(Photo by Staff Sgt. Michael Lemmons, 3rd Brigade Combat Team, 1st Infantry Division PAO)

During a brainstorming session, a soldier from the 3rd Brigade Combat Team, 1st Infantry Division, writes down his ideas on a dry erase board while attending an "Art of Design" class, 17 August 2012.

Perfection of Process Does Not Equal Perfect Understanding

Maj. David Oakley, U.S. Army

Two distinct aspects of design—as taught at the School of Advanced Military Studies (SAMS), Fort Leavenworth, Kan. —are *the spirit of design* and the practical, methodological approach contained in the *Army design methodology* (ADM).[1] The spirit of design is not concerned with specific processes or particular methods but is a way of thinking that appreciates the interconnectedness, complexity, and uncertainty in the world. Embracing the spirit of design conditions Army planners for the unpredictability that defines their operational environment.[2] The ADM is the Army's practical approach for dealing with that unpredictability—it provides planners a common lexicon to enable effective collaboration and communication.[3] Although the ADM enhances planning, Army planners must remember that design is not a perfected *military decisionmaking process*

2.0, but it is a way of thinking about a complex operational environment.[4]

To highlight these aspects of design, this article applies a framework of *environmental framing*, *problem framing*, and *operational approach*. This framework, derived from Army Doctrine Reference Publication (ADRP) 5-0, *The Operations Process*, will clarify the approach SAMS uses to teach design, convey the value of design for military planners, and illustrate the pitfalls of allowing the practical aspects of the ADM to overtake the spirit of design.[5]

Environmental Framing

The obvious question when trying to appreciate design is, "why design?" The answer comes from the difficulty of understanding the confusing sociopolitical environments in which humans live and the need to explore these spaces for understanding. An operational environment is an open system characterized by complexity, uncertainty, and interdependence.[6] During operations, Army forces are not an external audience viewing the environment but an integral part of a system; their actions will affect the system in indeterminate ways.[7]

Although there is purposefulness within a system (i.e., all the parts that make up an environment), we cannot achieve complete understanding of it. Moreover, we often are incapable of determining cause and effect due to their separation in time and space.[8] While we would like to bask in the comfortable warmth of certainty, our overconfidence is a symptom of hubris that could lead to tragic failure. Even when we believe we *know* the problem and respond appropriately to our *understanding*, we often are reacting to superficial symptoms and not to the underlying problem. As we improve our understanding, we slowly uncloak the veil of ignorance that has rested comfortably upon us.[9] Although our understanding increases and our confidence grows, changes in the environment can make our understanding fleeting and can cause us to fall victim to an enemy more insidious than ignorance—the illusion of understanding.[10]

Problem Framing

Even if military planners *could* understand the complex nature of their environment and appreciate the dynamic challenges it poses, forces still would have to do more than achieve understanding—they are tasked to do something, to achieve objectives. The problem is that in their pursuit of *doing something*, they often introduce thoughtless action into this complex system. Our thoughtless action not only can result in failure to achieve objectives but also can lead to further chaos within the system.

This is our conundrum: How do we ensure purposeful action to achieve our objectives within a complex and dynamic open system that is unpredictable and that is made more complicated and indeterminate by our actions? In addition, once planners appreciate the complexity of the environment, how do they convey their understanding of the environment to others so the unit builds and maintains a collective understanding that enables purposeful action?[11]

Operational Approach

To help planners appreciate their operational environment and understand the various problems it poses, SAMS embraces a dual-pronged approach. Instructors aim to develop within students a deeper appreciation of the spirit of design while providing them the practical tools that the ADM offers. Although SAMS provides a block of instruction focused on design, the instructors and cadre teach the spirit of design (call it a line of effort) throughout the curriculum. They consistently encourage the adoption of design principles and challenge students to ask *why* in order to increase understanding and enable purposeful action. This comprehensive approach toward inculcating the spirit of design in SAMS students is understandable when one considers that design is not a process but a way of thinking. Once SAMS students understand the spirit of design, they realize this way of thinking should not be turned on and off like a light switch but kept active throughout the operations process (during planning, preparing, executing, and assessing).

The practical aspect of the ADM (a second line of effort) is taught exclusively during the "Design of Operational Art" block of instruction at SAMS. Although the practical aspect is useful, the purpose of the ADM is less to educate the mind for uncertainty than to train staff officers on planning methods and language to communicate understanding.

The SAMS dual-pronged operational approach of combining the spirit of design and the practical aspect of the ADM should result in thoughtful and humble leaders. They will become mindful of the herculean task of striving for continued understanding and communicating their understanding to others.

(Photo courtesy of Fort Leavenworth PAO)

Soldiers and their classmates employ design methodology 2 November 2010 while attending the School of Advanced Military Studies at Fort Leavenworth, Kan. In using the Relevant Actor Diagram, the students contemplate the military and paramilitary capabilities of as many relevant actors (enemy, friendly, and neutral) as can be identified in a given operational scenario.

The Need to Know Why

German philosopher Friederich Nietzsche famously quipped, "If you know the *why*, you can live any *how*."[12] Within Nietzsche's simple yet eloquent statement is the acknowledgement that the *how* is not as important as the *why* in determining purposeful action. Unfortunately, all too often as military professionals we are predisposed to embracing the *how*. The Army takes pride in its ability to collect and promulgate tactics, techniques, and procedures and lessons learned. It always searches for optimal solutions to perceived problems. Enamored with finding out *how* to solve a problem, and encouraged by doctrine replete with examples of the *best* processes, steps, and guidelines to quench the soldier's voracious appetite for action, the soldier often fails to answer the *why*.

Previous experiences become problematic when soldiers try to develop understanding through the perfection of a process and not through appreciation of the environment. In contrast, the spirit of design embraces a humble way of thinking that accepts the human inability to achieve complete understanding. The strength of design lies in appreciating the possibilities within an open system rather than embracing a specific process.

Although the practical aspect of the ADM can provide utility if its purpose and value are understood correctly, it is important to appreciate that no planner "perceives more than a tiny patch of the vast tapestry of events," and no process or methodology will change this fact.[13] This humbling notion should remain in every planner's mind to ensure he or she does not confuse the spirit of design with the practical methodology of the ADM. Perfection of process does not equal perfect understanding.

Maj. David Oakley is an Army strategist (functional area 59) at U.S. Army North. He served as a civilian staff operations officer in the Central Intelligence Agency and as a contractor at the National Counterterrorism Center. He has a B.A. in political science from Pittsburg State University, an M.P.A. from the University of Oklahoma, and two M.M.A.S. degrees from the U.S. Army Command and General Staff College. He is a Ph.D. candidate in security studies at Kansas State University. Oakley wrote this article while attending SAMS from 2012-2013.

Notes

1. Army Doctrine Reference Publication (ADRP) 5-0, *The Operations Process* (Washington, DC: U.S. Government Printing Office, May 2012), 2-4. Doctrine identifies the Army design methodology as one of three planning methodologies.

2. William E. Connolly, *A World of Becoming* (Durham, NC: Duke University Press, 2011), 127.

3. ADRP 5-0, 2-4.

4. Ibid.

5. Ibid., 2-6.

6. Yaneer Bar-Yam, *Making Things Work: Solving Complex Problems in a Complex World* (Cambridge: NECSI [New England Complex Systems Institute], Knowledge Press, 2004), 27.

7. Peter M. Senge, *The Fifth Discipline: The Art & Practice of the Learning Organization* (New York: Currency Doubleday, 2006), 67.

8. Jamshid Gharajedaghi, *Systems Thinking: Managing Chaos and Complexity: A Platform for Designing Business Architecture* (Oxford: Elsevier Books, 2006), 33 and 49.

9. Samuel Freeman ed., *The Cambridge Companion to Rawls* (Cambridge: Cambridge University Press, 2003). This is not the same concept as the "veil of ignorance" found in John Rawls' philosophy, which seeks to establish fairness and equality in decision making.

10. Daniel J. Boorstin, *The Discoverers* (New York: Knopf Doubleday Publishing, 2011), 86.

11. Celestino Perez Jr., "A Practical Guide to Design: A Way to Think About it, and A Way to Do It," *Military Review* (March-April 2011): 46-47. Perez speaks about purpose and purposeful action in this article and in other writings and discussions.

12. Friederich Nietzsche, *Twilight of the Idols; or, How to Philosophise With the Hammer*, Richard Polt trans. (Indianapolis, IN: Hackett Publishing Company, Inc., 1997), Kindle Edition, Kindle Location 87-89. One of Nietzsche's main points is the importance of questioning "idols" and not leaving anything sacrosanct, in order to increase understanding. Although Nietzsche was mainly focused on religion, his emphasis on constantly questioning and reassessing our reality is valuable to military professionals in conducting operations.

13. Marc Bloch, *The Historian's Craft* (Toronto: Alfred A. Knopf, 1953), 50.

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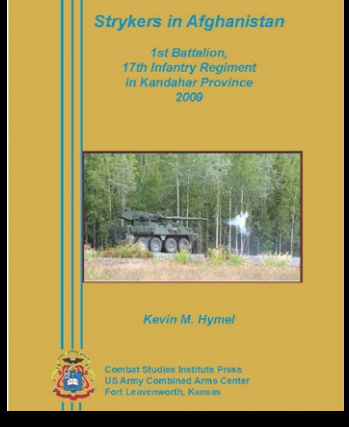

Strykers in Afghanistan

Kevin M. Hymel, Combat Studies Institute

With the Taliban threatening Kandahar city in the summer of 2009, the Soldiers of the 1st Battalion, 17th Infantry – part of the first Stryker brigade to deploy to Afghanistan – mounted a series of actions to destroy insurgent power in the region. Strykers in Afghanistan tells the story of the battalion's initial operations, focusing on its difficult fight for the Arghandab Valley. The valley, located near Kandahar city, was a Taliban safehaven characterized by dense orchards and irrigation canals.

This study by the Combat Studies Institute recounts how the men of 1-17 IN took advantage of their equipment and adapted their tactics in the face of a determined foe defending complex terrain. To download a copy, please go to: http://usacac.army.mil/cac2/csi/