Essays from the Fleet:
"The Wicked Problem of War"

By LT Robert "Jake" Bebber, USN

Since World War II, it seems like the result of America's participation in war has fallen short of our goals. We enter with the best of intentions, seeking a low cost, swift conflict and an overwhelming victory without excessive casualties (American, civilian *or even enemy*). It must be considered "morally justified" in accordance our national interests and the adversary should be convinced to make peace on our terms or a new regime is put in place whose policies will largely align to our strategic interests. When some or all of these goals are not met, the credibility of our conflict is called into question. This deficit has driven policy makers, the military and the public to place greater emphasis on finding a systematic formula for ending a war we are about to embark upon, and an almost breathless desire to exclaim that our warmaking is only "temporary." During the opening stages, the overriding question seems to be "what is the exit strategy?" Muddled in there may be an idea of what victory might look like. We seem reluctant to ask, "How do we win?" and instead wring our hands saying, "Tell me how this ends."

Part of this quixotic quest has its roots in that uniquely American of philosophical traditions: *pragmatism*. Pragmatism argues that through the application of technical innovation, professional expertise and scientific methodology, complex social problems can be overcome. The "great mysteries of the human condition are in their entirety mere questions of plain and neutral facts, and … society and man can be best understood through scientific study in the modern sense" as put by Yuval Levin in *The Tyranny of Reason* [1]. This underlying logic has fueled our search for a scientifically based form of war, one in which levels of horrific violence can be applied to specific targets at incremental values and varying degrees, leading to an almost formulaic reduction in the enemy's capacity to fight, which we then interpret to be his will to fight. We put a man on the moon after all (a systems-engineering problem), so why can't we win our wars in Afghanistan? Or Iraq? Or Vietnam?

War is the most complex of "social policies," to keep with the modern "social science" parlance of today. States and non-state actors who engage in the systematic use of violence to compel submission to their desires become deeply intertwined. War is immensely personal business, requiring the parties to attempt to know and understand one another on the most profound of levels. The modern "social science" outlook cannot be applied to war any more than it can be applied to most social "problems," such as poverty, crime or health.

Horst Rittel and Melvin Webber from the University of California at Berkley's Institute of Urban and Regional Development alluded to this in 1968, reframing our understanding of social policies and problems. The search for a "scientific base for confronting [social] problems is bound to fail" *because of the nature of those problems*. Science was developed to deal with "tame" problems "which are definable and separable and may have

solutions that are findable." Examples of "tame" problems are a mathematician solving an equation; an organic chemist analyzing the structure of an unknown compound; or an engineer tasked with bridging a river. For each, the mission is clear. It is also immediately clear when the problem is solved. [2]

In contrast, the "wicked" problem is inherently different. They are ill-defined and "rely upon elusive political judgment for resolution." Rittel and Webber are careful to note that wicked problems are never "solved." At best, they are "re-solved over and over." In this way, social problems, like poverty or health care (or war in this case), are not problems such as the ones a mathematician or engineer or scientist grapples with. *They are conditions of existence that can only be managed and mitigated*.

Wicked problems have ten distinguishing propositions:

1. There is no definitive formulation of a wicked problem. Rittel and Webber note that the "information needed to understand the problem depends upon one's idea for solving it. That is to say: in order to describe a wicked problem in sufficient detail, one has to develop an exhaustive inventory of all conceivable solutions ahead of time."
2. Due to Proposition 1, there are no stopping rules. The "process of solving the problem is identical with the process of understanding its nature, because there are no criteria for sufficient understanding and because there are no ends to the causal chains that link interacting open systems …"
3. Solutions to wicked problems are not "true" or "false." They are "good or bad." Social issues have multiple stakeholders, all of whom have an interest in judging the solution. Those judgments will vary widely based on interest, values and ideology.
4. There are no immediate or ultimate tests to the solution of wicked problems. Each "solution" creates "waves of consequences" and effects that can extend over time. Those consequences and effects may be both unintended and undesirable, generating ever greater problems. Thus, the age old adage: *The road to Hell is paved with unintended consequences*.
5. Because every implemented solution is consequential, it leaves "traces" that cannot be undone. Thus, there is no "trial and error" – *every trial counts*. Every attempt to correct for undesired consequences poses another set of wicked problems.
6. There are no rules, or set of "permissible operations" that may be used to address a wicked problem. All potential "solutions" cannot be exhaustively considered *or even identified*.
7. All wicked problems are unique. While there may be similarities in conditions between current problems and previous ones, there may be an additional distinguishing characteristic that overrides all others. Therefore, one must not fall into the trap of "knowing too early which solution to apply." In a more complex world, every situation is "one-of-a-kind" and solutions applied to what is believed to be a familiar problem are often incompatible.
8. Every wicked problem can be considered a symptom of another problem. We typically start our process of resolution with a search for a cause, but as we address a cause, this in turn becomes a symptom of a "higher level" problem. This presents a special difficulty in the process of addressing wicked problems incrementally. If a problem is attacked on too low a level, then the resolution may make things worse. "Marginal improvement does not guarantee overall improvement." Therefore, it is not surprising that members of an organization tend to see problems on a level below their own.
9. The choice of an explanation of a wicked problem determines the nature of the problem's resolution. When presented with conflicting evidence, the scientific method will simply discard the hypothesis as being invalid. However, for a wicked problem, the mode of reasoning is much richer than is used in the scientific method, and the choice of explanation becomes arbitrary. In essence, people choose explanations that are plausible to them and fit their world view.
10. For wicked problems, the aim is not to find a truth, but rather to improve some characteristic of life or the world we live in. There is no "right to be wrong," as is the case in science, where Karl Popper argues [3] hypotheses can never be proven, only

potentially refuted. The consequences of solutions to wicked problems are very real and touch people's lives in very acute ways.

We can see how war, both as an enduring characteristic of human existence and as a social policy, is indeed a wicked problem. Our attempts to "solve" war have, in many ways, only confounded the issue. We have attempted to turn war into something "alien to its nature." [4] Consider:

The American military takes a classic, systems-based theoretical approach based on the assumption that "planning projects can be organized into distinct phases." [5] One has only to look at our operational plan phases (Shape, Deter, Seize Initiative, etc.) [6] and our Joint Operational Planning Process steps (Planning Initiation, Mission Analysis, etc.) [7] to see how this assumption has been institutionalized. This approach is essentially a two- step process for resolving war: understand, *then solve*. Yet the nature of wicked problems (see Proposition 1) makes it unlikely that we can ever truly understand because we have to take into account the whole context of a problem. Ritter and Webber suggest an argumentative process "in the course of which an image of the problem and of the solution emerges gradually … subjected to critical argument." This would become the basis for our *Operational Design* model, first introduced by the U.S. Army. However, Milan Vego argues against both general systems theory described above and the use of pseudo-scientific philosophy, such as the argumentative approach of operational design, as a foundation for understanding war. He suggests that the foundation of a military theory – i.e., our understanding of war – comes through our knowledge of history [8]. Clausewitz wrote similarly that "war is never an isolated act." [9] The great dead Prussian goes on to say that "[t]heoretical truth must have been derived from military history or at least checked against it … theory will have to remain realistic; it cannot allow itself to get lost in futile speculation, hairsplitting, and flights of fancy." [10]

War as a condition of human existence is enduring, and the conduct of a war – that search for a formula for victory, or in today's more politically correct terminology, "war termination" – is unlikely to resolve itself to permanent closure (see Proposition 2). Indeed, Proposition 3 suggests that all parties involved have interests which vary widely, *including the side that loses*. Even the ultimate outcome of a war should not be regarded as final. The defeated state (or non-state actor) may simply consider the outcome a "transitory evil" which can be remedied at a later date. [11] Americans may start wars with the most grandiose motives and theories of victory, such as unconditional surrender or regime change. By war's end, we are often left settling for the best possible (or least bad) outcome available given the context of the time. Later, after the war's termination, we will have to "re-solve" our problem.

We seem to be falling back into the same traps in our recent attempts to "re-solve" this problem. The American military and civilian security establishment has advanced Network-Centric War and Effects-Based Operations as new theories of war and warfighting, promising that the application of force through networked systems and linked to effects will result in the most efficient and least costly way to bring military power to bear. We seem to have forgotten the promise of Douhet's theory of strategic bombing made many of the same claims, yet fell well short.

We have created an entirely "new" school of methodology of war – *counterinsurgency* – and applied a series of formulas, checklists and tactics to fight this supposedly new and different form of war. [12] That insurgency is a new, modern form of war and that there are effective ways of countering it would come as a surprise to Alexander the Great in Bactria (modern Afghanistan) [13] or the ancient Romans in Britain, for example. [14] There is an old Russian proverb, "History does not repeat, it rhymes."

This is not to say that it is impossible to win a war, or that war should not be used as a policy of state. History proves that there can be absolute victory and overwhelming defeat. It also shows the futility of "ending war as we know it" and declaring "peace in our time." For now, modern war looks increasingly harder to win "absolutely" by its nature. "Leading From Behind" and "Smart Diplomacy" as national security strategies do not

appear to have created any better conditions than the oft-maligned doctrine of pre-emptive war. Proposition 9 suggests that both the current and former Administrations fell into this trap. In many ways, the situation today appears to be worse. Yet we have to be careful about using the recent past as guide to our understanding of war, because it takes time for all the pertinent information to come forward and to be evaluated in the context of the times after passions have cooled. Snap historical judgments can be wrong.

For American policy makers and military leadership, understanding war as a wicked problem is the first step necessary to reframe our understanding and response to the need to use military force. Realizing that applying "tame" approaches are likely to lead to less desirable results, perhaps we can be better prepared to deal with the wicked contingencies that evolve during war. Mitigating a problem and solving a problem are two different things, springing from two different perspectives and lend themselves to different states of mind. That may not be a good answer, but it may be a place to start.

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[1] Levin, Yuval. The Tyranny of Reason: The Origins and Consequences of the Social Scientific Outlook. Lantham: University Press of America, 2001.

[2] Rittel, Horst W. J., and Melvin M. Webber. "Dilemmas in a General Theory of Planning." Policy Sciences 4 (1973): 155-169.

[3] Popper, Karl. The Logic of Scientific Discovery. New York City: Rutledge, 1935, 2002

[4] Clausewitz, Carl von. On War. Edited by Michael Howard and Peter Paret. Princeton: Princeton University Press, 1976, p. 88.

[5] Rittel and Webber, op cit. p. 164.

[6] Joint Chiefs of Staff. Joint Publication 3.0 - Joint Operations. Washington DC: U.S. Department of Defense, 2011

[7] —. Joint Publication 5.0 - Joint Operation Planning. Washington DC: U.S. Department of Defense, 2011.

[8] Vego, Milan. "On Military Theory." Joint Forces Quarterly 3, no. 62 (2011): 59-67

[9] Clausewitz, op cit. p. 78

[10] Ibid., p. 144

[11] Ibid., p. 80

[12] Department of the Army. Field Manual 3-24 / Marine Corps Warfighting Publication 3-33.5 - Insurgencies and Countering Insurgencies. Washington D.C.: U.S. Department of Defense, 2014

[13] Holt, Frank L. "Alexander in Central Asia." In The Landmark Arrian: The Campaigns of Alexander, by James Romm, 371-374. New York: Pantheon Books, 2010

[14] Mattern, Susan P. "Counterinsurgency and the Enemies of Rome." In Makers of Ancient Strategy: From the Persian Wars to the Fall of Rome, by Victor Davis Hanson, 163-184. Princeton: Princeton University Press, 2010