creativity in planning that should be selectively integrated into existing doctrine.

*If we are ignorant of the changing face of war, we will find ourselves unequal to its challenges.*  
~ Marine Corps Doctrinal Publication 1: *Warfighting*

## **Introduction**

Effective joint operational planning is required to guarantee the achievement of objectives directly related to the national security of the United States. Equally important, and not insignificant, is the fact that joint operational plans ultimately direct tactical actions that require the expenditure of national treasure in pursuit of the nation's vital interests, not the least of which are the precious lives of our soldiers, sailors, airmen, Marines, and their civilian counterparts in the interagency. When commanders and staffs at the operational and strategic level fail to plan effectively, the nation is placed at risk and, all too often, young American men and women die.

Today, joint commanders, as commanders have always been, are responsible for “understanding and describing the nature of the problems they face and the approaches they will follow to achieve desired solutions in a constantly changing operational environment.”<sup>1</sup> This is the purpose of planning, and leading such endeavors is the business of commanders who must be effectively supported by their staffs. Unfortunately, it appears that far too many commanders and staffs are derelict in these duties. There is a prevailing belief amongst many military professionals that inadequacies in joint doctrine are – at least partially – to blame. However, not everyone agrees with this assessment. Nonetheless, there exists substantial momentum within the military services to address perceived doctrinal shortcomings that will undoubtedly result in modifications, if not sweeping changes, to existing joint planning doctrine. The corrective construct being actively considered for inclusion into joint doctrine is “Design.”<sup>2</sup>

According to its proponents, Design provides commanders and staffs with a novel “methodology for applying critical and creative thinking to understand, visualize, and describe complex, ill structured problems and develop approaches to solve them.”<sup>3</sup> These advocates argue that this “novel” approach is superior to anything currently available in doctrine. One of the perceived problems with existing doctrine is that it does not provide commanders and staffs with the tools necessary to adequately understand and cope with the complexities and ambiguities present in the current joint operating environment.<sup>4</sup> Related to this, Design is supposed to address apparent deficiencies in doctrine related to the role of the commander in planning. A situation has resulted in too many commanders failing to lead planning.<sup>5</sup>

While few would argue that the character of modern conflict is not vexing, and that the failure of commanders and staffs to properly plan is not problematic, there is sufficient evidence to refute the premise that existing approaches to planning are fatally flawed. Although the case against existing joint approaches to planning is in many ways unconvincing, changes to doctrine are coming. Design initiatives represent the leading agent of change.

There are significant redundancies within Design and existing doctrine, specifically with respect to how environmental framing and Joint Intelligence Preparation of the Operating Environment (JIPOE) generate an understanding of the operational environment that present risk that if left unmitigated, will have adverse impacts on planning and operations. However, Design does offer some unique and useful methodologies that emphasize the role of the commander and creativity in planning that should be selectively integrated into existing doctrine.

Once settled, the ongoing perturbations over Design and the future of joint planning doctrine have the potential to significantly alter how the individual and joint services plan and fight. This is a matter that should be of interest to military professionals. Ongoing efforts must be examined and influenced from the fleet and field. To this end, this paper will compare and contrast the current form of Design, as described in service doctrine and joint literature, to determine if this methodology is in fact something that should cause the U.S. Armed Forces to turn from the more classical approach of existing doctrine.

This study of Design will first consider those problems related to the operational environment and the role of the commander in planning. Once these problems are properly set, an overview of Design and existing doctrine will be provided. This will be followed by a more scoped comparison of environmental framing in Design and Joint Intelligence Preparation of the Operational Environment (JIPOE) in existing doctrine. This tailored examination will be conducted to establish how each purports to generate an understanding of the operational environment and will also be culled for any insights into their respective treatment of role of the commander in planning. The results of this analysis will be synthesized to determine if Design offers a superior methodology that will provide joint forces commanders doctrinal improvements.

### **Why Design?**

Calls for Design emanate from a belief that existing doctrine for planning major operations and campaigns are no longer adequate and fail to provide commanders with the creative and collaborative planning tools they need to be effective in the face of current and emerging threats.<sup>6</sup> Examinations of the works of the leading proponents of Design underscores the belief that the doctrinal problems, specifically those related to critical and

creative thinking in planning, are substantial and require profound change.<sup>7</sup> In fact, one leading Design advocate, former Israeli Brigadier General Shimon Naveh, bluntly claims that “operational art died in the 1980’s.”<sup>8</sup> Others share this view.

In *War Planning for Wicked Problems: Where Joint Doctrine Fails*, Colonels T.C. Greenwood and T.X. Hammes USMC (Ret.) make the case that decades of planning that focused on the problem of deploying large formations of forces to halt Soviet advances has had a lasting and negative impact on both doctrine and organizational problem solving.<sup>9</sup> The rapid deployment of massive amounts of equipment and personnel from the United States to Europe in time to generate a force that was capable of conducting combined arms maneuver to defeat an adversary as formidable as the Soviets was no small measure to be sure. However, the deployment problem was, as the argument goes, mathematical in nature, and the real problem to be solved, defeating the enemy at known decisive points, was well-structured.<sup>10</sup> Greenwood and Hammes make the case that over time, in the face of the same problem in the same environment, some planning processes became focused on the science of deployment and others on the rote application of procedures to counter a well templated and relatively predictable enemy.<sup>11</sup> In essence, the premise of this argument is that the U.S. military became cognitively lazy during the Cold War and over time the creative spark of operational “art” went out of operational planning. What developed was a mechanistic approach to the planning process and a cultural bias to jump directly to mission analysis in a manner that “completely overlooks the critical step of developing a working definition of the problem.”<sup>12</sup> However, in the time that has transpired since the end of the Cold War, the character of war has changed.

The nature of war is immutable; it has and always will be at its essence a “fundamentally interactive social process”<sup>13</sup> where violence and chaos reign, uncontrollable factors cause friction, and the only certainty is uncertainty. However, the face of war is ever changing.<sup>14</sup> The face, or character, of war is shaped by a myriad of moral, mental, and physical influences peculiar to any given period.<sup>15</sup> Current and emergent threats are substantially different than those posed by competitive nation states and conventional forces that use similar, or at least discernable, ways and means to achieve objectives.<sup>16</sup> Adversaries in the current and future operational environments will, as Marine General Charles C. Krulak predicted in 1997, “not allow us to fight the Son of Desert Storm, but will try to draw us into the stepchild of Chechnya.”<sup>17</sup> Of significance is the emergence of hybrid threats; threats that blend conventional and irregular modes and means across the physical, moral, and mental domains, the waging of war “amongst the people,” and persistent conflict.<sup>18</sup>

The term “persistent conflict” has been ascribed to the conditions that will shape the operational environment in which the United States will likely be embroiled in the 21<sup>st</sup> century. Persistent conflict is defined as, “protracted confrontation among state, non-state, and individual actors that are increasingly willing to use violence to achieve their political and ideological ends.”<sup>19</sup> Against a global backdrop that portends continued globalization, the proliferation of advanced technology and weaponry, the linkage of state and non-state actors, and a continuous and immediate information cycle, conflict in this era will not merely be complicated and violent, it will be complex, ambiguous, uncertain, and violent.<sup>20</sup> This type of environment will most assuredly test the agility, creativity, and suitability of joint doctrine and commanders, and some senior military leaders, to include the former Commander, U.S. Joint Forces Command, have expressed concerns about both.

In a 2009 Memorandum entitled, “Vision for a Joint Approach to Operational Design,” General Mattis declared that he believed that existing joint planning processes provided an effective framework for solving problems. However he stipulated this by adding that he did not believe that existing doctrine adequately emphasized the critical thinking and creativity required to understand and solve problems in the current operating environment.<sup>21</sup> He, like Colonels Greenwood and Hammes, felt that the current practices of commanders and staffs were overly mechanistic and stifled the thinking and learning required early in planning.<sup>22</sup> Directly related to this, and likely a significant cause, was Mattis’ sense that commanders were not fully engaged in planning, and were reacting to the process vice leading it.<sup>23</sup> As a result of this assessment, General Mattis directed U.S. Joint Forces Command to seek ways to incorporate “design related improvements” into joint planning doctrine.<sup>24</sup>

### **An Overview of Design**

Design is a methodology meant to foster critical and creative thinking and to solve problems. It is not meant to be a function or procedure but should be considered more as a “living process” of ongoing learning and adaptation.<sup>25</sup> In essence, Design provides commanders and staffs with a framework for conceptualizing and articulating solutions to problems.<sup>26</sup> It is meant to be a fluid, and highly iterative cognitive approach. Design is meant to enable commanders and planners, or *designers*, to gain a deep and collaborative understanding of the current conditions in an operational environment, as well as the conditions intended upon the termination of operations.<sup>27</sup> Using the language of Design, these conditions are referred to as *the observed system* and the *desired system* respectively.<sup>28</sup> This essentially equates to the current situation and the desired end state within current

doctrine. The difference between the observed state and the desired state is the problem to be solved.<sup>29</sup> Once the problem has been identified, the commander and his team can devise a broad operational approach to effectively address the right problem founded upon a deep understanding of the relevant aspects of the highly complex and interactively adaptive operational environment.<sup>30</sup> The operational approach is what is currently referred to as the operational scheme.

Design is comprised of three distinct, yet non-linear and continuously interactive elements or *cognitive spaces* that correspond with the operational environment, the problem, and the solution.<sup>31</sup> During Design, a commander and staff cognitively interact with these spaces moving freely between them without sequence. Limited only by their creativity and imagination, the commander and staff are not bound by templates, formats or procedure and, through collaborative dialogue, apply this “organizational learning methodology” to gain the understanding, context, and vision required for framing the three cognitive spaces.<sup>32</sup>

Framing is a method that enables commanders and staffs to scope, organize, analyze, synthesize, and ultimately give meaning and structure to the realities of the environmental and problem spaces. Framing is also a way of transcending the initial impression, or outward appearance of an environment or problem, which in fact may only represent symptoms of, or even be unrelated to, the underlying problem that must be solved to attain the desired state.<sup>33</sup> Framing is the commander’s main method of hypothesis, experimentation, query, and cognitive interaction, to gain the necessary perspective to penetrate the complexity of the current operational environment. Framing enables theories and mental or physical models to be explored and/or generated.<sup>34</sup> While there are no limits to how a commander chooses to frame, open and collaborative dialogue, creative and critical thinking, and healthy skepticism

are a few of the key components of framing. Like all of Design, framing is the responsibility of the commander, and he or she is expected to be personally and deeply involved.<sup>35</sup>

The Design concept demands that the commander lead the effort in all three cognitive spaces to frame the environment, frame the problem within the context of the understanding of the environment, and frame the solution in order to devise an operational approach. (See figure 1). In *environmental framing*, which will be examined in detail later, the commander and staff seek to give context to the operational environment. The environmental frame helps the commander by mentally and physically examining desired end states, conditions,

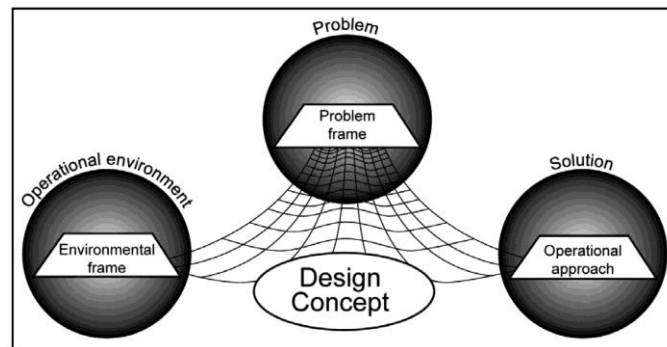


Figure 1. Design Methodology<sup>36</sup>

and relevant actors with increased emphasis on their motivations, thoughts, interactions and relationships.<sup>37</sup> In *problem framing*, the commander and staff further refine the environmental frame and determine what actions are required to transform the observed system into the desired system. In essence, problem framing seeks to determine the nature of the relationships between specific relevant actors, to include existing tensions (friction) and competition in order to uncover any possibilities and peril.<sup>38</sup> Commanders use the results of problem framing to assist them to devise an *operational approach*.

The commander's *operational approach* is a "broad conceptualization" of what he or she intends to do to create the conditions that define the desired end state.<sup>39</sup> Just as is the case throughout Design, there is no outline for, or limitation on, how the commander proceeds in framing or in the end, what he or she includes when depicting or describing an operational approach. Some ideas of what a commander may include in his or her operational approach are the use of lines of effort or operation, tasks, objectives, important linkages, and the desired end state.<sup>40</sup>

### **An Overview of Existing Planning Doctrine**

The approaches, processes, and tools within existing joint operational planning that are comparable to Design are Joint Intelligence Preparation of the Operational Environment (JIPOE), operational design, and the Joint Operational Planning Process (JOPP). Like Design, these operational planning tools promote the understanding required to set problems and devise the broad approaches to solve them. Joint operational planning is a responsibility that is intrinsic to command<sup>41</sup> and is described in Joint Publication 5-0, *Joint Operations Planning* as an adaptive, collaborative, and iterative process that has the inherent flexibility to adapt in the face of dynamic changes in the operational environment.<sup>42</sup> Just like Design, joint operational planning is about understanding and solving problems, and planning is the responsibility of the commander.

Joint Publication (JP) 5-0, *Joint Operation Planning* establishes that commanders play a central role in planning, and are responsible for its direction.<sup>43</sup> Presumably to afford commanders the latitude to command and, just as in Design, to tailor personal approaches to planning, JP 5-0 outlines that this direction is provided through interaction, the provision of guidance on product development, and through key decisions made at various points in the

planning process.<sup>44</sup> From this, one can reasonably glean that commanders, as they should, have a great deal of latitude to determine when, where, and how to inject themselves into the planning process.<sup>45</sup> JP 5-0 does specify that this interaction is typically continuous in crisis action planning. Joint doctrine highlights that commanders develop their initial understanding of the situation, including the environment and problem, via their personal experience, education, judgment, interactions in the planning process, and staff estimates.<sup>46</sup> In existing doctrine, the commander is the central figure in the planning process. However, unlike Design where the commander literally leads the planning group / Design team, in current doctrine a commander's physical interaction with the staff occurs at decisive points throughout the process. One of the commander's most important planning tools is JIPOE.

The main mechanism of understanding and problem setting within the existing joint planning process is JIPOE. JIPOE is an analytical process employed to provide a *systems understanding* of dynamic, interactive, and complex operational environments.<sup>47</sup> JIPOE is conducted early in the process, in parallel, and in support of JOPP in order to assist the commander gain an understanding of the operational environment and visualize the problem.<sup>48</sup> Of importance, JIPOE is an existing, and essential process that, if conducted effectively and fully integrated with JOPP, will assist a commander and staff develop this requisite understanding. It is through JOPP, supported by JIPOE, that a Commander develops what Colonels Greenwood and Hammes coined, "a working definition of the problem."<sup>49</sup> In this way, JIPOE supports the commander and JOPP.

JOPP "provides a logical set of planning steps through which the commander and staff interact."<sup>50</sup> JOPP flows sequentially through seven steps that include planning initiation, mission analysis, course of action (COA) development, COA analysis and

wargaming, COA comparison, COA approval, and plan and order development. JOPP is intended to be a collaborative planning tool for the commander and is meant to facilitate interaction within a staff as well as with higher and subordinate headquarters.<sup>51</sup> JOPP steps and planning tools help generate and collate the cognitive deliberations and creations of the commander and the staff. These should not only include those that emanate from the steps of the process itself, but also those that come from those processes and tools that support and inform planning. In this way, JOPP aids a commander and staff to generate a common understanding, vision, and appropriate plans. Although JOPP may be the process through which commanders develop and organize their plans, it is through operational art and operational design that commanders conceptualize and frame them.

Operational art is a term to describe the creative framework a commander uses to link tactical action in meaningful ways to achieve operational or strategic objectives. It has been defined as “the application of creative imagination by commanders and staffs, supported by their skill, knowledge, and experience, to design strategies, campaigns and major operations.”<sup>52</sup> Operational art is the cognitive pathway through which commanders visualize how to optimally integrate ends, ways, and means within the context of their understanding of the environment and problem. Operational art is the creative spark that enables operational design planning. Operational design, not to be confused with Design, is the “conception and construction of the framework that underpins a joint operation plan and its subsequent execution.”<sup>53</sup> Operational design provides the commander a number of *design elements* that assist him or her generate the requisite understanding and operational vision to solve complex problems and attain objectives. The main elements of operational design include strategic and operational guidance, desired end state, objective, and critical factors

with emphasis on centers of gravity, and the operational scheme. The operational scheme is tantamount to the operational approach developed in Design.<sup>54</sup>

### **Understanding the Operational Environment: Environmental Framing & JIPOE**

No commander, whether he or she uses Design or existing planning approaches, can devise an operational approach or scheme that will accomplish objectives or achieve a desired end state without a deep appreciation and understanding of the environment in which his or her problem is set, and in which operations will be conducted. Within Design, this understanding is gained, in concert with the other frames, through environmental framing. In existing doctrine, this understanding is, at least in part, gleaned from an effective JIPOE. Both will be examined more closely, beginning with environmental framing.

### **Understanding Environmental Framing**

Design uses environmental framing to gain understanding of the operational environment in order to give the necessary context to enable problem solving and the attainment of objectives.<sup>55</sup> Due to the non-prescriptive nature of Design, there is no limit to what lenses a commander chooses to use during environmental framing. However, environmental framing will typically include an examination of products, guidance, and orders from higher which should include a desired end state and strategic or operational objectives that will begin to contrast the existing system (current situation) with the desired system (end state).<sup>56</sup> The commander and staff will also examine, amongst other things, military and non-military conditions, moral, mental, and physical factors, history, cultural, language, and other societal factors, as well as the behavior and relationships of relevant actors in the environment.<sup>57</sup>

Environmental framing and Design in general, places significant emphasis on the behavior, linkages, tendencies and tensions of, with, and between relevant actors.<sup>58</sup>

Identification of relevant and key actors is a critical aspect of environmental framing.

“Relevant actors” are individuals, groups, or systems that act, interact, and transact in the environment. Relevant actors are often, but not necessarily, complex and adaptive. Relevant actors include: friendly, enemy, neutral, or others, such as governments, the population, religious and social networks, criminal organizations, non-governmental organizations, or any other element that exerts influence in the environment which might in some way impact the attainment of the desired end state.<sup>59</sup> Through this method, “key actors,” those that are identified as critical to the operation’s success, are identified for inclusion in continued environmental framing. Those actors, systems, or factors that bear no impact or influence on operations are framed out.<sup>60</sup>

In Design, the identification of key actors and their relationships through environmental framing enables the commander and his or her team to focus (reframe) and expand their effort in order to cognitively explore and learn about the “tendencies” and “potentials” of these systems. “Tendencies” are the inclinations of an actor, or actors, to think or behave in a certain way. Gaining awareness of such tendencies within this frame provides a basis for the commander to hypothesize on current and future patterns of behavior, relationships, and/or the decision making of the actor(s).<sup>61</sup> The commander and team determine the “potential,” meaning the “ability and capacity,” of key actors or other systems to act, change, and/or establish or break linkages due to external influences, or a lack of influences, of the other actors in the operational environment . This includes friendly action or inaction as well.<sup>62</sup> The ultimate goal of environmental framing is to determine “those

interactions and relationships that support achieving the desired system and those that will resist it.”<sup>63</sup> As was aforementioned, environmental framing provides the context for the problem to be framed.

### **Understanding JIPOE**

Just as environmental framing seeks to identify, and provide relevant context for the problem the commander must solve to attain his or her objectives and desired end state, JIPOE supports the commander and operational planning by gaining a holistic understanding of the operational environment for the very same reasons.<sup>64</sup> JIPOE provides the joint force commander with a continuous, dynamic, and expansive systems perspective of the environment by analyzing and synthesizing all relevant moral, mental, and physical elements of the operating environment and their relationship to, or potential impacts on, operations and objectives.<sup>65</sup> Like Design, these elements include, but are not limited to, friendly, enemy, and other groups characteristics, relationships, and capabilities, as well as any related political, military, economic, information, infrastructure (PMESII), and socio-cultural dynamics.<sup>66</sup> These elements can be tangible or intangible. Just as in operational framing, environmental awareness and perspective is initiated by viewing the current environment through the desired end state and strategic and operational objectives set by higher authority, as well as the joint force commander’s assigned mission.<sup>67</sup> This, in part, is the first step of JIPOE, and is referred to as “defining the operational environment.”<sup>68</sup>

After defining the operational environment, JIPOE transitions to “describe the impact of the operational environment.”<sup>69</sup> Similar to Design, this step of JIPOE places significant emphasis on relevant actors and their relationships, to include potentials and tensions, although these are referred to in JIPOE as systems, nodes, and links. This is what JIPOE

refers to as a “systems understanding of the operational environment.”<sup>70</sup> A systems understanding of the operating environment supports the commander’s visualization of the nature, actions, and potential actions of systems that comprise the operational environment. This approach also assists the commander to make assessments of how these factors might affect operations. Just as an understanding of actors, potentials and tendencies in Design enable a commander to anticipate and gain operational vision, a systems perspective developed through JIPOE enables a commander to visualize possibility and peril, centers of gravity and other critical factors that will inform his or her operational scheme.<sup>71</sup>

Not dissimilar to a relevant actor in Design, JIPOE describes a system as “a functionally, physically, and/or behaviorally related group of regularly interacting or independent elements that form a whole.”<sup>72</sup> These elements may be friendly, enemy, neutral, or other individuals, groups, organizations, or other PMESII and socio-cultural entities within the environment. In the same way a commander might frame out those elements not relevant to an operation during environmental framing, JIPOE seeks to identify those systems that are relevant to the operation as well as those that are not. This thoughtful scoping is conducted in order to focus efforts on relevant systems and those nodes and linkages within the system that have influence in the environment and/or that can be influenced.<sup>73</sup>

Nodes are those tangible PMESII and social cultural elements of a system that can be physically or cognitively targeted or influenced. Nodes are akin to relevant actors described in Design.<sup>74</sup> Links are the *behavioral or functional* relationships between systems and nodes. Like Design, JIPOE places emphasis on these relationships, to include, but not limited to, their characteristics, significance, influence, strengths and weaknesses, commonality, and divergences.<sup>75</sup> JIPOE recognizes that these systems, nodes, and links are themselves

dynamic, can be transient in nature, and complex. Together they make operational environments interactive, adaptive and complex. To this end, JIPOE focuses on generating an understanding of the operational environment through analysis and synthesis. For instance JIPOE uses center of gravity analysis, which like many other existing tools is easily adapted to have application well beyond conventional military planning, to give meaning and structure to the environment, and to discover pathways to solve the problem.

### **Synthesizing the Comparison: The Perils and Possibilities of Design**

The comparison of environmental framing and JIPOE provides a microcosmic view of the overarching approaches of Design and the current planning process. The resulting perspective clearly points to the fact that, while terminology may be different, an important issue in and of itself, environmental framing and JIPOE both account for, and provide methodologies that enable, a systems understanding of the operational environment. Both environmental framing and JIPOE consider the very same elements, factors, actors, relationships, behaviors for the very same reasons. Not inconsequentially, joint literature addressing Design indicates that existing planning tools, specifically JIPOE, will be instrumental in supporting Design efforts.<sup>76</sup> If JIPOE is up to the challenge of providing the commander the requisite insights he or she needs to pierce the ambiguity and uncertainty of the operational environment, the claim that existing doctrinal approaches are not up the challenge of the current operational environment is debased. This also suggests, in no small way, that sweeping changes to doctrine are not warranted, and therefore not recommended. There are other aspects of Design that give cause for concern as well.

Design has some unique aspects, specifically its unique lexicon and resistance of any sort of standardization or limitations on how *design* is done, that carry risk that must be

considered. While one can appreciate, and see utility in Design terminology, the reality of crafting a planning approach that encompasses two different languages has the potential to wreak havoc in planning and on the battlefield. As one can see from the limited comparison above, there are inconsistencies between Design terms and existing planning terms that are likely to cause internal friction within the joint headquarters as well as result in a lack of clarity within plans themselves. No matter what planning approach is employed, those that must execute the plans must receive orders that are clear, concise, and unequivocal. If Design is fully integrated into doctrine, these differences in terminology will have to be reconciled.

In addition to the different terminology, the lack of standardization of Design methodologies and tools, which certainly promotes creativity and allows Design to be tailored to unique problems, could also be the source of significant friction as organizations and commands attempt to collaborate and coordinate. Design does not lend itself to, in fact it rails against, the prescription of common approaches or tools. Like the language, whatever Design tools are conceived and employed within a command must be easily integrated with the tools used by planners. Of equal importance is that a joint command's Design methodologies and tools be easily integrated with those used by higher and subordinate commands. If Design is to be integrated into existing doctrine, these risks, coupled with the realization that there are not substantive differences between Design and current approaches, make a strong case that Joint Forces Command should selectively integrate elements of Design into existing planning tools or processes like JIPOE and JOPP.<sup>77</sup> This approach would mitigate a great deal of risk, and capitalize on the elements of Design that would in fact enhance existing planning processes.

One aspect of Design that is certainly a strong point, and that would enhance existing doctrine, is the emphasis of the role of commander in Design. In comparison to joint doctrine, Design is much more clear and unequivocal about the commander's responsibility to not only lead planning, but also, to be personally involved in an enduring manner. Although joint doctrine addresses the role of the commander in planning, the case is not as effectively laid out as it is in Design. While seemingly minor, JP 5-0 uses COA Selection as an example of where and how a Commander interacts with planning. This is clearly not the emphasis on the commander's role early in planning that General Mattis called for. Additionally, JIPOE does not address the role of the commander in any substantive way beyond articulating how the process *supports* the commander. These are two areas where Design methodologies can inform meaningful changes in doctrine. JFCOM should provide stronger emphasis on the role of the commander in JOPP, and more clear examples of how and where the Commander interacts early in the process. JFCOM should also add language to JIPOE that promotes the commander's interaction, and influence in shaping this process. Nonetheless, despite the strength of Design's approach to the role of the commander, it must be noted that expecting a Combatant Commander, or other Joint Force Commander, to be dedicated to Design, or planning, full time is a bit unrealistic. A balance needs to be struck in this area. In addition to emphasis on the role of the commander, Design does provide tools that will better assist the commander as he or she leads planning. One such tool is collaborative discourse.

Design places heavy emphasis on collaborative discourse as a method to promote organizational learning and interaction. Collaborative discourse between the commander and staff not only inserts the commander into the process, but also, it provides a much wider

cognitive aperture that will most assuredly expand creativity and critical thinking, and prove useful in attempts to give structure to ill structured problems. This is one of the most important and transferrable methods of Design, and should be incorporated into existing planning approaches and education.

### **Conclusion**

General Mattis was correct when he identified that existing planning doctrine provides an adequate tool for solving problems. Although he did highlight inadequacies in doctrine and called for the implementation of *design related improvements*, he did not call for sweeping changes. Neither did he explicitly call for a full integration of Design into doctrine. This was prudent on his part. A close examination of environmental framing and JIPOE, a microcosm of Design and existing planning doctrine, highlights that there are significant overlaps in the *raison d'être* of both of these methodologies. This raises questions about the usefulness and rationale of any calls to integrate Design into existing planning doctrine holistically. Coupled with the fact that the duplicative nature of environmental framing, and Design by extension, carries with it distinct risk, these combine to warrant a conservative and pragmatic approach to implementing Design related improvements. The dissimilar language of Design, and its open ended application has the potential to generate friction in planning and on the battlefield. This is unacceptable. More importantly, it is unnecessary.

Overall, as General Mattis pointed out, existing planning doctrine is up to the challenges posed by the current and emergent operational environment. Doctrine does not need to be radically altered, it simply needs to be refined. With relatively modest enhancements spiraled out of Design initiatives, like those that emphasize the role of the

commander in planning, joint planning doctrine will not only be enhanced, but also provide joint force commanders with the tools necessary to penetrate the ambiguity operational environment and plan successful operations. A limited approach to implementing Design-related changes will prove to be an effective response to General Mattis' call to improve existing doctrine, and it will result in commanders leading, and not reacting to, the planning process.

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## NOTES

<sup>1</sup> James N. Mattis, Commander, U.S. Joint Forces Command, *Vision for a Joint Approach to Operational Design*, Memorandum to Joint Forces Command, (6 October 2009).

<sup>2</sup> To distinguish the relatively new concept of “Design” from the existing doctrinal approach “operational design” the former will remain capitalized throughout this treatment. Both will be subsequently defined to further the distinction.

<sup>3</sup> U.S. Army, *The Operations Process*, Field Manual (FM) 5-0, (Washington, DC: Headquarters Department of the Army, March 2006), 3-1. An *ill structured problem* refers to a problem that defies definitive formulation and where there is often not only disagreement on how to resolve it, but also how to define it.

<sup>4</sup> U.S. Joint Forces Command, The Joint Warfighting Center, Joint Doctrine Series Pamphlet (JDSP) 10, *Design in Military Operations, A Primer for Joint Warfighters*, (Norfolk, VA: Headquarters U.S. Joint Forces Command, September 2010), 1.

<sup>5</sup> Ibid., 1.

<sup>6</sup> Huba Wass de Czege, *Systemic Operational Design: Learning and Adapting in Complex Missions*, Military Review, January – February 2009, 2.

<sup>7</sup> Ibid., 1-3.

<sup>8</sup> Dr. Shimon Naveh, Dr. Jim Schneider, and Dr. Timothy Challans, *The Structure of Operational Revolution: A Prolegomena*, (Booz Allen Hamilton, 2009), 1.

<sup>9</sup> T.C. Greenwood and T.X. Hammes, “War Planning for Wicked Problems,” *Armed Forces Journal*, December 2009. <http://armedforcesjournal.com/2009/12/4252237/> (accessed September 2010).

<sup>10</sup> Ibid.

<sup>11</sup> Ibid.

<sup>12</sup> Ibid.

<sup>13</sup> U.S. Marine Corps, *Warfighting*, Marine Corps Doctrine Publication (MCDP) 1 (Washington, DC: Headquarters U.S. Marine Corps, 1997), 3.

<sup>14</sup> Ibid., 3-21.

<sup>15</sup> FM 5-0, *The Operations Process*, 3-4.

<sup>16</sup> U.S. Army, *Commander’s Appreciation and Campaign Design*, TRADOC Pamphlet 525-5-500, (Washington, DC: Headquarters Department of the Army, January 2008), 4.

<sup>17</sup> Charles C. Krulak’s, “*The Three Block War: Fighting in Urban Areas*,” National Press Club, 15 December 1997, <http://www.accessmylibrary.com/article-1G1-20267468/three-block-war-fighting.html>.

<sup>18</sup> FM 5-0, *The Operations Process*, 3-4.

<sup>19</sup> Ibid.

<sup>20</sup> Ibid.

<sup>21</sup> Mattis to U.S. Joint Forces Command, memorandum.

<sup>22</sup> Ibid.

<sup>23</sup> Ibid.

<sup>24</sup> Ibid.

<sup>25</sup> U.S. Army, *Counterinsurgency*, Field Manual (FM) 3-24, (Washington, DC: Headquarters Department of the Army, December 2006), 4-2 – 4-3.

<sup>26</sup> These definitions of Design are a synthesis of the definitions offered by U.S. Army, *The Operations Process*, and the United States Marine Corps Warfighting Publication (MCWP) 5-1, *Marine Corps Planning Process*, (*signed Draft*), August 2010.

<sup>27</sup> Some Design initiatives, like that of the U.S. Army, distinguish design and planning to the point of recommending two separate teams, a design team and a planning team. The Commander and Design team would, through Design, learn about the environment, set the problem, and develop an operational scheme (or idea). The planning team would take the cognitive work of the Design team, and then conduct detailed planning via MDMP or JOPP. This is a dramatically different than approach than U.S. Marine Corps took. The Marines integrated select elements of Design, into the MCPP.

<sup>28</sup> JDSC Pamphlet 10, 3.

<sup>29</sup> Ibid.

<sup>30</sup> Ibid.

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- <sup>31</sup> Stefan J. Banach and Alex Ryan, Ph.D., *The Art of Design: A Design Methodology*, Military Review, (March – April 2009), 105-106.
- <sup>32</sup> FM 5-0, *The Operations Process*, 3-9.
- <sup>33</sup> Ibid., 3-8 – 3-9.
- <sup>34</sup> Ibid., 3-8.
- <sup>35</sup> Ibid., 3-5 – 3-7.
- <sup>36</sup> Ibid., 3-7 This graphic does not depict the U.S. Marine approach to Design nor does it reflect the methodology depicted in the U.S. JFCOM, Joint Warfighting Center, Pamphlet 10. However, this graphic is in consonance with the Joint Forces Command model and does accurately reflect a common understanding of Design methodologies.
- <sup>37</sup> Ibid., 3-10.
- <sup>38</sup> Ibid.
- <sup>39</sup> Ibid., 3-11.
- <sup>40</sup> Ibid.
- <sup>41</sup> Ibid.
- <sup>42</sup> Ibid., 1-4, 1-12.
- <sup>43</sup> Chairman, U.S. Joint Chiefs of Staff, *Joint Operation Planning*, Joint Publication (JP) 5-0, (Washington DC: CJCS, 26 December 2006), III-3.
- <sup>44</sup> Ibid.
- <sup>45</sup> Ibid.
- <sup>46</sup> Ibid.
- <sup>47</sup> Ibid., III-16.
- <sup>48</sup> Ibid.
- <sup>49</sup> T.C. Greenwood and T.X. Hammes, "War Planning for Wicked Problems," *Armed Forces Journal*, December 2009. <http://armedforcesjournal.com/2009/12/4252237/> (accessed September 2010).
- <sup>50</sup> JP 5-0, *Joint Operation Planning*, IV-2.
- <sup>51</sup> Ibid., III-19.
- <sup>52</sup> Ibid., IV-1.
- <sup>53</sup> Ibid., IV-2.
- <sup>54</sup> Ibid., IV-4.
- <sup>55</sup> JDSC Pamphlet 10, 35.
- <sup>56</sup> Ibid., 9.
- <sup>57</sup> FM 5-0, *The Operations Process*, 3-9.
- <sup>58</sup> JDSC, Pamphlet 10, 9.
- <sup>59</sup> Ibid., 9-10.
- <sup>60</sup> Ibid.
- <sup>61</sup> Ibid.
- <sup>62</sup> Ibid.
- <sup>63</sup> Ibid.
- <sup>64</sup> Chairman, U.S. Joint Chiefs of Staff, *Joint Intelligence Preparation of the Operational Environment*, Joint Publication (JP) 2-01.3, (Washington DC: CJCS, 16 June 2009), xi-xix, II-1 – II-9.
- <sup>65</sup> Ibid.
- <sup>66</sup> Ibid.
- <sup>67</sup> Ibid., xvi, II -1– II-19.
- <sup>68</sup> Ibid., xi.
- <sup>69</sup> Ibid., xvii, II-44.
- <sup>70</sup> Ibid.
- <sup>71</sup> Ibid., II -44 – II-49.
- <sup>72</sup> Ibid.
- <sup>73</sup> Ibid., II 45-47.
- <sup>74</sup> Ibid., II-46.
- <sup>75</sup> Ibid., II-46 – II-49.
- <sup>76</sup> Mattis to U.S. Joint Forces Command, memorandum.
- <sup>77</sup> The U.S. Army and U.S. Marine Corps, the two services that have pursued Design initiatives, have integrated Design into their respective planning doctrine in distinct manners. The Army views Design and planning as two

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distinct, yet complimentary components. In their model, which is essentially outlined above, Design would precede detailed planning and potentially be performed a separate team of “Designers.” For the Army, Design will serve as the conceptual arm of planning, and the Military Decision Making Process (MDMP), will be the detailed arm. Although the Army took a “Design and planning” approach, the Marines have taken a “Design in planning” approach. The Marines have incorporated Design into the Marine Corps Planning Process (MCP). The Marines re-tooled the first step of MCP, by integrating the Commanders Orientation, Intelligence Preparation of the Battlefield (IPB), and subsuming Commanders Battle Area Evaluation (CBAE) with “new” Design methodologies, specifically environmental and problem framing, to better emphasize design terms. The first step of MCP is now “Problem Framing.” These are fairly substantial differences in where and how Design belongs in planning.

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