

Putting Art Back in the Art of War

Some thoughts toward developing the skill of operational design
by Capt Michael D. Minerva

Most discussions about operational design seem to center on “wicked problems,” framing the environment, and chaos theory (as if any of us understand higher-level theoretical physics). From there, the practice tends to devolve into a PowerPoint template with a few slides defining the problem and the environment, and somewhere along the way it morphs into a course of action (COA) brief. We end up focusing more on the fact that our task has to deal with the operational level of war and less with actual design. As an institution, we tend to look at whatever slides our predecessor used, make some tweaks, and call it a design. But that is not design. It is similar to when instructors discuss the idea of the *coup d’oeil* and explain that you just need to read more military history, as if that alone is the ticket. Little is given by way of tangible skills, drills, or techniques we can use to develop the vision required for operational design, which begs the question: How do we learn how to design operations?

In Marine Corps training, we address operational design from an operational perspective but with scant attention to the design perspective. In other words, when we teach design, we do so in terms of problem framing and problem environment. One key thought missing in all of this is how we develop the actual skills of designing operations, campaigns, and strategies. The immediate and quasi-doctrinal response is staff rides, war games, tactical-decision games, and the critical study of history. Indeed, all of these do help develop judgment and the more elusive *coup d’oeil*, but really these methods fall short

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PowerPoint skills are not a substitute for skills in operational design. (Photo by Marine Forces Europe-Africa.)

of developing the overarching ability to *design* an operation that will occur in time and space, run from beginning to end in a coherent thought, and ultimately be the expression of a singular thought. These methods are effective for teaching valuable lessons and forcing decisions—critical skills in the military. We do not do them nearly in proportion to how much we talk about them, but that is another topic entirely. These methods are geared toward developing

understanding, which is good—critical even—but we give little attention towards developing vision. This lack of training when it comes to design is compounded by the fact that we affirmatively design very little in practice.

We operate with a plug and play mentality, not a wholistic approach to operational design. Each staff section brings their piece of the proverbial pie to the operational planning team (OPT) and rarely is there time for the com-

mander to ensure that his “pie” is not composed of a couple slices of cherry with one or two pumpkin slices, which are split by a random slice of lemon merengue (which is only there because it is the CO’s favorite), and then there is a random plate on the side with a slice of Key Lime (but the whipped cream is missing). Once every section has contributed their piece to the sampler, the commander is left with the unwieldy task of synthesizing and synchronizing all of it and is supposed to be able to craft his intent or mission statement and task his subordinates based on that “design.” You do not have to be a renowned food critic to know that those flavors do not go together, and when put side by side, they spoil the whole thing.

Operational Design is Inherently Artistic

Military theorists and publicists and especially professional practitioners love to point out that war is an *art*; certainly, there is a science of war, but the practice of it, that is art—poetry in motion. We love it because art does not have hard and fast rules, and we can “craft” new solutions for problems, and everyone can contrive a different but seemingly valid solution to a given problem. We love it because it invokes a carefully developed special insight. Art supersedes the ordinary. Art is special. At the end of the day, we love it because art invokes beauty, and beauty, after all, is in the eye of the beholder. We love that war is an art because it gives us an opportunity to be creative and conduct original thought.

With this infatuation with war being an art, why then, one might ask, do we neglect art? Clausewitz, always quick to use an art comparison to help visualize the vague, said,

Architects and painters know precisely what they are about as long as they deal with material phenomena. Mechanical and optical structures are not subject to dispute. But when they come to the aesthetics of their work, when they aim at a particular effect on the mind or on the senses, the rules dissolved into nothing but vague ideas.¹

Thus, we should look to art to develop the skill of operational design, as

Clausewitz so frequently did. Certainly, the mental models and disciplines of defining the environment and problem framing taught in Command and Staff Colleges are helpful, but at the end of the day, *design* is not done in Power-Point—it is done with the right side of our brains. Unfortunately, that is the side most military professionals leave underdeveloped.

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If skills and techniques are developed in the company grades, then the field grades should be about the art. As Gen Mattis explained, mastery of the instruments of war permits improvisation on the battlefield, “just as a jazz musician masters his musical instrument.”² This is why the very best renaissance painters spent their early years of training by sketching in charcoal. This is why musicians spend countless hours practicing scales and learning basic chords. Furthermore, this is why the best operational artists spend hours in planning field exercises, ranges, and war games using C2PC or whatever the program of the day is. While we are all comfortable with the aphorism about being brilliant in the basics, what distinguishes the greats’ focus on the basics is that they do so with an eye toward the transcendent that they were pursuing.³ In our field, we must understand the strategic implications of every tactical event. While the transcendent provides context for the basics, understanding it comes from a well-rounded mind.

Officer Education Must Be Well-Rounded

In this STEM-driven era when everything is cyber-hyphenated, it is important not to lose sight of what is true about the military profession and

its status as an art that is practiced and dependent on judgment. That is, that war is in fact a liberal art—naught but an extension of the policies of nations. This is why Scharnhorst’s reforms of the Prussian military instituted general education examinations for officer candidates:⁴ “Only a broad, liberal education in the arts and sciences, to include ‘a general spiritual culture,’ could develop leaders capable of waging war as an art.”⁵ Indeed, when he first became the director of the Berlin Institute, “[t]o broaden their educational horizons, Scharnhorst arranged for officers to attend evening lectures ... on languages, philosophy, literature, and the natural sciences.”⁶ As Boyd was so quick to remind us, war is a human endeavor: ideas, people, things—in that order. If science contributes things, ideas and people are the realm of the liberal arts:

The fact that the officer [is] continually dealing with people require[s] ... an understanding of human attitudes, motivations, and behavior that only a liberal education stimulate[s]. Unlike other vocations, the profession of arms demand[s] a broad, general education for its mastery.⁷

A case in point on the intertwined nature of these liberal arts is the pairing of Barbara Tuchman’s two works: *The Proud Tower* and *The Guns of August*. In the former, she chronicles the cultural shifts that take place in the years leading up to August 1914, and only after framing the Great War with the art and philosophy of the times, does she explain the why and how behind the guns of August. Where better to learn about the vagaries of the human condition that could plunge the world into war than a detailed account of the changes in philosophy and art of the time? What better way to learn about the human condition generally than the study of art?

Putting Art Back in the Art of War

Military officers should study art to develop the skill of operational design. In order to develop the skill of designing solutions for “wicked problems,” we must learn how to image an entire campaign from the current state to the desired future state and understand

what that image means at our respective level. We do not have to be able to predict the future, but we must have the imagination to design a campaign. Certainly, there will be holes in intelligence and we will not have a perfect understanding of either the enemy, the problem, or the operating environment. However:

It is the faculty of quickly and accurately grasping the topography of any area [read environment] which enables a man to find his way about at any time. Obviously this is an act of the imagination. Things are perceived, of course, partly by the naked eye and partly by the mind, which fills the gaps with guesswork based on learning and experience, and this constructs a whole out of the fragments that the eye can see; but if the whole is to be vividly present to the mind, *imprinted like a picture*, like a map, upon the brain, without fading or blurring in detail, it can only be achieved by the mental gift that we call imagination. *A poet or painter may be shocked to find out that his Muse dominates these activities as well ... for if imagination is entirely lacking, it would be difficult to combine details into a clear coherent image* [emphasis added].⁸

This is precisely the “imaging” that Gen Mattis used so effectively as a battalion commander during the Gulf War.⁹ This means we need to have an imagination rooted in the possible and fully capable of reading between the lines, seeing the meaning within.

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Mattis and Clausewitz both point toward using your learning and experience as the basis for filling in the gaps in intelligence. But if an officer does not even have the capability to image an entire campaign or his respective role in the campaign in a format other than the PowerPoint their predecessor used, no amount of intelligence report-



16th century artist Giorgio Vasari's writing provides a useful a framework for learning the skill of operational design by explaining five principles of art. (Vasari's self-portrait: Galleria degli Uffizi, Florence.)

ing or Marine Corps Planning Process (MCP) deliverables will help. But having studied a variety of art in a disciplined manner will equip an officer's your mind with the constructs necessary to image an entire campaign. After all, “[t]he liberal arts are all related to each other in some way.”¹⁰

Five Principles of Art for Operational Design

In 1568, a painter and architect from Arezzo, Italy, named Giorgio Vasari published *The Lives of the Most Eminent Painters, Sculptors, and Architects*

in which he chronicles the progress of art through history to his own times.¹¹ Vasari provides a framework that proves useful for learning the skill of operational design by explaining five principles of art: good rule, order, proportion, design, and style. These principles can provide a mental framework for designing an operation, and there is something for

every military officer in Vasari's explanation of these principles.

By good rule, Vasari means the basing of modern works on the plans of the ancients.¹² Thus, we must study campaign plans (not mere battles) from history, both recent and ancient. This is nothing new to the military mind as the critical study of history is unanimously heralded by every great strategic thinker, so I will not spend any more time addressing the development of good rules except to note that this principle, helps prove the point: we ought to study good designers, regardless of their craft.

By order, Vasari means the difference in architectural styles so that each part is appropriate to the overall work.¹³ In essence, so that you have a whole pie, not a collection of pieces, or a natural forest, not a random collection of dissimilar trees. Do not mistake this to mean that contrary opinions should be stifled in the design process, for those voices are essential. Rather, it is so that the end product makes cogent sense together and is not a hodge-podge that has been kludged together with a title slide that says “Operational Design” on it. The component parts must be appropriately related to each other so that our whole is decent and orderly. We miss the proverbial forest—that final design—far too often because we are all independently focused on ensuring our preferred tree has a place in the forest and gets the water and sunlight that is the CO's attention that we think it deserves. Palm trees do not appropriately grow next to Douglas Firs. The company grades are the time to study what makes each type of tree grow in what type of environment. The field grades are for studying forests.

By proportion, we mean that “universal law ... which stipulates that all bodies must be correctly aligned, with their parts properly arranged.”¹⁴ The design must address the various aspects of the “wicked problem” proportionately to their respective degrees of influence. This law ensures the appropriate means for the ends and that all of the various tools that make up the means are used in a balanced way. This principle ensures we keep Clausewitz's trinity in balance by ascribing the appropriate

amount of weight, time, effort, priority, and resources where they need to be. When we study art and see that for example, the subject is out of proportion to the whole, we will stop to look for a reason explaining why that might be the case. By training our eye to recognize what proper proportionality looks like, we will better recognize when something in the environment is out of proportion and be able to look into why that might be the case and make appropriate adjustments. Design requires proportionality.

Vasari explains design as

the imitation of the most beautiful things in nature, used for the creation of all figures whether in sculpture or painting; and this quality depends on the ability of the artist's hand and

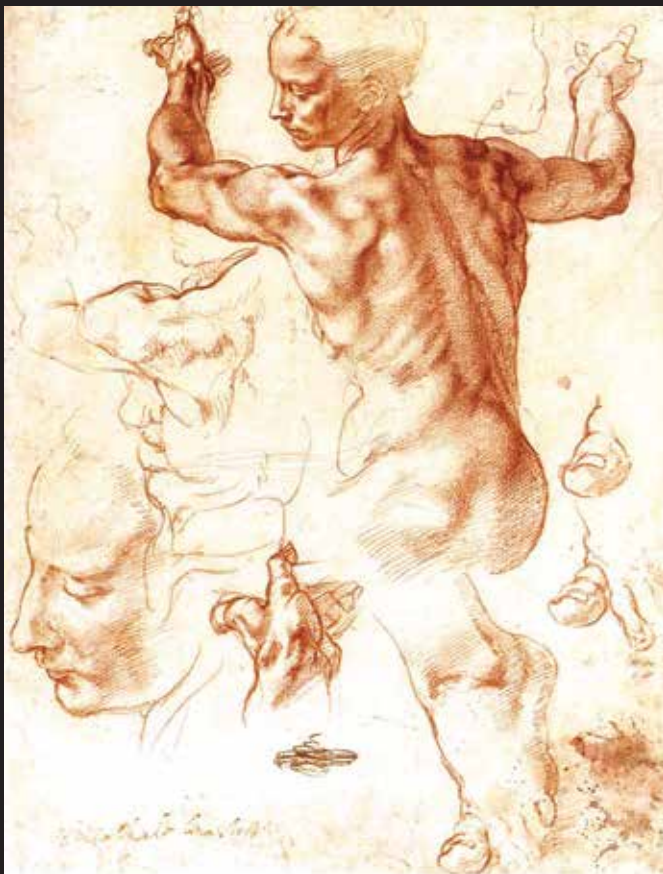
mind to reproduce what he sees with his eyes accurately and correctly on to paper or panel or whatever flat surface he may be using. The same applies to works of relief in sculpture.¹⁵

If the reader has not abandoned this article yet, this explanation may tempt you, but bear with me. When Mattis discusses "imaging," this is what he is talking about. Taking the image in your mind's eye and turning it into reality on the battlefield. For Vasari, design is the ability to take a subject (for us, an operation) and produce it. For military planners then, design is largely a synthesis of the first three principles. Can we take what we know from history and experience and reproduce it in a way relevant to today? More precisely, can we take what we have

imaged and make it reality? For Vasari, that is design.

Finally, Vasari defines style as the zenith when "the artist achieves the highest perfection of style by copying the most beautiful things in nature and combining the most perfect members, hands, head, torso, and legs, to produce the finest possible figure as a model for use in all his works; this is how he achieves what we know as fine style."¹⁶ As with his principle of design, style seems to be an amalgamation of his previous principles. Nonetheless, there is an independent lesson to be applied from this principle. Distinctiveness, consistency, and completeness are what make style. This is the level at which the personal touch comes in. Michelangelo changed the way the human figure was

"Studies" - partial drawings to prepared for paintings or sculpture are a part of an artist's design process. (Michelangelo's study for *The Libyan Sybil*, Museum of Modern Art, New York)



***The Ride of the Valkyrie*. Illustration by Arthur Rackham in *The Rheingold and the Valkyrie* Wagner, Richard (translated by Margaret Amour) 1910. (London:William Heinemann, New York: Doubleday.)**

painted not with the painting of a single figure but with the consistent, distinctive painting of hundreds of different figures in one complete, holistic work (the ceiling of the Sistine Chapel) and his style was immediately copied by an overawed Raphael with an ode to the master (the School of Athens). His style was distinctive. It was consistent. It was complete. Forgive the overwrought analogy, but he made a pie that had a consistent texture, taste, and degree of satisfaction throughout—not a disjointed sampler.

So far, this has been an explanation of the general reasons why the study of the arts is useful for developing the skill of operational design. Now, a few brief, but specific, examples to help make the point.

From 1508–12, Michelangelo painted the ceiling of the Sistine Chapel—providing an epic view of thousands of years of history and theological development chronicling from the beginning of time through the fall of man and Christ’s family history together with both Christian and pagan prophecies of atonement intertwined. Set the religious aspect aside and just ponder the historical and philosophical scope of his vision while minding the minutest of details. That is operational design. Particularly when one glances down the alter wall of the chapel and sees again the scope of his vision in his Last Judgment—where all of the prophecies he foresaw the need to include in the ceiling nearly 30 years previously come to fruition in that later painting. The perfect rule, order, proportionality, design, and style are all plainly visible in either of these independent works and the scope of vision from beginning to end is staggering. It comes as no surprise then that Michelangelo was put in charge of designing the fortifications of Florence when the combined forces of the Holy Roman Empire and the Papal Armies despite his complete lack of military experience.¹⁷ He knew the art of design.

If Renaissance art does not suit you, although it seems to be the best for learning operational design due to its fountainhead of realism, try music. Explore Richard Wagner’s *Der Ring Des Nibelungen* beyond the well-known

Flight of the Valkyries, which is but one of nearly 180 pieces of music that make up the four-part opera spanning creation and destruction based on Norse lore. Analyze it using Vasari’s principles as a framework and see what you learn about designing a thing from beginning to end. Vasari gives us a few tools we can apply to any number of artistic endeavors, be it painting, sculpture, music, novels, or architecture that will enable us to better understand our own art.

The lesson is plain there is more to learning our craft—our art—than reading military history. The more ways we can expose ourselves to wide ranging, big pictures with grand scope of vision that are well-executed the better we will be at operational design. The idea is not that we will learn the secrets to great military strategy hidden in works of art. The point is that by conducting a disciplined analysis of various designs we will become better designers ourselves because understanding these principles will give us flexibility for the ever-changing environment of war. When a new condition arises, we will instinctively understand the degree of importance relative to our desired future state, and a commander is thus “capable of judging situations in terms of both their own action and the reaction of their opponent and choos[ing] their course from a flowing serious of possibilities rather than a static menu of certain formulae.”¹⁸ This will help us learn to see the forest and still appreciate the individual trees. We ought to apply Vasari’s framework informally in our own study of the art of war and formally in our PME curriculum. Vasari gives us a form of analysis. Practice it on every work of art you can, then use it on our martial art. Once you are comfortable applying Vasari’s principles to the fine arts, take a campaign from antiquity and analyze it through his prism. The more we practice applying those principles in a variety of contexts, the better warfighters we will be because we will be fighting with both sides of our brain.

>Author’s Note: The views presented herein are those of the author and do not necessarily represent the views of the DOD or its components.

Notes

1. Carl von Clausewitz, *On War*, eds. and trans. Michael Howard and Peter Paret, (Princeton, NJ: Princeton University Press, 1976).
2. Jim Mattis and Bing West, *Call Sign Chaos: Learning to Lead*, (New York, NY: Random House, 2019).
3. For this thought, credit must be given to Capt Adam J. Crane with whom the author has had countless discussions regarding this topic.
4. Samuel P. Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations*, (Cambridge, MA: Belknap/Harvard University Press, 1957).
5. Charles Edward White, *The Enlightened Soldier: Scharnhorst and the Militärische Gesellschaft in Berlin, 1801–1805*, (Westport, CT: Praeger, 1989).
6. Ibid.
7. Ibid.
8. *On War*.
9. *Call Sign Chaos*.
10. Giorgio Vasari, *Lives of the Artists, Vol. I*, ed. and trans. George Bull, (New York, NY: Penguin Books, 1965).
11. This work is a tour de force on the progression of the human experience and the evolution of design in its own right.
12. *Lives of the Artists*.
13. Ibid.
14. Ibid.
15. Ibid.
16. Ibid.
17. William E. Wallace, “Dal disegno allo spazio: Michelangelo’s Drawings for the Fortifications of Florence,” *Journal of the Society of Architectural Historians*, (Berkeley, CA: University of California Press, 1987).
18. Jon Tetsuro Sumida, *Inventing Grand Strategy & Teaching Command: The Classic Works of Alfred Thayer Mahan Reconsidered*, (Baltimore, MD: Johns Hopkins University Press, 1997).

