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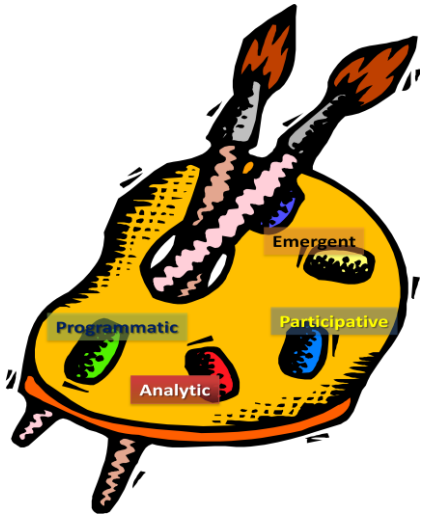
Design and the Prospects for Decision

by Christopher R. Paparone

The designers may begin with a vague image of some ideal solution. They factor their decision into a sequence of nested design and search cycles, essentially working their way through a decision tree, with the decisions at each node more narrow and focused than the last. Failure at any node can lead to cycling back to an earlier node. Thus a solution crystallizes, as the designers grope along building their solution brick by brick without really knowing what it will look like until it is completed.

--Henry Mintzberg, Duru Raisinghani and Andre Theoret,

"The Structure of Unstructured Decision Processes"



Designers do not rely on set decision-making schemes; they design them as they go. To embrace a more open philosophy of deciding, this essay calls for an enlargement of how decision is defined and develops a typology that serves the military designer as would an artist's palette. Unfortunately, the US defense community is stuck on decision-making models which are the antithesis of what design philosophy advocates.1 These models – the programmatic and rational-analytic– are so taken-for-granted that they blind the culture to alternatives.

One could argue further that the US Defense Department's "planning culture" clashes with other stakeholders while seeking to impose its programmatic and analytic decision templates. Here is a quote that exemplifies this quest taken from Michèle A. Flournoy's 28 Jan 2008 testimony to Congress calling for a Goldwater-Nichols Act equivalent for the interagency:

> … unlike the U.S. military, which has doctrine and a standard approach to planning its operations, the U.S. government as a whole lacks established procedures for planning and conducting interagency operations. Each new administration tends to reinvent this wheel, either issuing new Presidential guidance—which too often overlooks the lessons learned and best practices of its predecessors—or ignoring the issue entirely until it faces an actual crisis. This ad hoc approach has kept the United States from learning from its mistakes and improving its performance in complex

[1] Such as the joint operation planning process explained in US doctrine, Joint Publication 5-0, *Joint Operation Planning*.

> contingencies over time. It is no wonder that U.S. personnel who have served in multiple operations over the last 10-15 years lament feeling a bit like Sisyphus.[2]

For the more reflective military designer, the proposed imposition is flawed. First, the traditional rationalistic military decision methods hardly account for *craftwork* and *emergent tasks* that are unpredictable and inherent to complex operations.[3] Second (and this is the thesis of the present essay) ***there are other legitimate ways to conceive of deciding beyond the structured programmatic and rational-analytic models used by the US military, namely, the unstructured participative and emergent processes***.

Before describing these alternatives, a critique of the programmatic and rational analytic models is in order.

Critique of Programmatics

The US defense establishment's cultural infatuation with programmatics is historically linked to the turn of the last century's industrial-aged, ***scientific management*** (otherwise known as *Taylorism*).[4] This infatuation grew as Robert S. McNamara introduced a form of scientific management (operations research and systems analysis— ORSA) as President Kennedy's Secretary of Defense in the early 1960s. ORSA originated as a military science of mathematical modeling for the optimized allocation of scarce resources to be used against a definable threat. The attractiveness of this paradigm of planning is self-evident to those who have to make decisions about prioritizing the use of resources, illustrated by the DOD's Planning, Programming, Budget and Execution (PPBE) and other force planning processes. To the Pentagon culture, the programmatic paradigm is so ingrained as to make challenging it near impossible.[5]

A looming issue with programmatic planning is that it assumes a stable threat environment so that tasks can be studied (and published in doctrinal manuals) and routinized

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[2] Michèle A. Flournoy, "Achieving Unity of Effort in Interagency Operations, Center for a New American Security," Testimony to the House Armed Services Committee. There are many other calls for unified decision-making for the interagency, such as perhaps the most extensive and scholarly account by Tonya L. Jankunis, "Military Strategies are from Mars, Rule of Law Theorists are from Venus: Why Imposition of the Rule of Law Requires a Goldwater-Nichols Modeled Interagency Reform," *Military Law Review* (Department of Army Pamphlet 27-100-197), Vol. 197, 2008, pp. 16-102. She states: "The only viable means of achieving the successful implementation of the rule of law in failed or fragile states is a robust coordinated interagency planning and implementation process" (p. 26). The idea of integrating Federal government toward unified planning made the news recently. For example, see Nathan Hodge, "Lawmakers Seek to Revamp National Security Coordination," The *Wall Street Journal*, 29 Sep 2010. Hodge reports that House Armed Services Committee Chairman Rep. Ike Skelton (D., MO) and Rep. Geoff Davis (R., KY) are proposing a bipartisan bill – the interagency equivalent to the Goldwater-Nichols Act of 1986.

[3] See this argument elaborated in Essay #3 of this series, "Design and the Prospects for Mission Analysis."

[4] A brilliant history of Taylorism is found in Judith A. Merkle, *Management and Ideology: The Legacy of the International Scientific Management Movement* (Berkeley: University of California, 1980).

[5] Frederick C. Thayer links Taylorism to McNamara's PPBE quite effectively in his article, "Productivity: Taylorism Revisited (Round Three)," *Public Administration Review*, Vol. 32, No. 6 (Nov. - Dec., 1972), pp. 833-840. See the present author's critique, "PPBE: A Red or a Blue Pill? Can Defense Sensemakers Really be Rational in a Hyperturbulent World?" The DOD's more recent infatuation with Taylorism is its near-wholesale adoption of "Lean and Six Sigma" methods. See also: "A Values-Based Critique of Lean and Six Sigma as a Management Philosophy."

(trained-to-standard) into "capabilities" to achieve them during future military operations. In other words, military organizational capabilities are constructed based on the results of programmatic decision-making – funding is justified, equipment is purchased, and people are recruited, trained and readied to accomplish them. The process of equipping, manning, and training can take years or decades to accomplish, yet the original environmental assumptions that gave birth to the programs are no longer be valid. Emergent threats are unpredictable; meanwhile, programmatic decision-makers wager that they are determinable. This is a losing bet.

The programmatic model's "big brother" is the rational-analytic model. The rational analytic model assumes that the capabilities developed under the programmatic model can be put together in various configurations, like building blocks. Programmers call this building-block quality "modularity" and when ordered to perform military operations, rational-analytic planners "task organize" these modular capabilities to address the contingencies at hand.[6] Criticisms of the combined programmatic and rational-analytic logics are many. Here are a couple.

Critique of Rational-Analytic Decision-Making

The first flawed assumption of the rational-analytic model is that the programmatic decisions made about modular force capabilities were correct, or at least correct enough. Recent US military history is replete with examples of ill-preparedness in that regard. The Vietnam War and the post-9/11 wars demonstrate that the marriage of McNamara style force planning and operations planning have not worked well and ironically have led to wasteful practices. (If one were to counter-argue, using the first Gulf War (1991) as an example of rational-analytic decision success, this would be a strawman fallacy considering that the 2003 invasion of Iraq was a morphed continuation of that same war which is still ongoing today, twenty years later.)

The second assailable assumption is that the policy ends that drive the programmatic and rational-analytic models are immaculately conceived. Programmatic and rational analytic decision-making assume that policies (that create goals, objectives or end-states) produced are inalienably valid.[7] However, the more volatile, uncertain, complex and ambiguous (high VUCA) the world is, the less likely that pre-execution policies and strategies will prove to be valid.[8] On closer reflection (required by design philosophy), these policies and strategies (especially in the US system) are based in some sort of politically-conceived, consensus-based position. Although assumed to be so, the efficacy of the military planning (whether good or bad) is not tied to an

[6] For a detailed explanation, see the present author's previous work with Dr. Melissa Schilling, Modularity: An Application of General Systems Theory to Military Force Development.

[7] The military culture in particular emphasizes discipline in following orders from higher authority. The US system of governance demands this subordination of the military to civilian authority. The old Tennyson adage applies, "Ours is not to reason why, ours is but to do or die." This is why design philosophy may not work in the US military – in many ways its philosophy of free and open questioning is antithetical to appropriate civil-military relations in our republican democracy.

[8] The best critique that exposes this fallacy is Henry Mintzberg, *The Rise and Fall of Strategic Planning: Reconceiving roles for Planning, Plans, Planners* (NY: Free Press: 1994). VUCA is an acronym for Volatile, Uncertain, Complex, and Ambiguous. The acronym comes from the National Defense University. See *Strategic Leadership and Decision Making*.

objective-based, near-certain, cause-and-effect policy science. Unfortunately, it is tied to a fallible-, and many times ephemeral-, political accommodation.[9]

The next two forms of deciding are unstructured; hence, the military community may find them neither psychologically nor culturally comfortable. Yet these forms of decision are important to the military designer.

Participative Mode

Related philosophically to the idea of ***critical dialogue***,[10] this style is very different the programmatic and analytic styles because it is a discursive-based decision process. Unstructured decision making is defined as "decision processes that have not been encountered in quite the same form and which no predetermined and explicit set of ordered responses exists in the organization."[11] The key to deciding is achieving consensus on ends and ways among the stakeholders – those who are interested and involved in the situation (See insert below, *Wilkof's Typology of Tactics*).[12]

Given the tactics for consensus, one can also diagnose the level of complexity of the agreement process when it comes to ends and means/ways (Figure 1). At any point in time, the accommodation patterns can shift, and the decision model moves from type-to-type. Given the wickedness of the situations faced, this can seem like an endless "merry-go-round" of irregular decision-making (perhaps US Foreign Service officers are more psychologically and culturally comfortable with this dynamic than are US military officers—more on this later). As discussed in Essay #4 of this series, *critical dialogue* can play a big part in participatory deciding, particularly in the context of design. When trying to making sense of wicked situations, institutions are well served by calling in "outsiders" as its own ingrained patterns of thinking and behaving may be getting in the way of *frame reflection* (explored in Essay # 5). In addition, institutions may not have those who have been immersed in the historical and cultural aspects of the situation. Hence the decision situation may require including a diversity of minds, keeping as many options open as possible; whereas, the programmatic and rational-analytic models would call for a single, best way to proceed and then command and control it to fruition. Participative ways of deciding may consist of accommodating multiple, interactive actions that may or may not work across multiple organizations (some have referred to this as *coordinative*

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[9] Charles E. Lindblom, "The Science of Muddling Through," *Public Administration Review*, Vol. 19, 1959, pp. 79-88.

[10] There is a lot written in the subject of "communicative rationality," a term coined by Jürgen Habermas of the Frankfurt School. The term has also been linked to the idea of discursive planning, or *communicative planning*. See the following references. Ernest R. Alexander, "Rationality Revisited: Planning Paradigms in a Postmodernist Perspective," *Journal of Planning Education and Research*, 2000; 19; 242-256. Diana MacCallum, "Participatory Planning and Means-Ends Rationality: A Translation Problem," *Planning Theory and Practice*, 9 (3), 325-343. Cevdet Yilmaz, "Planning and Planner in a Post-positivist Global World: Towards a New Paradigm," *Journal of Economic and Social Research*, 5 (2), 21-46.

[11] Henry Mintzberg, Duru Raisinghani, and Andre Theoret, "The Structure of 'Unstructured' Decision Processes," *Administrative Science Quarterly*, 21, 1976 (pp. 246-275), p. 246.

[12] Consensus, in its most democratic form, means, "problem solving that is open to creative, new possibilities in a climate that is created to ensure all people and views are heard, where unanimity is desirable, but not required." From T. Owen Jacobs, *Strategic Leadership: The Competitive Edge*. (Washington, D.C.: Industrial College of the Armed Forces, 2002), p. 119.

planning).[13] They may also involve negotiations ("getting to yes") between people, factions, nations, etc.[14]

[13] Alexander (Op. cit.).
[14] See Roger Fisher and William Ury, *Getting to Yes: Negotiating Agreement Without Giving In*. (2d ed.) (New York, NY: Penguin Books, 1991).

Wilkof's *Typology of Tactics* for Achieving Consensus

Morally "clean" tactics include:

- Consensus through ***agreement*** means that everyone shares the same view of the action that should be taken in a certain situation. It is usually generated by reasonable, logical arguments, whether based on technical, market, strategic, political or other issues.
- Consensus through ***expertise*** occurs when certain or enough technically respected people believe in a course of action that others either lead their support or at least do not interfere with or sabotage the action. It occurs when people do not want to invest the time and energy in figuring out something for themselves. They will agree if credible others say the situation, solution, or whatever is acceptable.

Machiavellian (seamy/"dark-side") tactics include:

- Consensus through ***exhaustion*** is a tactic for generating consensus used when an issue has been hashed and rehashed over a period of time and one party finally gets so tired or decides they have better things to do that they do not want to spend any more time and just shut up about the issue at hand.
- Consensus through ***pruning*** consists of cutting down (pruning) the list of influential people among whom consensus by agreement is attempted. This is a tactic to avoid getting many people in the consensus by not telling many; thus, those who do not know will not or cannot object. This tactic is risky because people finally find out they may upset the consensus. The goal is to have enough influential people on board that when others find out they go along with the project, often out of consensus through expertise.
- Consensus through ***destruction of credibility*** consists of rendering someone non-influential by calling that person's credibility into question so that s/he will shut up or so that others will stop listening to him/her. The two major ways of calling someone's credibility into question are by bringing up mistakes made on past projects or by demonstrating in front of many others that s/he is wrong on a set of points or issues.
- Consensus through ***ignoring*** occurs when one does not listen to someone else or some other group. The hope is that the people or group in question are not influential and/or will tire of fighting over the issue and give up.
- Consensus through exchange is generated when at least two people or groups agree that neither party will create problems for the other's project.
- Consensus through ***sidetracking*** is accomplished by getting a person who has been critical of the project interested in other projects, thus eliminating him/her from the consensus group. This tactic is used with the people whose technical expertise is not particularly well respected.
- Consensus through ***flattery*** is implemented by elevating someone's influence so that s/he is no longer critical of a project. This is accomplished by diverting his/her attention to a small, insignificant issue, elevating his/her influence *vis-à-vis* that issue and thus increasing his/her positive visibility in the [organization]. His/her gratitude for getting positive exposure prevents him/her from being overly critical of the project or other issues. This tactic is also used with people whose technical expertise is not particularly well respected.
- Consensus through ***co-opting*** consists of making a person who has been critical of a project a member of the project team. The purpose is to change his/her criticism from a destructive to a constructive form. Because s/he is now a member of the project team, s/he feels more ownership for the problem and feels that his/her criticism applies to the work s/he is doing as well as the work other teams members are doing. This form of consensus generation is used with people whose technical expertise is either respected very highly or at least somewhat respected.
- Consensus through ***threat***, when it works at all, only works in a superior-subordinate relationship. This form of consensus building usually operates implicitly and infrequently in professional organizations. In essence it is agreement obtained through fear of a poor performance review, a lesser raise, or loss of job. This tactic does not work well because talented people can usually find a job somewhere else and/or that it is difficult to fire people in government bureaucracies.*

The present author adds the following Machiavellian tactic perhaps missed by Wilkof:

- Consensus through ***equivocation*** (also called the strategic use of ambiguity) is when someone successfully uses unclear terms of reference that means something different to each person involved in the decision so that each thinks they have the correct definition and so agree to the text without really having a true consensus of (shared) meaning.

	Agreement on Means/Ways	***Disagreement on Means/Ways***
Agreement on Ends	Move to **Programmatic** mode If causality is certain, or to **Rational-analytic** if uncertain	Stay in **Participative** Mode
Disagreement on Ends	Move to **Rational-analytic** mode (Does it really matter? Just do it!)	If no agreement in sight consider that you may be "stuck" in the **Emergent** mode

Figure 1. Diagnosing Accommodation. **Multiple interpretations of what is going on and what needs to be done define the ambiguous nature of plural decision processes under the participative paradigm (in other words, "politics"). The designer is best served by diagnosing "progress" by discerning which form of reasoning seems to be more applicable to approach accommodation. This is not to say that randomness, hidden-agendas, guile, and other "Machiavellian" aspects of negotiating a strategy do not come into play; so, both programmatic and analytic models may still play a deceptive premise for preset agendas and decision making.**[15]

Emergent: The "Anti-Model"

In wicked (or high VUCA) situations the adage, *if you are not confused, you are not appreciating what is going on*, applies. Here are ten characteristics of wicked situations described by Horst Rittel and Melvin Webber (interpreted and placed in a military context by the present author):

1. **No definitive formulation.** This includes the recognition that complex operational situations are indefinable and that more information does not make the situation less ambiguous; in fact,

[15] This chart was adapted by the present author from the ideas of James D. Thompson and Arthur Tuden, "Strategies, Structures, and Processes of Organizational Decision." In J. Thompson (Ed.), *Comparative Studies in Administration* (pp. 195-216) (New York: Garland, 1987) (Original work published in 1959.) The present author used a similar diagram in chapter 11, pp. 309-340, in Gabriel Marcella (Ed.), *Teaching Strategy: Challenge and Response*, US Army Strategic Studies Institute, 2010, p. 321.

more information may make the situation more ambiguous (as Herbert A. Simon wrote, "…a wealth of information creates a poverty of attention").[16]

2. **No stopping rule.** Past solutions, lessons learned, or best practices may continue even if conditions change, and the conditions of the problem change more rapidly than a programmed change can keep up with; hence, the solution becomes disconnected from the thought-to-be-problem as the situation morphs; and, finally, turnover and fluidity of participants in the affected organizations or institutions further confounds the process.

3. **Not true or false, but bad or good approaches.** Proposed solutions are politically, culturally, and psychologically charged, that is, they are infused with the values and interests of those in power or with influence; hence, hidden ideological judgments and intuitions – not cost-benefit rationality – can and will dominate.

4. **No immediate or ultimate test for unintended consequences.** Because the situation is so complex, with variables that exhibit the dynamics of mutual causality, no one can predict what will happen (a quality of emergence).

5. **May have one shot only because of irreversible consequences.** Even if the commander acts in committing resources to a single course of action, the dynamics of taking action itself will change the environment and the previous conditions will be irretrievable.[17]

6. **No enumerable or exhaustive set of solutions.** Courses of action can seem like "bad or worse," or the lesser of two evils, or may even be incomprehensible—the present author has overheard military planners sarcastically call this phenomenon the "solve world hunger" kind of impossible planning challenge, not unlike the intractable social messes involved in prosecuting irregular warfare – where programmatic and analytic decision processes cannot work and goal-setting is politically ephemeral.

7. **Uniqueness.** Every situation is unique and situations morph unexpectedly so one may have to extend and even displace old knowledge and realize that the knowledge created now is likely to be short-lived in its usefulness.

8. **Probably a symptom of another problem.** There is no single problem but a systemic network of interactive and interdependent problems—called a "mess"—that is too complex to unravel.

9. **Discrepancy.** There is no systematic procedure to get to the right answer (solving the gap between the current situation and the desired conditions. This quality makes Cartesian solutions fruitless but does give designers the opportunity for frame reflection.

10. **The commander has no right to be wrong**. Albeit, s/he deals constantly with the reality of a large "organized anarchy" that experiences forever dynamic and unpredictable trajectories,

[16] Herbert A. Simon, "Designing Organizations for an Information-Rich World," in Martin Greenberger, *Computers, Communication, and the Public Interest* (Baltimore, MD: The Johns Hopkins Press, 1971), pp. 40-41.

[17] In physics, this is known as the Heisenberg Principle (the act of observing something changes it)—a good metaphor for wicked situations.

fraught with ambiguity, and complex causal webs that defy the articulation of a desired end state or strategic objective.[18]

There can be no effective method to model ***emergence*** when it comes to individual and group decisions or indecisions. In complexity-science-based sociology, emergence is defined as "the process by which patterns or global-level structures arise from interactive local-level processes."[19] The ways these patterns arise are not predictable. One might say that emergence in the midst of complex operations defies decision-as-a-point-in-time and demands that decision making be an ongoing, rather ad hoc, uneven, erratic, and distributed process of *successive limited comparisons* (or, in Charles Lindblom's vernacular, *incrementalism* – "the science of muddling through").[20] **"Planning" (i.e. anticipated decision-making) is not possible except that one might "plan to learn" and paradoxically accept the uncertainty of unplanned learning (the latter referring to the surprises associated with emergence).**[21] Those immersed in the situation (who may be anyone in the organization) may assume the role of deviant leadership (see Essay #2 in this series) and leadership may shift. The best hope is that those involved in the complexities of emergence are committed to a shared set of socially-derived

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[18] Horst Rittel and Melvin Webber; "Dilemmas in a General Theory of Planning," *Policy Sciences*, Vol. 4, 1973, (pp. 155–169,), pp. 161-166. The present author notes that the US Army doctrinaires have lost touch with wicked problem theory in their FM 5-0, *The Operations Process*; albeit, the original concept of importing design into the Army was closely tied to the Rittel and Webber theory (see the precursor to FM 5-0, Commander's Appreciation and Campaign Design, pp. 9-11. What happened? The present author speculates that retaining wicked problem theory would have been so contrary to the underlying rational-analytic logic of the field manual that the chapter on design would have seemed silly. The result is a watered-down version of design, presented as the official version of just another US Army decision method.

[19] Kevin Mihata, "The Persistence of 'Emergence'" in Raymond A. Eve, Sara Horsfall, & Mary E. Lee (Eds.) *Chaos, Complexity & Sociology: Myths, Models & Theories* (Thousand Oaks, Ca: Sage, 1997, pp 30-38), p. 31.

[20] Lindblom (Op. cit.). Likewise, Mintzberg, Raisinghani, Theoret (Op. cit.) in an empirical study found that this sort of "decision process is characterized by novelty, complexity and open-endedness, by the fact that the organization usually begins with little understanding of the decision situation it faces or the route to its solution, and only a vague idea of what that solution might be and how it will be evaluated when it is developed. Only by groping through a recursive, discontinuous process involving many difficult steps and a host of dynamic factors over a considerable period of time is a final choice made. This is not the decisionmaking [sic] under *uncertainty* of the textbook, where alternatives are given even if their consequences are not, but decision-making under *ambiguity*, where almost nothing is given or easily determined" (emphases in original, p. 136.) See an equally compelling study by Gary Klein, in his essay "Corruption and Recovery of Sensemaking During Navigation," in Malcolm Cook, Jan Noyes, and Yvonne Masakowski (Eds.), *Decision Making in Complex Environments* (pp. 13-32), (Hampshire, UK: Ashgate, 2007). Klein framed situational wickedness with these characteristics (similar to the Rittel and Webber list described earlier): (1) The nature of the problem is itself in question: what requires attention and adjustment is unclear, shifting, or intertwined with other concerns; (2) Information is problematic: there is doubt regarding what information is needed, and how it can be collected, filtered or categorized; (3) There are multiple, conflicting interpretations: reported facts and their significance can be read in different ways; (4) Differences of value orientation exist: lacking adequate objective criteria, decision makers rely on personal and cultural values to read significance into a situation; (5) Goals are unclear, multiple or conflicting; (6) Time, combat resources and attention are limited; (7) Contradictions and paradoxes appear; (8) Roles and responsibilities are unclear: decision makers are unsure as to what mission success means and how to measure it; (9) Poor understanding of cause-and-effect relationships; (10) Symbols and metaphors are used in confusing ways; and, (11) Key decision participants are fluid: different staff members are entering or leaving the situation as a function of problem redefinition or staff shift rotation.

[21] Donald N. Michael, *Learning to Plan and Planning to Learn* (2nd ed.), (Alexandria, VA: Miles River, 1997).

values (these may be all that guide them).[22] The emergent process involves acting first and then reflecting in and on that action (i.e. reflective practice).[23]

Institutional Barriers to Participatory and Emergent Forms

There are innumerable institutional barriers to US military acceptance and embracement of the participatory and emergent forms of decision. What follows are the three most obvious.

First, the Executive and Legislative branches demand accountability from military commanders who are naturally reluctant to give up formal decision-making power to more unpredictable, unstructured processes. Turning consensus over to a group or permitting emergence and immersive activities to dictate decisions is extremely risky under the current forms of civil-military relations in the United States.[24] At risk, according to Gallup polls, is the longstanding US public's extraordinary confidence in military leaders. Even at the end of the Vietnam War in 1975, the US military was held in great esteem according to these polls.[25] The cross pressures for the military and its commanders to serve as heroic examples of selfless, competent servants creates a dangerous mythology of super-human-ness that delimits opportunities to experiment and act in order to learn. Indeed, the stakes are extremely high and the culture is rightfully risk-aversive as lives may be at stake as well as careers.[26]

Second, being decisive is a well-rewarded characteristic of military officers and commanders.[27] Allowing participatory and emergent processes to work can take time (sometimes generations) and time is usually constrained in military operations because the good guys are trying to decide and act faster than the bad guys can adapt and react. After all, the

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[22] Christopher R. Paparone, unpublished manuscript, *The New Military Decision-Making Model* (NMDM2), May 2010, p. 26.

[23] Watch Henry Mintzberg describe this logic in his short video on YouTube: Henry Mintzberg on Decision Making.

[24] For example, see Barbara S Romzek, Patricia Wallace Ingraham, "Cross pressures of accountability: Initiative, command, and failure in the Ron Brown Plane Crash," *Public Administration Review*, Vol. 60, No. 3 May/Jun 2000; pp. 240-253. "In the American political system, with its principle of civilian control of the military, answerability for performance is a central tenet for military personnel at all levels of service and the cornerstone of any relationship that involves delegation to act for a sovereign authority. Military personnel assume that they will be answerable for their performance, and, under normal circumstances, these matters are handled by immediate supervisors on a daily basis and within periodic performance and promotion reviews. Under unusual circumstances, accountability issues of military officers become much more public. Such unusual events, while unfortunate, generate sufficient public scrutiny to provide opportunities to examine the dynamics of accountability…(p. 243)… Officers often feel intense pressure to meet their assigned mission regardless of constraints. **The institutional culture, professional norms, and career advancement considerations all create pressure on officers to adopt a 'can do' approach to problem solving. No one wants to be the officer or the commander who says, 'We can't do that'**" (emphasis added, p. 244).

[25] This is based on the present author's personal email correspondence with the Gallup pollster's office. In May 1975, only "the church of organized religion" had a higher confidence rating. Beginning in Sep 1989, the military had the top spot through the last poll, Jul 2010.

[26] Romzek, Wallace, and Ingraham (Op. Cit.).

[27] The Navy Fitness Report includes "employing force in a decisive and timely fashion with maximum effectiveness," and "applying broad knowledge and excellent judgment, and taking decisive action even under very difficult, high-stakes conditions," in its rating "traits" (p. 20-15, BUPERSINST 1610.10B 9 Jul 08). The US Army demands an officer that, "Develops detailed, executable plans that are feasible, acceptable, and suitable" in its Officer Evaluation Report Systems (p. 17, Army Regulation 623–105, 1 Apr 98). According to the US Marine Corps *Performance Evaluation System* (p. 4-30, 11 May 06) the Marine must be "…creative, proactive and decisive."

purpose of synchronized operations is to arrange "military actions in time, space, and purpose to produce maximum relative combat power at a ***decisive*** place and time" (emphasis added, *DOD Dictionary*). Those who participate in writing future requirements for leadership and command decision systems call for "decision superiority."[28] Millions (billions?) of dollars in research and development projects across the Services and in the joint community are predicated on this idea of commanders deciding faster than their adversaries. Doing otherwise would create an ideological dilemma for the institution and cognitive dissonance for individuals placed in charge.

Third, nonhierarchical participatory and emergent decision processes have a feminine quality about them; or perhaps more accurately, the programmatic and rational-analytic models reflect a paternalistic orientation where papa (the commander) is the "head of the household" and the final decision-maker of the "family." At some risk of stereotyping, studies indeed suggest that women may be more inclined to collaborate, negotiate, deal in heterarchical networks, and be more comfortable with complexity and uncertainty.[29] James G. March and Thierry Weil report that men tend to use forms of instrumental rationality (means-based strategies and searches for answers that worked before). Women, on the other hand, are better at contextual reasoning (treating each case at hand as different from others and providing unique solutions to novel problems).[30] The latter quality is more closely associated with design philosophy. Expanding into design philosophy from the instrumental rationality of doctrinal decision-making may require a challenge to traditionally dominant masculine culture of the US military. This challenge alone may well defeat the integration of design philosophy and the embracement of alternative, unstructured decision processes into the culture.

Artful Deciding

The military designer, armed with this typology for decision, can now appreciate the complexity of decision making (or the intractability of the decision situation). Taking into consideration the previous essays in this series (Heraclitean::Parmenidean philosophies, situational VUCA-, leadership-, tasks-, frame reflection-, methods-, and values-continua) one can reform these proposals into a complex decision making concept (Figure 2).

[28] See *Net-Centric Environment Joint Functional Concept 1.0* "The Joint Force can … derive and use knowledge in superior decisionmaking [sic] processes and apply capabilities effectively, robustly, and flexibly to achieve desired effects. This allows the Joint Force and its mission partners6 to function more efficiently (faster and better) in the execution of traditional missions" (p. 2).

[29] Gary Yukl, Leadership in Organizations (5th ed.) (Upper Saddle River, NJ: Perntice Hall, 2002), p. 412. Yukl goes on to advocate skepticism on the results of such studies.

[30] James G. March and Thierry Weil, *On Leadership* (Malden, MA: Blackwell, 2005), p. 63.

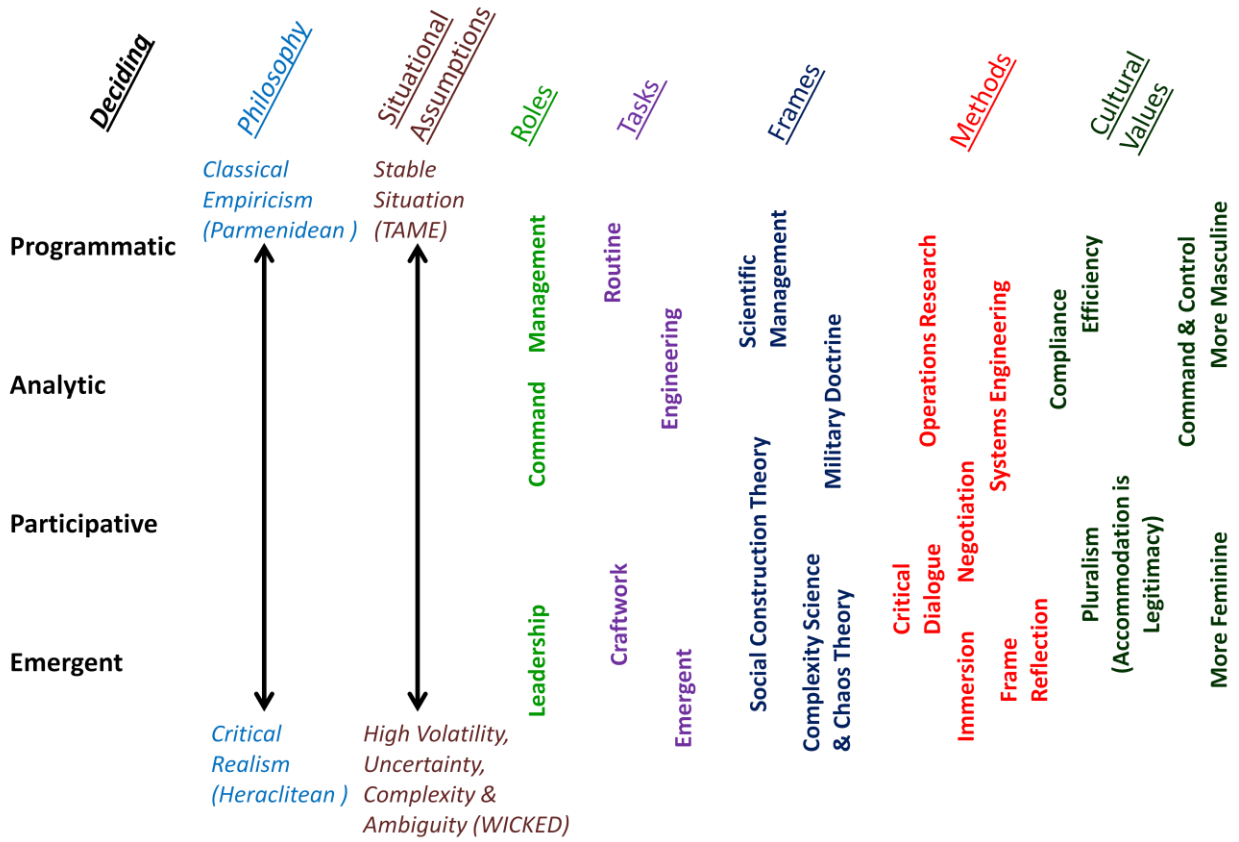

Figure 2. Designing Decisions. The four types of decision processes are displayed with corresponding concepts ("colors") discussed in this essay and in the preceding five essays in this series published in *Small Wars Journal*.

Conclusion

The proposed view of decision presented in this essay reflects quite a departure from US "PPBE" procedures, "JOPP" doctrine and Service-equivalent procedures, such as the US Army's Field Manual 5-0, *The Operations Process*. US Joint Forces Command recently released a pamphlet that equally subordinates design as process methodology subservient to a rational-analytic model of decision-making.[31] These depictions unfortunately portray design as just another staff method to reach sufficient commander's understanding in order to eventually reach a rational or programmatic decision.

This essay is attempts to challenge that view. The artful military designer is concerned about the ***design of deciding*** based on appreciatively judging the situation at hand – sometimes having to act before deciding; realizing that deciding may be an elongated process, not a point in time. The messier the situation the more unstructured deciding must become. Although US

[31] United States Joint Forces Command, The Joint Warfighting Center, Joint Doctrine Series, Pamphlet 10, *Design in Military Operations: A Primer for Joint Warfighters*, 20 September 2010. The pamphlet states, "…that design can precede detailed planning, but does not discuss how one would integrate the components of design into the joint operation planning process or the Adaptive Planning and Execution system. The ongoing revision of joint doctrine will address the integration of design and planning" (p. 2).

Army doctrine and pre-doctrinal joint publications may see design as a step toward the more desirable programmatic and rational-analytic forms, participative and emergent modes do not have to lead to analytic and programmatic modes. Situations may demand a blending of all four types, with emphases on one or more. With the proposed typology presented in this essay, the art of deciding is facilitated with the prospects of blending more than one "color" on the military designer's palette.

Much of the curricula in both US Service and joint staff colleges emphasize programmatic and rational analytic models. For the most part, US military staff and senior service colleges stress rational-analytic models to teach military strategy.[32] Can we imagine a staff or war college changing the educational emphases toward consensus-based decision-making (with the backdrop of social construction theory) and require more exploration of complexity science and chaos theory? In the next essay of this series, the present author will attempt to address design and the prospects for educating practitioners in very different ways.

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[32] Marcella (Op. cit.) One exception may be the US Naval War College.