

Military Organizations, the Business of War, and what it means for Innovation

I. Introduction:

Organization theorists often think in terms of the effects of three big factors on the behavior of large scale organizations—Purpose; People; and Environment.

- A. This discussion is organized around the specifics of military purposes, military people, and the environment—"combat," "domestic," and foreign.
- B. These are tied together by the theme of uncertainty—its sources, and its management.
 - 1. Mean-Ends, or "cause-effect" Uncertainty, ie uncertainty about how to complete the task in the world
 - 2. Interdependence Related Uncertainties
 - Internal: How are my own component parts going to work together
 - External: How will outsiders upon whom I depend going to work with me, or even at cross purposes
- C. How much difference these specifics about military organizations make for considering the behavior of military organizations relative to non-military ones is a fit subject for discussion, and comment.: Much of organization theory and management theory is about large scale organizations that are similar, but not identical to modern militaries; a lot of academics have used organization theory to look directly at militaries in one way or another.

II. Purpose

- A. Like all organizations, in caricature, and in the abstract modern militaries arrange people for the mass production of rationality. (This may be changing, as I'll discuss later in the week) Max Weber's message. The classical administrative-bureaucratic

view. Purpose is the driver. Functional Specialization of the Organization and within it, with an Internal Division of Labor, coordinated through a Hierarchically arranged system of Command and Control. Decision made on Rationality criteria, cost and benefit. Professionalization of the officials/managers with education and developing expertise. "Files." The neutral tool. The living machine.

1. Weber, one of the earliest students of large scale formal organizations, bureaucracy, understood that the very evolution of bureaucracy was in part a function of the military struggles among the monarchs of Europe, "War made the state and the state made war." Bureaucracies grew to feed armies, and it's not an exaggeration to say that the professionalization of armies and of bureaucracies occurred hand in hand, each learning from the other.
 2. The over-riding commitment to purpose, and the effort to achieve rationality in pursuit of that purpose make uncertainty of any kind an enemy. Organizations do what they can to reduce uncertainty.
 3. The need to pursue purpose with people, whose rationality is limited, and who in any case are not actually going to be perfect cogs in a rational machine, creates special motivation and control problems for organizational leaders in their efforts to keep the organization focused on the achievement of purpose. People are a source of uncertainty.
 4. How might a military organization's specific purpose produce special behaviors or qualities, especially qualities that might bear on their ability to innovate?
- B. Military organizations do something unusual—they try to destroy one another, directly. Samuel Huntington's notion of the officer corps as specialists in the management of violence in service to the state does not do it justice. I am not sure that any other organization has the explicit purpose of bashing its like to

pieces, with the possible exception of criminal ones in competition with each other. Very Competitive.

1. Sometimes you only notice this at the micro-level, the early minutes of Hal Moore's aircav battalion at its LZ in the Drang river area; the sudden realization of the size force encountered and the desperate need to secure a defensible perimeter, and bring in the reinforcements to do so.

- C. Mistakes have potentially very great Consequences. Many organized activities—including the Boston commute—involve risk to life and limb, some risk to a few friends and colleagues, Almost none risk the lives or “freedom” of family members and friends not present. One must make decisions that at minimum involve very serious risks and costs for other organization members. The consequences of failure for one's self, one's associates, one's country are absurdly great. Very Risky

1. Churchill's (?) remark during WWI that Jellicoe, the commander of the High Seas fleet was the only man who could lose the war in an afternoon.
2. Perhaps less dramatically, Keith Park, commander of Number 11 Group, the one closest to the Germans in France, and defending the approaches to London, while not able to lose the whole war with a mistake, failure to intercept, break up a German raid could produce very serious consequences on the ground, either for industrial targets, or for bases the Germans were trying to hit; also huge arguments about what is the right thing to do, try to "defend" or as those in the neighboring groups, wait, muster larger concentrated forces, and try to shoot down more german planes, and worry less about defending targets on the ground.

- D. A very powerful tension between boldness or dynamism necessary for competition and conservatism imposed by the great consequences??

E. **The Purpose of Mutual Destruction Creates a Special Environment**

1. This has the effect, as Clausewitz observed of giving warfare an inherent competitive quality far more intense than almost any other aspect of social life. The greater the exposure of the state that a military organization serves—the more competitive that military's peacetime behavior is likely to be, but as I'll suggest, this does not necessarily cause innovation.
2. The activity itself creates a new environment.
Clausewitz talks about friction and the dearth of good information, often called fog.
 - It is hard to make things happen on the battlefield—even when the adversary is not fighting very hard.
 - It is hard to figure out what is going on on the battlefield. Getting useful information from the mass of impressions and data, often deliberately obstructed by the enemy (again due to the competitiveness factor) makes the conduct of war a hugely uncertain activity.
 - Getting information often risks and costs lives and machines.
 - Nothing is easy or free.
3. Within this environment, these organizations are in a relative sense—“fragile.”
 - a) Most modern military organizations (not actually all—guerrillas, or MAD excepted) but most, are trying to coordinate the “rational” application of a range of technologies, each of which requires a little administrative tail to fix it, fuel it, arm it, replace it, as well as brain, eyes, nervous system. A very high level of internal interdependence in modern arms, which has grown since the industrial revolution. Thus the organizations suffer a kind of fragile internal interdependence. AND

- (1) The campaign in the low countries took the Germans about six weeks in 1940 to finish off the better half of the French Army.
 - (2) A new term was introduced during Desert Storm for the Iraqi army's efforts to avoid US electronic intelligence by the very sparing use of their radio communications networks: EMCON suicide
- b) Often, they are surprisingly dependent on relatively small numbers of high value assets (navies especially) and as both sides know this, the high value assets get a lot of destructive attention.
- (1) The Israelis destroyed the Egyptian Air Force in a day, the Army in six, in 1967.
 - (2) The Japanese lost 4 carriers in a day at Midway.
- c) Battle doesn't always, or even often, turn out quite so dramatically. But these organizations are fragile given their task—and they know it.
- d) The knowledge of how quickly and easily things can go very wrong, coupled with great uncertainty about the precise ways it may go wrong, influences the organization's day to day behavior, in war, and also in time of peace.
- e) Competing businesses, at least the larger ones, destroy each other through competition over many years;
- to my knowledge, government bureaucracies are seldom actually killed off.
- F. There is also a funny, and extremely scary, gray area, the "Transition to Conflict," the moment when peace turns into war

either for the organization as a whole, or even for unblooded units in an organization already at war.

1. Fraught with Uncertainty, given what the organization knows in a general way about the course and risks of combat, coupled with the fact that the normal peacetime existence of the organization, regardless of training regimen, is quite different from war.
 2. Examples:
 - a) Kasserine Pass for the US Army in WWII
 - b) The green 106th division in the Battle of the Bulge
 - c) Task force Smith, but really all of the early arriving divisions during the first weeks of the Korean War
 - d) French Army in May of 1940
 3. How do you get your organization intact through this transition.
 4. Both the Environment of war and the problem of the transition to conflict Raise the Question for the Organization of How it Prepares/Buffers itself in Peacetime.
 5. May produce a very high premium on simplicity, stability, and acceptance of "doctrine; cohesion is a very high value
 6. Even if someone could prove, at the last minute, that the doctrine was not quite right, would you try to change it? An agreed poor doctrine may be preferable to none at all to an organization looking forward to an imminent transition from the pleasures of garrison life to the rigors of the campaign.
- G. The Combination of Friction and Fog, with Competitiveness and Fragility (You could say Fear but I think it goes deeper than that) Creates a Very High Degree of Uncertainty

1. War is at some level a struggle of rival organizations, not just rival orbats, doctrines, or war plans.
2. A stable, agreed way of warfare, a doctrine, is a very appealing way to deal with friction and fog, with fragility, especially at the moment of the transition from peace to war.
3. The adversary has the same set of problems, and the same set of incentives, so you want to "operate" your own doctrine, and deny the adversary his. Impose your plans on him.
4. Live by the golden rule, do unto others as they would do unto you,, but do it first.--"Offensive" is more honored than the Defensive; Striking first is tempting, even if the state is a status quo power; Surprise is honored, though at least one of the better known theorists, Clausewitz, discounts its utility.
5. One key aspect of this is secrecy. For purely functional reasons militaries wish to keep a lot of things secret, it helps in this process of imposing your own sop's and denying the enemy his but it has some implications for other aspects of organizational life..

III. The "Peacetime Environment"—

- A. Realist theorists of International Politics see international politics as an anarchical realm—
 1. With no sovereign warfare is always possible and there is nobody to protect the state but the state, or its allies. And allies are often unreliable.
 2. As Samuel Huntington notes in Soldier and the State, militaries tend toward a version of this belief. He correctly in my view gives the standard rationale which is not as I have stated it—anarchy, but rather human nature. Have a pessimistic view thereof. --an unchanging expectation of trouble, and attention to how you are going to deal with it.

- B. The flip side of this expectation however, is that most of the time trouble never comes; the more successful you are at deterring war, or simply avoiding it, the higher your uncertainty about what it is that you do.
 - 1. Absolutely key to the life of military organizations is that most spend years with no reliable test of their capabilities—technological, organizational, doctrinal, tactical.
 - 2. And given everything I have said so far about the conduct of war-- Virtually no way to reliably simulate the process. You try—but it is very hard to prove anything. It is also quite costly. Just simulating the friction of a corps level operation by trotting out a full two or three division corps is sufficiently expensive and disruptive that you virtually never do it.
 - 3. War games and simulations have gotten better and better, as have actual maneuvers. Militaries do what they can, and in recent years have invested vast sums. But there is simply a lot you cannot know, as I suspect an honest "before and after" study of the Kosovo War last year would show.
 - 4. And we have another problem, truly realistic training is dangerous, and with all volunteer militaries, and significant competition from the private sector, it's not clear how many training deaths you can really afford.
- C. During these periods of peace, much can change from your last combat. Peace is full of military uncertainty.
 - 1. The civilian economy throws off new technologies, which your old or new adversaries may exploit and which some members of your own organization, as well as its clients, want you to exploit..
 - 2. New adversaries arise, or civilian leaders choose new ones, with new or at least different methods of warfare, in different climates and topography.

3. Civil society, which provides the materiel and human contributions for war may change—altering notions of acceptable costs of combat, available resources, and even what it is permissible to do to the enemy .
- D. The domestic political environment in modern societies is a source of uncertainty centering around the basic purpose of the organization.
1. Most modern states, to a greater or lesser degree, subscribe to nominal civilian control over foreign policy, and of the the military.
 2. The military's function is to manage violence in service to state policy. But how can this be achieved?
 3. In early Organization theory, Woodrow Wilson for example, people believed in policy and administration. Carried into military this would mean (as soldiers often hope, according to Richard Betts's Soldiers Statesmen and Cold War Crises) statesmen make policy, provide a mission, stand back and watch the neutral tool execute. But it seldom works this way; Nobody believes it. They are mixed up together.
 4. Clausewitz did not believe it either. And insisted policy ought to infuse every aspect of the conduct of war. But he did not have very interesting ideas on how to do it. This gives rise to a very basic “Cause Effect Uncertainty.”
 - a) Do we Make our soldiers into politicians/statesmen? Running risk that their professionalism as war fighters will suffer?
 - (1) Did Gamelin, the interwar French Army Chief of Staff spend too much time on diplomacy and alliances, to the detriment of his responsibilities as a soldier, it looks like it?

- b) Do we encourage civilians to closely oversee the conduct of military operations? You can't prevent it if that is what they want to do, But this threatens the organization's core mission, and causes it to fight to regain its autonomy,
 - (1) Churchill's incessant demands on Dowding for more Fighter squadrons to support France in May/June 1940, even though Dowding had tried to explain gently that at some point too few would be left to defend Britain, finally an open disagreement in a key meetings, Churchill had to cease his requests but he never forgave Dowding.
- c) It is at this point that the fetish for secrecy to deceive enemies without, becomes a handy rationale for fending off meddlers at home.
(Weber—Secrecy is the fighting posture of the bureaucracy.)
 - (1) SAC's great effort to keep SIOP information out of the hands of politicians, pentagon officials etc.
 - (2) General disinclination to share details of war plans with civilians, even Pentagon civilians.
 - (3) Old pedigree, some question as to whether the German Foreign Minister, Bethman Hollweg understood that the Schlieffen Plan not only called for violation of Belgian neutrality, which he probably did, but that it required a surprise coup de main even before German mobilization was complete. Thus the FM did not understand that his timeline for successful diplomacy was shorter than he thought.

- E. Comparative Wealth—Militaries in societies that face any kind of plausible threat tend to have considerable influence over their own situation.
1. Control great material resources,. Great Powers in particular tend to perceive other great powers as their Greatest Threats which causes them to allocate Great Resources to their defense, which they have because they are great powers. Even today, 3% of GDP is a pretty big war chest,
 2. They tend to have significant prestige, which may arise from heroic history, conservative political values, or in advanced liberal democratic society simple deference to technical expertise. Although this will vary as well with perceived threats to the state, history, and constitution.
 3. Significant internal influence, especially on its “own” issues. Political power if it confines itself to its own issues where it has legitimacy. Thus very great influence over security policy—ie it affects the task it is given. And it tries to use that power to minimize its own uncertainties.
 - a) Not the same everywhere, US very high, Israel probably very high, much of western Europe probably less.
- F. In Most Countries, especially in modern times, there are several military organizations, armies, navies, and air forces but there can even be others
1. Other services in peacetime and wartime can create sizeable interdependencies and thus sizeable sources of uncertainty.
 - a) Fratricide for example, between army or navy surface air defenses, and air force aircraft
 - b) Fratricide between aircraft and ground forces. [sometimes truly devastating, Leslie McNair was killed in the Cobra breakout from Normandy in

WWII, US bombers attacked US ground forces very heavily on several occasions during the Battle of the Bulge, Desert Storm etc.]

2. Special, because you need them in the moment of truth but you don't have too much influence over them in many militaries and central institutions across services are often not strong
3. Each organization has some incentives to get into those aspects of the other's business that affect it the most. Can cause Tension and rivalry, perhaps creative, as Harvey will argue, but can also cause redundancy, and the over-consumption of scarce resources.
 - a) I will not try to answer the perpetual question, do we really need all these air forces in the United States, but this basic question did provide the impetus for the failed roles and missions commission.
 - b) Some of you may remember "air land battle"- IT is striking that as late as Desert Storm, the "air-" part seemed pretty under-developed, and does to this day; the Army seems to still be trying to complete the development of the autonomous deep strike capability to destroy the Soviet Second Echelon with long range rockets, which the air force never quite offered.
4. On the other hand, cooperative relationships, and divisions of responsibility that have been negotiated with difficulty over many years may deter innovation efforts-
 - a) When General DePuy was head of TRADOC and was working up the much maligned Active Defense, he more or less decided that changing the Army was hard enough without trying to change the air force, and more or less signed a private treaty with the AF saying everything on the other side of the FSCL is yours, I hope it all goes well

for you. He eschewed what the ALB folk hoped to, but failed to, achieve.

5. In general, "innovations" that straddle the boundaries of services should face extremely hard going ["our targets your platforms, our platforms, your targets"].
 - a) Close Air Support, Maybe tactical aviation in general
 - b) Luftwaffe support of the German Navy
 - c) USAAF Long Range maritime patrol aircraft in the Battle of the Atlantic
 - d) [Naval carrier aircraft support for long range strategic bombers?]

IV. The People within the organization

- A. How do you keep them happy in peacetime; get them to think at least somewhat seriously about preparation for war; and then actually make them function when the crunch comes—and keep them functioning?
- B. Informal Organization/Human Relations School.
 1. Traditional Preparation For War-- We don't really know how to do it, but we know what it's like. Gives rise to two fundamental peacetime behaviors.
 2. Cultivate traits in officers that will at least hold the organization together—ie Phlegmatic (intrepid coolness or calm fortitude) commanders, who can do without sleep; eat little, no or poor food; still approximate rational decision making.
 - a) Soldiers Once and Young, General, then Col. Harold Moore.
 - b) Rommel, Infantry Attacks

- c) Movie, Command Decisions (Le May), 12 o'clock high as well
 - d) CS Forester, The General (Haig caricature)
3. Stalwart troops who trust their commanders and rely on each other.
 4. Know your weapon—ie proficiency in the actual technical task of using it.
 5. Neither of these have much to do with tactics, doctrine, operational art, or anything else. But I advance the hypothesis that they are both central to the informal organization. Its culture.
- C. To keep them “happy” you must go well beyond utilitarian incentives, to solidary and purposive ones.
1. But war is off on the horizon—so some intermediate goals, conducive to solidarity are needed.
 2. One source of non-monetary incentives is allegiance to weapons and tactics of the last glorious episode, "branch" or "platform community" (as Owen would say) loyalty. [the horse, the tank, the light infantryman with his rifle - LIDs, the pilot-ed fighter aircraft]
- D. Officer Corps—peculiar kind of “profession.”
1. Truly fundamental differences between doctors or lawyers, vs Officers. Doctors and Lawyers can take clients or not. They have considerable professional mobility. In some cases they can even change countries.
 2. But not officers—particularly the ones closest to the core technology of “management of violence.” Officers have one buyer—the government, and they usually can’t switch countries.
 3. This produces extremely powerful utilitarian loyalties to the organization—once you are in, the thought of being out is scary purely on these grounds. (Forget the

solidary aspects, which are also very important once you have lived in these organizations for long.)

- a) Thus the incentives to favor classical organizational preferences to enhance size, wealth, and autonomy, is even higher than it is for most organizations.
 - b) Could change if/as more and more officers are doing things that transfer easily to the civilian economy, but that would not be combat arms.
4. Samuel Huntington argues that the professional military's emphasis on obedience, loyalty, and the chain of command stems from the military's organizational commitment to infuse the conduct of war with goals of state policy. I don't think this is quite right.
- a) This emphasis is part of both the formal and informal organization, and in my view arises from the grave fears of keeping any control at all once the battle starts.
 - a) Chain of command is the “hardware” of military command, loyalty is the informal glue that helps commanders believe that subordinates will try to execute their wishes even when the fog and the friction make continuous communication impossible
5. But both the professional dependence on the organization, and the stress on chain of command, obedience, and loyalty for combat effectiveness, may put a kind of premium on maintaining the unified external face of the organization; we handle our own problems in private in order not to provide outsiders a way in.
- May make innovation debates hard to have. Could explain the decline of public inter-service fights in the US and more generally.

V. Conclusions: Implications

- A. The more encompassing the Innovation, the harder it should be to implement. The commitment to big macro-level organizational understandings--"Service doctrine," should be very great.
- B. Innovations in doctrine and tactics, should be very hard to achieve in "peacetime." Not much can be proven; few sources of pressure. Much energy and capability for resistance to external meddlers.
- C. The human organization has a set of values and characteristics that help prepare for war in a very general way. But these preferred characteristics are probably not conducive to innovation. 1. Loyalty can easily drift into Conformity. 2. Respect for the human values that get you through combat may drift into a vaguely unscientific attitude 3. Sentimental attachment to old branches, arms, etc. may stack the deck against new ideas and proposals
- D. Bernard Brodie says, improved weapons should not cause any great resistance, it is their implications for doctrine, tactics, and organization that a military has a hard time seeing, (although probably a little more technology. resistance than he admits.)
- E. Civilian control, for direct intervention to try to spur innovation, or even for policy infusion into military strategy, (Political-Military Integration) should be difficult, the organization has a lot of assets to resist civilian control, and a lot of incentives to do it.