Lesson 14
Organizational Culture and Strategic Planning

DLO1. Summarize the basic Quality Air Force values and principles and the phases of quality focus.

Quality Air Force (QAF) is a leadership commitment and operating style that inspires trust, teamwork, and continuous improvement. A vision is what you want to become.

Values

Integrity – the foundation of trust. Standing by your word and a commitment to honesty. It recognizes the worth of every person’s contribution to the team. Integrity is a life-essential element of every job in our high risk environment.

Courage – The moral strength to do the right thing where the outcome is uncertain. Fight the quick fix which offers only short-term gains. Courage is important when you empower others. Empowerment places accountability, authority and responsibility at the lowest possible level.

Competence -- Members build their skills, knowledge and experience in the tradition of experts. Competency is an ongoing experience. Become the expert.

Tenacity – carries you over obstacles that threaten to slow your progress. It’s the corporate value which allows you to stay the course.

Service -- leads to customer satisfaction. Anticipate, meet and exceed the customers’ needs. Customers' needs come first.

Patriotism -- The importance of accomplishing mission goals. A sacrifice for the greater good. Do what’s best for your most important customer -- America.

Principles

Principles support the core values and provide a road map to help you reach your goals.

Leadership involvement -- means setting the vision, policies, priorities and strategies. Communicate these, create an environment that supports trust, teamwork, risk taking, initiative, reward and continuous improvement. Design quality into the culture.
Dedication to mission — No matter what the role, every person is critical to the team to achieve "global power and reach" for America.

Respect for the individual — Recognize everyone’s skill and contribution. Value everyone as a professional. Understand how each person contributes to your team.

Decentralized organization — Tear down functional walls and eliminate layers of bureaucracy. Align organization to support critical processes. Decentralized orgs return decision-making authority to the wings and squadrons.

Empowerment at the point of contact— one of the most misunderstood concepts in this culture. Giving folks the tools they need to do their jobs. It's not leaders surrendering their power. It gives people opportunity, authority and resources they need. It creates an environment in which properly trained subordinates can continually improve the org. It encourages innovation and risk taking.

Management by fact — Measures indicate when, where, and how to improve your most important processes. Data-driven decisions.

This is not part of DLO, but is focused on senior leaders and sounds test questionish to me: For senior leaders, identifying organizational values is a critical first step. Work hard in strategic planning. Some experts say this could initially take 70% of leaders time. Planning for the future, senior leaders will talk with customers, focus on work to complement the AF vision and measure significant objectives. Create short-term plan (12 - 24 months) and long-term plan (over 3 years). Mid-level leaders primary roles are coaching, mentoring and teaching.

Strategic planning is a systematic, integrated, data-driven process that overlaps the four phases of quality focus.

Four phases of QAF quality focus:
Formulation phase:
Defining the mission, vision, values and goals from a macro or system perspective. Talk to customers. Customer’s needs continually change. Set customer-driven goals. What major systems impact customer satisfaction? You and your customers need to agree upon indicators of those systems. Monitor those indicators as metrics to continually improve the process.

Deployment phase:
Communicate, gather feedback and integrate the mission, vision values and goals. Cascade it along the ranks. Agree on sufficient budgets, manpower and time to meet your goal. Each level of the org develop objectives to improve processes to support the overall goals. Develop process indicators too.

Implementation phase:
Count on your natural working groups to monitor and incrementally improve processes. Charter other teams too for breakthroughs in areas critical to success. Don’t expect immediate changes or complete success. Stick to your plan.

Review phase
How does work compare to the original plan? System indicators prove you’re meeting customer requirements? You need a tracking system to evaluate the overall planning process.

DLO2. Explain the steps in the strategic planning process and how a senior leader might apply them in a military organization.

When building plan, include the mission vision, values, goals, objectives and action plans.
1. Planning to plan
Commit the time and other resources. Entire organization ready to commit to strategic planning? Need strong trust and teamwork.

2. Values assessment
Values define organizational culture. AF values are integrity, courage, competence, tenacity, service and patriotism. Values mark the boundaries of any planning process and serve as a baseline for decision-making. Planning team drafts a set of values and asks for everyone’s feedback.

3. Analyze mission
Mission statement expresses a reason for existence. Is your mission operationally defined? What does the org do? For whom? How does it do this? Why does the or exist?
Conduct an environmental scan: Gather info that impacts the mission; define customers, suppliers, and their requirements; define key result areas; and define key processes.

4. Envision the future
Makes planning STRATEGIC in nature. Visualize orgs future state and describe what this looks like. Develop scenarios of possible futures. This is the basis for a vision statement, organizational goals, objectives and metrics.

5. Assess current capabilities
Evaluate your key processes; do they meet customer requirements? This is baseline for improvement as well as Gap analysis. One way is to conduct a unit self assessment.

6. Gap analysis
Compare the current capabilities of each key process/key result area to the future customer requirements. Gaps? These are critical issues and the basis for near- and long-term goals setting.

7. Develop strategic goals and objectives
Tie your strategic goals to the vision. Develop goals and objectives to bridge the gap between current capability and the vision. They form basis for the functional plans. Feedback helps determine if your goals and objectives are feasible, and gain support and commitment from unit personnel.
8. Develop functional plans
Planning team coordinates with middle managers and working groups to develop the action plans. Define the subprocesses and tasks that align with and support key processes in your org. Do you have indicators to measure the subprocesses?

9. Implement plans
Natural working groups, functional, process action and developmental teams all carry out the plans.

10. Periodic review
Each month (or three) review functional plans. Use metric data to assess progress.

11. Annual review
Planning team reviews the goals, objectives and functional plans. Use system metric data. Deploy results for feedback and use as input for planning cycle. Review the strategic planning process for continuous improvement.

DLO3. Summarize the basic components of the Applied Strategic Planning model.

Strategic planning and strategic management (the day-to-day implementation of the strategic plan) are the two most important, never-ending jobs of management, especially top management. The strategic plan is implemented and applied not only after it is completed but at nearly every step of the planning process — hence the title "Applied" Strat Planning. In the model, values scan, strategic business modeling, and integrating action plans represent the unique elements of this approach.

SEE FIGURE NEXT PAGE

Planning to plan
How much commitment to the planning process is present, especially from orgs chief exec? Who are the orgs principal stakeholders and how should they be involved? How do the orgs fiscal year and budgeting cycle fit the planning process? How long will the strategic planning process take? What info is needed in order to plan successfully? Who needs to gather and analyze the data? Also, Obtain organizational commitment from key players, especially the Chief.
Figure 5-3. The Applied Strategic Planning Model
Environmental Monitoring and Application Considerations are continuous processes.

Environmental Monitoring
five environments need to be monitored: Macro, industry, competitive, customer and organization's internal environments. Some overlap in these. Enviro monitoring process should be continual

Applications Considerations
Need to pay attention to action steps throughout the planning process. As organization moves through the planning process, it needs to be aware of available resources, the existing culture, and what the competition is up to. At each phase of Applied Strat Planning, application considerations should be addressed rather than postponed until the final implementation, identifying problems and then solving them.

Values Scan
Scan the values held by each member of the planning team and the group as a whole, as well as stakeholders. Differences in values of planning team members need to be identified, clarified, and (where possible) resolved. If not, team may reach little or no agreement.

Values scan covers:

Philosophy of Operations: Make that philosophy explicit. Strat plan must fit philosophy or philosophy needs to be modified.
Stakeholders: Consider their values
Organizational Culture: and in-depth examination of the fundamental beliefs that underlie organizational life and org decision making.

Mission Formulation
(100 words or less) that identifies the basic business the organization is in. Communicated to all members of the org. Should be a transformational guide to what management wants the org to be. Four primary questions: 1. What function does the org serve? 2. For whom serve this function? 3. How does the org go about filling this function? 4. Why does the org exist? Also, identify distinctive competency: the quality or attribute that sets the org apart from its competitors.
Orgs mission statement should be worded in a way that will provide a rallying cry to the org.
Strategic Business Modeling
Defines success in the context of the business(es) the org wants to be in, how that success will be measured, what will be done to achieve it, and what kind of org culture is necessary to achieve it. A concrete detailed road map of the orgs desired future

Proactive Futuring: This uses proactive futuring, the organization takes responsibility for its own future rather than waiting for external forces to dictate that future

Constructing a Strategic Profile: 1. The orgs approach to innovation 2. Its orientation to risk 3. Its capacity for proactive futuring 4. Its competitive stance
The Process: 1. Identifying major lines of business (LOBs) the org will develop to achieve its mission. 2. Establish the critical success indicators (CSIs). 3. Identify the strategic thrusts that are required to allow the org to achieve its mission. 4. Determine the culture necessary to support the LOBs, CSIs, and strategic thrusts.

The Performance Audit
Planning team must evaluate where the org stands in LOBs, CSIs, strategic thrusts, and culture necessary.
SWOT Analysis: (Strengths, weaknesses, opportunities, threats) examines those factors both internal (SW) and external (OT) confronting it. Special attention should be paid to obtaining hard data that indicate orgs capacity to move in identified strategic direction. Need candor, openness and nondefensiveness.

Gap Analysis
Determine the size of the gap between the strategic business model and the orgs current performance. Planning team’s task is to find ways to close each gap. If impossible to bridge a gap, rework strategic business model until gap is reduced to manageable size.

Integrating Actions Plans – Horizontally and Vertically
Each of the various constituent units of the orgs business (vertical dimension) and functional (horizontal dimension) need to develop detailed operational or tactical plans based on the overall plan of the org. These plans need to be integrated into a comprehensive plan. Usually unit plans exceed the resources of the org. tough decisions set priorities.

Contingency Planning
Applied Strat Planning focuses on the highest-probability events confronting the org. Contingency planning focuses on those lower-probability events that would have a high impact on the org if they were to occur. Most important is development of a PROCESS for identifying and responding to unanticipated
events. Consider the potential threats but also the opportunities. This requires the constant use of DOWN-BOARD THINKING.

Implementation
Careful attention to doing what has been planned is critical. Ideally, the manager will pause to consider whether a proposed solution to a problem is congruent with the orgs strategic plan.

Strategic planning needs to be the template on which organizational decisions are based.

4. Summarize Gen Lorber’s views on the problems with the quality program and its implementation in the Air Force.

Quality used effectively provides a force more capable to do our nation’s taskings and more self-fulfilled because our people feel they are a contributing part of a winning team.

Probs:
We developed training programs that teach phrases out of books, and a new book comes out and we change the vocabulary. We have created a situation where many of our units are rewriting quality directives so their people can understand it. We have a lot of people running around, doing “quality speak” while we’re frustrated that we haven’t seen the level of concrete results we expected. WE tried to force fit quality programs made for industry into our AF. Example: Baldrige criteria. We are going to have to spend an unacceptable time in training if we don’t simplify our quality program. Let’s not train for training sake.

Including quality application in our professional military education is also a step in the right direction, but this training needs careful application and continuous assessment of it effectiveness. THE ONLY SOUND WAY TO IMPLEMENT QUALITY IS THROUGH LEADERSHIP. People don’t need leaders to set our core values, they’re inherent in all of us. Leadership is needed to set the environment and provide the tools for people to live out our core values. Leadership styles that have succeeded throughout history are all characterized by:
- a vision
- a sense of purpose or mission
- concern for the needs of others

There are reasons some leaders doubt the value of quality application:
1. Some leaders are personally offended that quality implementation might imply they haven’t been using quality up until now. They’ve been using some of its tenets, tools, and techniques, but not all.
2. As a nonprofit organization, the AF and its leaders sometimes don’t relate well to the commercial environment, and haven’t been completely successful in relating the commercially-oriented Baldrige criteria to airpower and our profession of arms. We are unsure of whom we’re talking about using the generic term “customer” We need to work at making terminology more specific to our military profession.
3. We often lack the incentive to adopt a structured approach to continuous improvement. But resting on our laurels will prove disastrous.

We need long range plans, well developed, that give us direction to focus our energies: STRATEGIC PLANNING. Leadership’s vision and direction are crucial to keeping everyone pointed in the same direction. Strategic planning has to provide the environment for people to think outside the box. We need and AF-wide set of metrics, and probable even a joint and DoD-wide set of metrics to help us spotlight those organizations that are doing extremely well so we can all learn from them and emulate their success. QAFAs are beginning to show some payoff. Every level of PACAF is setting goals, developing meaningful metrics, and especially rewarding superior performance. QAFAs aren’t providing us the data we need to convince us we’re continually improving our capability to do our jobs. No matter how much training, we will never realize 100% understanding and acceptance of QAF because of constant turnover of personnel. We hear too often that quality and compliance are incompatible. WRONG! Compliance with proven directives is critical to the way we do business. People were not finding QAFA feedback useful and meaningful. They still wondered, “How did we do? Are we making progress?” PACAF is now going to provide feedback in the form of a grade.

DLO5. Explain the five key attributes of Quality program implementation as discussed in the article, “When Good Enough, Isn’t: Quality Air Force in Your Organization.”

Factors which motivate leadership to begin TQM: Alignment or strategy of the approach, the culture which permits TQM to flourish, and the implementation or engagement phase, and finally, why most TQM efforts fail.

Motivation
TQ requires leadership commitment and vision to takeoff and grow. TQ journey is longer than the incumbency of most leaders. A possible motivator is to increase market share, or in declining markets, to preserve market share. This could move many DoD orgs toward TQ as they face inevitable force drawdowns. Another motivator could be the commander who wants to move his org from good to
excellent or world class. The better one understands his motivation, the more committed to the journey.

Alignment
The strategy and approach the org will take. This is largely top-down directed effort. The commander needs to equate the unit’s mission with the TQ program. Senior management must recognize the obstacles. Generally they are bureaucracy and cultural bias. A clear vision, logical strategy, and tenacious commitment by leadership will usually wear down bureaucracy. Cultural biases must be understood and overcome. Administration of the TQ program is usually done by an office chartered with responsibilities to manage the day-to-day details as well as

A total quality model, such as that in Figure 1, is a very useful tool in helping to organize the approach and explain it to the levels of management and workers who have a stake in the business’ future.

![Total Quality Model](image)

Figure 1. Total Quality Model.

the education program. Focus on long-term improvements at the expense of short-term approaches. What the short-term manager may see as a cost, the long-term manager sees as an investment.

Culture
The org must place high priority on transforming the culture of the org for new, more progressive ideas to take root. Empowerment is a team approach to energize process owners to gain control and ownership over the work they normally accomplish. Progressive organizations will transform recognition programs to reward teamwork and peer acceptance. Also, buy-in is part of the culture and will serve to accelerate cultural change. Values such at trust, integrity, and credibility are important ingredients of culture. The work force needs to see visible examples of these values in practice by management for cultural bias separating management from supervision from workers to erode.
Engagement
The takeoff phase. We begin to see pay back. ENGAGEMENT is from the BOTTOM up. TQ at engagement level is a combination of suppliers, products, customers and the processes which bring them together. Internal and external customer feedback and satisfaction are important. Surveys must be composed and controlled at the process owners’ level. Process owners need to develop their surveys after answering: 1) What info do we want to know from our customers? 2) What will we do with the data once received? During engagement, workers energize coworkers with the new concept, tools, and possibilities which should result in an avalanche of TQ.

The greatest TQ fear is the area of metrics, made up of tools and statistical process control. A common mistake occurs when management forces metrics on the workforce. Metrics are meant to drive action at the process owner level, the only level which can make a meaningful change to the process.

Failure
Analysis of what might go wrong: 7 of every 10 orgs which begin the TQ journey will fail to some degree.

Classic mistake is an immature alignment phase.

Because TQ engagement requires decentralization, there must be a well conceived plan to ensure the decentralization is conducted in and orderly manner.

Also, poor commitment of leadership causes failure. TQ is hard work and involves persistent determination.

Many orgs cannot overcome bureaucracy and cultural bias. The best cure is commitment from leadership.

Impatience is another problem. Organization must concentrate on long-term planning an continuous improvement. Anything else will be superficial.

The classic error made by many orgs is to engage from the top down.

DLO6. Promoting organizational culture has become a major priority for top leadership. Summarize the means by which a senior leader can transform the workplace into an attractive and productive environment.

For best part of the Covey article, read the left column on page 107.

How might you transform a swamp (a bad workplace) into a lovely oasis? By building basic habits of personal character and interpersonal relations, based on principles. Through principle-centered leadership. Transformation requires patience and work. It involves a natural, orderly, step-by-step process that encourages constant, constructive feedback. Four principles of transformation:

12

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Trustworthiness, trust, empowerment, and alignment must be applied in their proper sequence and for long enough to achieve long-term change. Principle-centered leadership is practiced from the inside out on four levels:
- personal (my relationship with myself)
- interpersonal (my relationships and interactions with others)
- managerial (my responsibility to get the job done with others)
- organizational (my need to organize people -- to recruit them, train them, and compensate them; to build teams; to solve problems; and to create aligned structure, strategies, and systems)

No Quick Fix...Swamp transformation does not come from working harder and more positively in the swamp. Start by building a sense of internal security in people so they can be flexible in adapting to the realities of the marketplace. Most habits of ineffectiveness are rooted in social conditioning toward quick-fix, short-term thinking. In principle-centered leadership, we center our lives and our organizational leadership on certain “true north” principles, processes and practices. Practices tell us what to do. Principles tell us why. Teaching practices without principles make people dependent upon instruction from others when the environment changes. We need to create a common vision and set of principles, and work on decreasing restraining forces. Practice-minded managers focus on increasing the driving forces that will make specific short-term improvements, creating tensions, leading to new problems, requiring new driving forces.

Long Term Relationships...Think in terms of building relationships and high-trust cultures. Most orgs’ people are caught up in image-building and turf-protecting, seek to manipulate the political swamp, its adversarial spirit and survival-of-the-fittest mentality. They spend their energy on efforts that do not serve the customer, contribute to quality, or build long-term relationships.

Transformation requires long-term thinking and long-term relationships...natural capabilities and talents of women. Management is basically a left-brained, logical approach toward controlling things...leadership is more of a right brained, intuitive, visionary approach toward building relationships with people. Most orgs are overmanaged and under-led. They never get deep buy-in to a common set of principles that enable people to supervise, direct, control and govern themselves. Regarding relationships, guiding principle ought to be “We will not talk about each other behind each other’s back” If we disagree with someone, go directly to that person to clarify a position or resolve the problem. People oriented toward competition think defensively and in terms of scarcity. Those who live in an atmosphere of affirmation and unconditional love have an intrinsic sense of personal security and abundance mentality.
Most management paradigms try to turn people into “things” by making them more efficient. If widespread in an organization’s culture, people try to protect themselves by collective power (union) and social legislation to mitigate the exploitative tendencies of an overaggressive management. You can be efficient with things, but you must be effective with people.

DLO7. Summarize Stroup’s four basic assumptions that are useful in analyzing an organizational culture and the actions used to embed values into military culture.

Stroup goes beyond person-to-person leadership concepts, examining instead the impact of indirect leadership. He says “The Army’s culture is its personality.”

Four Basic assumptions that guide the way an org culture forms
1. Who is in control?
Some units believe and operate as if they are masters of their destiny. Others appear to be at the mercy of the whims of whatever happens.
2. How we view people... intrinsically bad or good?
Soldiers, when left on their own, will do the right thing. Authority is passed down the ranks. At the other end of the scale, some units may believe soldiers will use any opportunity to “get over” on the system.
3. How we expect our soldiers to act.
A unit may expect its soldiers to be active participants and encourage individual initiative. Another org may expect its people to be passive and simply follow the leader’s direction.
4. Expectation of how people interact.
Some units expect people to be highly competitive with little interaction. Others advocate a team-oriented approach with a concern for consensus building.

Our task as leaders is to ensure the Army’s culture is appropriate to our organization.
We must act in a manner that communicates our values and assumptions to our people.

Four actions we can use to embed our values into Army culture:
1. What leaders pay attention to, measure and control. We set the standard by what our soldiers observe us checking, asking about and monitoring. Likewise, what we do not react to.
2. Leader reactions to critical incidents and organizational crises. In a crisis, our reactions reveal underlying assumptions. During a crisis, sensitivities are heightened and soldiers more likely to remember what happens.

14  KELjd14
3. Deliberate role modeling, teaching and coaching. Leaders can communicate assumptions and values by personally instructing, modeling, correcting and coaching...formally or informally.


DLO8. Compare and contrast the different types of scenario-based planning models that enable the senior leader to guide the organization, envision its future, and formulate strategies to achieve that future.

Scenarios are being used by corporate strategists as tools that adjust managers' mental models to reflect looming changes in their competitive environment. The rules for competing in the market are changing so rapidly that a past-oriented mental model will lead to wrong decisions. A critical success factor is how fast the whole company – not simply individuals – can learn.

Scenarios allow management to get beyond the question of “What future is most probable?” to more powerful questions like “What future do we fear the most?” and “What future do we want to create?”

The Shell process. Two goals. One to create a “critical mass of intent” concerning possible upheavals in an industry. Provide a way to experience upheavals before they occur, preparing managers to react quickly. Two is to spur debate thus a context for further planning.

Future Mapping. Two assumptions. First is shaped by, actions of various participants. Two are efforts in pursuit of competitive advantage will cause structural change. That planning is about learning and re-perceiving the environment of the business – is the same as Shell’s.

Future Mapping includes line managers in the scenario-building process. It is always preferable to have managers discover a new insight themselves. Two sets of tools - one the “endstates” and two “the events.” Scenario is a series of events that, in aggregate, lead to a particular endstate.

Endstates. Snapshots of an industry some number of years into the future. Endstates are purposefully extreme and divergent.

Events. You must be able to tell whether or not it has happened. A trend, a series of events. Deconstruction of trends and issues into recognizable events is key. Events are only about one thing.
Conventional Wisdom Scenarios. In Future Mapping, think of it as placing the “you Are Here” dot on a mall directory. Goal is to make existing decision-making context a tangible object of discussion. Identifying events management believes highly likely or unlikely. The experience is often disturbing, even contentious.

Mapping Endstates. The second phase of Future Mapping is that teams assigned to each endstate. Assume the endstate has happened and to construct a logical explanation of how this came about. Events are clustered into themes spread over time, a series of logical pathways.

As building scenarios come to a close, two ways the team can go:

1. Common Features Approach. Investments can be targeted to events occurring in all the scenarios using events as leading indicators. “react-faster-and-better.”
2. Aggressive Change Approach. Rank endstates on two scales: attainability and desirability. Optimally, management will choose to focus on the one endstate they believe is best for the company. Events that lead to that endstate become the basis for implementation planning.

Focus on Events. Future Mapping focuses on specific events that become the basis of actions to be taken by managers. Key events function as markers to track the industry.

DYNAMIC COMPETITIVE ADVANTAGE; THE ABILITY TO LEARN

The endstate becomes the long-term context for flexible, short-term decision making. Endstates and events are a set of alternative futures and the steps that need to be taken to reach them.

The Risk-reduction School. Two school of thought in scenario planning. One the goal is to enable large organizations to respond swiftly in our turbulent times. Scenarios catalyzing creative debate and discovering weak trends that point toward what is really going on in the world enable managers to respond more effectively to change called the risk-reduction school.

Other is to set up a vision that not only the organization but the industry can aspire to as “best” called the revolutionary or “we can change the industry” school. Positions scenarios as tools to raise the sights of a large organization to the goal of achieving a vision they believe is best and to identify the tasks required to achieve the desired endstate. This school has all the benefits and uses of the reduced risk school, but take the next step of how to make the right future actually happen.
MEMORANDUM FOR AIR WAR COLLEGE NONRESIDENT STUDIES STUDENTS

13 October, 1997

FROM: AWC/NSC
325 Chennault Circle
Maxwell AFB, AL 36112-6427

SUBJECT: Air War College Nonresident Studies Shipping List – Edition 8, Volume II, Course 00042/43B

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   JEROME M. FRADER, Lt Col, USAF
   Chief, Curriculum and Technology Integration

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LESSON #5
INTRODUCTION TO MILITARY STRATEGY AND DOCTRINE

1. Explain the key components of the Snyder model in their relationship to each other and to the levels of strategy.

First, he begins by defining Strategy—a broad concept, embracing an objective, resources and a plan for using those resources to achieve the objective—More specifically, Military Strategy—is a broad concept which includes a military objective and a plan for achieving that objective by means of military resources. p5

A companion term used with military strategy is policy—defined as broad statements of intent with regard to goals, or they can be statements that delimit or bound bureaucratic or military behavior in pursuit of implied goals. Examples: Containment Policy to limit expansion of Soviet Union, Deterrence Policy was to prevent the use of nuclear...and unconditional surrender...total defeat of the axis powers...Notice it does not say how or when it is to be accomplished.

- Often used interchangeably with strategy
- Does not say how or when it is to be accomplished
- Often ambiguous because of negotiations in developing policy...therefore...must be interpreted and refined to provide greater clarity p6

Levels of Strategy pp6-7

National Strategy—overall White House -Capital Hill Level Strategy—broad general goals
Total resources (financial, industrial, demographic...) of the nation are available to support this strategy—often National strategy and national policy are blurred because of the broad objectives

Military Strategy—the military component of national strategy—broken down into two categories—operational and force developmental

Operational Military Strategy - the objective is to win the war, or to deter the attack—-to achieve the national objective---the resource side includes the existing force structure, munitions stocks, spares, and items that can be produced in industry within a short period of time—-war plans prepared by the unified commands are examples of operational strategy.

Force Development—the objective would include development of weapons or creation forces designed to deal with existing or potential enemies—the resource side would be the defense industrial base, the Strategic Defense Initiative is an example of force developmental strategy.

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Operational- the level of war at which campaign and major operations are planned, conducted, and sustained to accomplished particular objectives-commonly referred to as “theater of operations” or four star /theater commander level (with three -star and below constituting the tactical level), the objective at this level is to “win” the campaign seizure of the beachhead, defeat of the opponents forces and capture of territory. Resources at this level include military forces of all services present in theater plus reinforcing elements that can be quickly moved into theater.

Tactical- the objectives are narrowly military, destroy the target, seize the town or defend a area. The resources are military units and supplies at the wing/division or corp level.

Separation of the levels is not absolute or clear cut, they overlap each other. The conceptual relationship is the same at all the levels. Each level involves a plan, or concept, to use resources to achieve some objective. The degree of complexity increases as one moves from tactical to the national level, but the thinking process and concepts are the same. Two other important features of the strategy model: Strategy is not driven-or determined by resources, influenced yes-- but not determined. Especially at the two top levels. They generally have sufficient resources to select from several alternative strategies. A second feature is that at every level, and virtually every circumstance, alternative ways of achieving the objective exist, however, the variety and number of alternatives decrease as one moves from national to the tactical level.

2. Summarize and identify examples of Snyder’s variables affecting strategy.

Six Variables Affecting Strategy pp8-10

**Enemy Capabilities** - One of the most important variables that shape strategy. Increases both quantity and quality of the resources needed to achieve your strategic, operational, or tactical objective - effects are hard to predict... Example: The German U-boat operations in WWII frustrated Allied efforts to provide supplies - caused us to commit additional resources to win the Battle of the Atlantic--More naval forces, employed new technology, and required us to devise new technology--therefore the enemy actions influenced both national and military strategy, and indirectly necessitated the development of new technology.

**Technology** - Has been the decisive factor in many-many campaigns--Examples include the Longbow in the battle of Crecy (1346), the British early warning radar in the Battle of Britain. Often these advantages are negated by offsetting advances. Technology can shape national strategy by decisions made on technological areas or opportunities to exploit that would give a nation a qualitative advantage-- like SDI to defend against ballistic missile attack.

**Doctrine** - Defined as the fundamental principles by which the military forces guide their actions in support of national objectives--authoritative but requires judgment and mainly
used at the tactical and operational levels—Example: the Army Air Corp belief in 1930s that bombers were relatively invulnerable and that they could deliver bombs accurately—air power doctrine rested on this for WWII—Sometimes beliefs of service members vary from doctrine.

**Political - Military Relationships** - The degree to which adequate resources are achieved at the national and military levels is often affected by the nature of the political-military relationships in the society. Two reasons this relationship is so important: First, military leaders tend to be more knowledgeable about military resources than civilian political leaders. Secondly, national and military strategies are typically supported by activities other than the use of military force. Examples are the diplomatic initiatives, economic policies and informational actions that are normally undertaken by civilian agencies. p.10

**National Style** - Less obvious but no less important—clear that a nations strategy is influenced by their history, culture, geography, and past military experience. To put it differently a nations strategy is “ethnocentric” shaped by the experience and outlook of the nation involved. Soviet planners approach strategic problems differently than Americans.

**Leadership** - This is the most important variable. The others can limit the strategy and influence it, but leadership determines strategy. Successful leaders are able to define the objective and muster the resources needed to achieve those objectives: ineffective leaders see their strategies fail because of a mismatch between resources and objectives.

3. Distinguish among grand, national, and military strategy according to Collins.

**National Strategy** - fuses all the powers of a nation during peace as well as war, to attain national interest and objectives. Within that context, there is an overall political strategy, which addresses both international and internal issues; an economic strategy, both foreign and domestic; and a national military strategy, and a national security strategy. p.18

**Grand Strategy** - *In compilation, all of the above constitute the grand strategy?* which is the art and science of employing national power under all circumstances to exert desired degrees and types of control over the opposition through threats, force, indirect pressures, diplomacy, subterfuge, and other imaginative means, thereby satisfying national security interest and objectives. Military and Grand strategies are interrelated, but are by no means synonymous. **Military strategy** is predicated on physical violence or the threat there of, where as, grand strategy is tries to alleviate the need for violence. Mainly in the purview of statesman and it controls military strategy, which is only one of its elements. p-18

4. Explain the types of strategies as described by Collins.
Sequential Strategies comprise successive steps, each contingent on the one preceding, that lead to the final objective. Efforts to undermine the enemy’s morale, isolate him from allies, deny him external supply, and destroy his internal lines of communication before invading his homeland would be a typical sequential strategy. p19

Cumulative Strategies conversely constitutes a collection of individual, random actions that eventually create crushing results. Strategic bombardment and naval campaigns against enemy shipping are prime examples. The Soviets used cumulative techniques in a different vein in the 1940s when, one by one, they incarcerated nine countries behind the Iron Curtain. No single loss seemed shattering to the free world, but suddenly it seemed the Kremlin dominated all of Eastern Europe.

-Sequential and cumulative are not incompatible they are reinforcing  p19

Direct Strategies has force as a major key, however, with Indirect Strategies force recedes into the background and its place is taken by psychology and planning. Both strategies maybe used and both have the same objective, to bend or break the enemy’s will. p19

Deterrent Strategies aims at preventing or limiting the scope of wars. This strategy has not been used extensively to prevent low intensity conflicts or revolutionary wars—insurgents may be prepared to accept the consequences. Combative (war-fighting) Strategies is oriented toward prosecution of war if they start. p20

Counterforce and Countervalue Strategies apply mainly to general nuclear war. Counterforce is designed to disarm the enemy with preventive and preemptive operations; seizing the initiative is a possible option. Countervalue (sometimes called counter city) targeting, poses what it presumes to be an unacceptable threat to the enemy’s civilian population and production base. Purpose is to create a stable “balance of terror” and thereby obviate the need to fight a nuclear war. Pure CF or CV probably are would not prove practical. Compromise concepts have emerged --CF variations that avoid CV targets and other variations that welcome collateral damage as a bonus. p20

5. Compare and contrast Snyder’s, Croll’s, and Collins’ approaches to strategies.

Snyder’s approach to strategy has three concepts (objective, resources, & a plan to link the two). He distinguishes “strategy” from “policy” because it is often too general to serve as an objective in a strategy. He also differentiates among the levels(national, military, operational and tactical), with the degree of complexity varying from highest to lowest. p5-8

Collins offers different approaches to be used depending on the parameters established by imperative ends, available means(ends vs means), and intervening threats. Ends vs Means can be compared to Snyder’s Objectives and Resources in their different models.
Approaches: Sequential and Cumulative Strategies/Direct and Indirect

KELjd21
Strategies/Deterrent and Combative Strategies/Counterforce and Countervalue Strategies He also describes strategy in four schools of thought: Continental, Maritime, Aerospace, and the Revolutionary School all of which think in terms of geographically different environments. Collins recommends a more comprehensive school of thought focusing on a grand strategy. pp18-21

Crowl’s approach to strategy is accomplished through asking six questions. He developed and derived these questions from the history of war and diplomacy in the Western world over the past century and a half. - 1) What specific national interest and policy objectives are to served by the proposed military action? 2) Is the national military strategy tailored to meet the national political objectives? 3) What are the limits of military power? 4) What are the alternatives? How strong is the homefront? Does today’s strategy overlook points of difference and exaggerate points of likeness between past and present? pp23-28

6. Summarize the types of doctrine and identify examples illustrating each of them. pp32-34

**Fundamental Doctrine** - forms the foundation for all other types of doctrine. Broad in scope and abstract. It defines the nature of war, the purpose of military forces, the relationship of military force to other instruments of power, and similar subject matter on which more abstract beliefs are founded. Characteristics, one, it is almost timeless, seldom changes because it deals with basic concepts - and the second, which is really the basis for one is that it seems to be relatively insensitive to political philosophy and technological change.

**Environmental Doctrine** - is a compilation of beliefs about the employment of military forces within a particular operating medium (sea, air, space, ground). It is more narrow in scope because it deal with a particular medium and is significantly influenced by factors like geography and technology. Some are influenced more by one than the other. p-33

**Organizational Doctrine** - is the basic belief about the operation of a particular military organization or group. It attempts to bring the abstractions of fundamental and environmental doctrine into sharp focus. Discusses roles and missions, current objectives, admin organ, force employment principles and tactics. Also very narrow in scope and concerns use of a particular force, at a particular time and environment. Must change more regularly to stay current. p-33

7. Describe the relationship between doctrine and strategy.

Strategy grows out of doctrine and doctrine is used for employing, organizing, training, and equipping our forces. p39 Doctrine must be adequate to guide/support strategy in all potential arenas. Doctrine is applicable mainly at the tactical and operational levels and shapes the way military commanders seek to accomplish their missions. In turn, the ways
in which tactical and operational task are carried out obviously affects national and military strategies. p-9

8. Explain why doctrine is important beyond the academic arena.

Because our academic approach to doctrine is heavily based on historical information/experiences that may or may not be accurate or appropriate with respect to changes in our or our opponents environment, technology base, political or cultural situation, or economics status. Therefore, doctrine must be a living, growing, maturing document. If allowed to stagnate, it becomes dogma:---dogma is inflexible and has the potential to cost us unnecessary lives and treasure. p-39

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Volume 1 Lesson 6  
Introduction to the Nature and the Art of War

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This week’s lesson characterizes the subject through the eyes of one of the key military philosophers of the modern era, Major General Carl von Clausewitz, and his approach to the “Art of War” as read in selections from “On War.” Contrasting Clausewitz’s text is General Donn Starry’s practical discourse on the principles of war in excerpts of his “The Principles of War.”

When studying military philosophy the reader must bear in mind the era during which the concepts originated and the basis of their origin. In the case of Clausewitz, much of the writing found its origin in the analysis of prior wars, the most influential having been the 18th Century European actions involving Germany, Austria, and the exploits of Napoleon. Typically, the historian considers the author’s work in light of that author’s experience and period in history to take into account influences in the text as well as the degree of accuracy as historical works prior to the mid-19th century were less scientifically researched.

To understand a little of Clausewitz and his basis for forming his philosophy let us cover some of his background. Carl Gottfried von Clausewitz (b. Magdeburg, Prussia, 1780) began his military service at 12 years of age, serving in the Rhine campaign 1793-94 then joined the Berlin War College in 1801. As a student he gained the recognition of Scharnhorst and joined him in launching new reforms for the Prussian Army. Again in combat, Clausewitz became a POW during the Jena Campaign. He served with the Russians especially during the campaigns of 1812-13. Once back with the Prussians he became chief of staff for Thielmann’s campaign at Ligny. As an eventual major general, Clausewitz became administrative director of the Kriegs Academie. While he penned much on historical military battles, the greatest and most timeless classic was “On War.” Not all of the series complete prior to his death, the translated versions did not come to the United States until the 1870s and by that time, the national military doctrine had grown out of Napoleon, inter alia, via Jomini. Clausewitz has been studied by virtually all military services worldwide. His cumbersome exposition often forces the reader to gloss over rather than absorb and to make judgments of theory application were it ostensibly fits a scientific of doctrinal purpose. Typically, the German Army embraced some of his work as dogma but either misapplied it or selected what they believed to have been tactical applications for field implementation. Clausewitz died 16 November 1831 and through the years has been called the greatest philosopher of war. Note that throughout the text, the word’s “War” and “Genius” are capitalized. Note also the term “Genius” is quoted for officers (Prussian influence) and especially for the commander in chief, in any case a general.
Donn Starry's article grew out of the AirLand Battle doctrine, although the actual principles have been in existence pre-dating AirLand Battle. The student must draw a significant contrast as the doctrine of Starry serves as a checklist or yardstick to measure OPLANs and OPORDs against for strategic, operational and tactical command levels. Clausewitz, as a Military Art philosopher, concerns himself that command and staff, especially at the national level, assume a proper mental framework to approach warfare as an "Art."

As a means of quick review of the most recent "Total War" doctrine, that being AirLand Battle, let's take a moment to review our warfighting philosophy as a comparative for the discussion on Clausewitz and ultimately Starry. It is the opinion of the defense establishment that basically all military operations "pursue and are governed by political objectives." AirLand Battle supersedes all previous combat environments. Lethality potentially extends well beyond the battlefield. Dimensions in the battle area have gone from the surface, as in Clausewitz's day, to multi-dimensional including space, air, surface, and subsurface (submarine-launched ordnance). Command and control, communications, and intelligence now enable the most technologically advanced force to get inside his opponents decision and execution cycles to create major advantages from the political to tactical levels. Wars extend downward from global to Low Intensity Conflicts, peacekeeping/making, NEOs, and even surgical high-tech economy of force operations.

War fighting and particularly "war winning" still depend on three major characteristics of the warfighters to meet the challenges. These include (1) superb soldiers and leaders with character and determination who will win because they simply will not accept losing; (2) sound, well-understood doctrine; (3) victory depends on weapons and supporting equipment sufficient for the task at hand.

Under the structure of modern warfare for the U.S., we see there are three key levels strategic, operational, and tactical. Military Strategy is the art and science of employing the armed forces of a nation or alliance to secure policy objectives by the application or threat of force. Successful strategy achieves national and alliance political aims at the lowest possible cost in lives and treasure. Operational Art is the employment of military forces to attain strategic goals in a theater of war or a theater of operations through the design, organization and conduct of campaigns [series of joint actions designed to attain a strategic objective in a theater of war] and major operations. Operational art translates strategic aims into effective military operations and campaigns. Tactics represents the art by which corps and smaller unit commanders translate potential combat power into victorious battles and engagements [small conflicts between maneuver forces]. Sound tactics win battles and engagements.

2 FM 100-5, p. 5
3 FM 100-5, pp. 9-11.
Under AirLand Battle the dynamics of combat power cover four major areas to determine the results of campaigns, major operations, battles and engagements. Combat power is the actual fightability of the force. It becomes the yardstick that measures the effect created by combining maneuver, firepower, protection, and leadership in combat actions against an enemy in war. Relative combat power becomes a quantified mathematical representation of forces in opposition.\(^{4}\)

For at least the Army, but then that is Clausewitz realm in any case, AirLand Battle doctrine provides the means by which the Army generates and applies combat power at the operational and tactical levels. It is based on securing or retaining the initiative and exercising it aggressively to accomplish the mission. The four basic tenets include initiative, agility, depth and synchronization. Risk is considered as a component of initiative and can be broken down into the categories of loss of soldiers and the risk that a selected course of action does not attain the intended result.\(^{5}\)

For those who have not read Jomini [Baron de Jomini, General and Aide-De-Camp of the Emperor of Russia], his work captures much of the Napoleonic era’s influence and was published in the 1800s. It preceded Clausewitz in popularity and doctrinally influenced the U.S. Army. Rather than describe at length, compare the chapter titles Jomini assigned his work with the chapters read in the Clausewitz study passages: *The Relation of Diplomacy to War*, *Military Policy*, *Strategy*, *Grand Tactics and Battles Several Operations of a Mixed Character Which are Partly in the Domain of Strategy and Partly of Tactics*, *Logistics or the Practical Art of Moving Armies, Formation and Employment of Troops for Battle.*\(^{6}\)

A.T. Mahan applied an interesting element which might well be included in the theory of war. One of his concepts cited the employment of technology as a means of gaining a sound advantage that would enable the force to gain and maintain the initiative and eventual victory.\(^{7}\) On the other hand, with one particular reference, the Greek commander and historian Thucydides said of scientific approach in the naval battle [dispute over Corcyra 433 B.C.] that, “...it was a battle where courage and sheer strength played a greater part than scientific methods.”\(^{8}\)

Last is the theorist J.F.C. Fuller who evolved a series of principles of war. Of interest is not so much the endstate of his principle, but rather his concept of the unity of the principles of war. The include the key vectors of cosmic, mental, moral, and physical. This further includes economy of force, object, objective, direction, concentration, distribution, surprise, endurance, mobility offensive, and security.\(^{9}\) Compare with the

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\(^{4}\) FM 100-5, p. 11.

\(^{5}\) FM 100-5, pp. 14-17.


\(^{9}\) Fuller, J.F.C., *The Foundations of the Science of War* (FT. Leavenworth: USACGSC. 1907) 220
current U.S. principles of war objective, offensive, mass, economy of force, maneuver, unity of command, security, surprise, and simplicity

Please note that for the purposes of questions and the desired learning objectives (DLOs) that the questions for study and discussion will be answered first then the reference DLOs will be listed. The DLO 4 is independently listed at the end of this lecture handout.

1. In his definition and explanation of war, is Clausewitz truly arguing that the real aim of war is to disarm the enemy, or is this an extreme statement growing from this methodology? DLO 1: Understand Clausewitz's definition of war and its essential aim.

The objective in war is to ultimately place the enemy in a position where he must submit to the opponent's will—to do what the opponent will require of him. If our will is to be exercised, then an enemy will experience our violent actions to compel him to accept our will. If an enemy is disarmed as a component of our acts of violence, then he cannot further refuse imposition of our will. Our first consideration is acts of violence in the disarming (neutralizing) military resistance. Once that has been achieved, compulsory submission of the enemy is de facto possible as he has no further military means of resisting. Clausewitz is not advocating disarming as the goal. He states war is the vehicle which brings an enemy to subjugation. If an enemy is disarmed or neutralized militarily, there is a supposition that our will can be imposed. So the progression would be the act of violence, defeat and therefore, disarming, followed by the imposition of will (object) which is there as a political end with war as the means.

2. Is absolute war possible? DLO 1.

Absolute war can occur on paper but becomes diluted when consideration is given to the military ability to mass forces, negotiate terrain to achieve force decisive massing, and the timely ability to have the maximum allied effort concentrated for a decisive attack which would then result in the military (disarming) victory. Absolute war can be applied theoretically but the variables of reality may restrict the force size, mobility, ability to concentrate effort, and timing in acquiring allied forces. Ultimately, a force size may be selected with tailoring to match enemy forces rather than absolute massing a result of both sides seeking economies is massing. One tends to match the other (3 reciprocals) than to be absolute. Ultimately, both political abilities and goals of the disarmed state may result in the failure of the winning belligerent to impose the level of will on its enemy as originally conceived when the planning began. Timing on the starting side of the war will vary the notice of intent to fight Clausewitz believing that instant war is not likely. Ultimately war is not on both sides a factor as will to launch and prosecute the attack may also be lacking in absolute intent. Further, if political objectives diminish or if equivalents are assigned as objectives, absolute war or lesser military actions may be possible (p. 76). Absolute war can be further buffered by periods of inaction where the military chiefs evaluate resources ad offer restrained commitments as they allow realities and statistics effect battle commitment and move away from absolute warfare (p. 78).
When one side resolves to withdraw from combat or to change its efforts for absolute conflict to absolute war and affords the opponent a chance to modify his response or delay with an expectation of a more favorable moment, then the absolute character is lost. Opportunity may change also with relative combat power changes between offense and defense. Further if a commanders battlefield intel is lacking he can change his operations to match incorrectly perceived requirements and therefore dilute from absolutism (pp.76-77)

Further, the "...Art of War has to deal with living and moral forces, the consequence of which is that it can never attain the absolute and positive (p. 79). The more violent the excitement which precedes the war by so much the nearer will the military and political ends coincide, so much the more purely military and less political the war appears to be (p.80)."


Genius is essential at all levels “from the lowest upwards...to render distinguished services in war (p. 90) " Although Clausewitz states this, the key individual with his ideal genius is the commander in chief.

Genius is spelled out as a variety of personal qualities and characteristics. In one surprising statement Clausewitz states “...it is the average result which indicates military genius (p. 84).” However, he concludes his book by reviewing characteristics of a military genius mindset as “...searching rather than as have a social beat, cool rather than fiery heads, are those to which in time of war we should prefer to trust the welfare of our women and children, the honour and the safety of our fatherland (p. 91).” We can infer that genius is essential to victory.

4. How do the four elements of war (danger, uncertainty, chance, and physical effort) affect the requirements of senior commanders at war? DLO 3.

There are four elements Clausewitz cites as “comprising the atmosphere in which the war moves (p. 84).” These are danger, physical effort, uncertainty, and chance.

To counter these factors, Clausewitz describes the personal traits or characteristics a leader must have to overcome the four elements present in war. First, we must note the term most often applied by Clausewitz is “War”, not battle. This is important as his approach supports the concept of military art--its philosophical approach on a very broad spectrum--rather than focusing on a battle or battlefield where more operational systems are brought to bear--soldier versus soldier.

To overcome these war “elements”, the application of force is personally driven by the CINC in the form of energy, firmness, staunchness, strength of mind and character (p. 84). These are the internal character traits which the General brings to bear at the right moment and in the right event to overcome these four elements. These elements are present in war
and in order to overcome them the senior officers must clearly, in Clausewitz's opinion, control them with their own personal character. Danger, though a present concern, is a physical property of war and should not effect the commander in his decision-making function.

(p. 82) Danger—Warrior's first quality is courage. (1) First in the immediacy of danger is physical courage. Indifference to danger. (2) and, moral courage—or courage before [as a component of] responsibility. (3) And, impulse-driven or pride, patriotism, enthusiasm.

(p. 83) Together they form perfect courage.

Physical Exertion—combined strong body and mind can overcome fatigue (mental and physical) and give the commander an attitude of aloofness from or immunity to them.

(p. 83) Uncertainty—Clausewitz assigns 75% of that which must be “calculated” as being hidden in the clouds of great uncertainty. The mind must seek the truth or answers and defeat uncertainty through its “tact in judgment.”

(p. 83) Chance—"War is the providence of chance." Actions in war constantly finds things different from his expectations. Chance will impact plans—branches and sequels need to be exploited. Chance may not alter plans totally if there is an awareness of chance and the circumstances in the war. Another characteristic to overcome or at least deal with the effects of chance is coup d’oeil (F. glance, what he can see with the mind’s eye), intellect, and the courage to implement the plan are key. This literally is resolution. In fact, his mental capacity should be independent of exposure to danger, which in any case diminish with rank.

Clausewitz notes that firmness, as a characteristic, is an individualized trait and “will” becomes a matter for the general—his degree of motivation to act firmly and impart this downward will, his motivation and self-control can be major traits that make the difference in absorbing a single blow (p. 86), “firmness”, or repeated blows “staunchness”. To Clausewitz, a great intellectual force (p. 86) is required to “furnish” motive. A strong mind is literally one which can maintain serenity under the most powerful excitement and permit “perception and judgment to act with perfect freedom (p. 87)”. His underlying paraphrasing of “strength of character” is simply “tenacity of conviction (p. 89)”. The commander must be able to hold his mental standard despite the distractions often resulting from complaint or dissonance or whimsy (p. 87)."

Uncertainty is included in the above as uncertainty falls back to personal conviction. Such a mental detractor can be countered with character and a degree of obstinacy—where the commander opposes the feelings or recommendations running counter to his own. He can use his powers of logical assessment, overall knowledge, and his imagination to overcome uncertainty (pp. 88-89).
Chance can be overcome with knowledge of the region (p. 89), his own force capabilities, planning, and flexibility to either develop opportunities that he sees or to react to chance difficulties using reasoning, intellect, understanding the spectrum of war, and applying good judgment (p. 90).

5 What are the most important elements in the friction of war? DLO 2.

Chance is the greatest contributor to causing friction. Chance can effect men to be causative factors which create delay and irregularity combined with bodily exertion--these are the greatest causes of friction. Overcoming chance--The most consummate skill, presence of mind, and energy are required to resolve chance incidents and to overcome their friction. When executed expertly the activity will continue as seemingly smooth and undisturbed through the eye of a casual observer. Strong will of a proud spirit stands prominent and commanding in the middle of the Art of War.

Friction is the only conception that differentiates between real war and a war on paper. People comprise the military machine and each individual creates an individual friction, each going in a different vector. The unknown.

Friction/Precision on plan of execution--By understanding friction exists, the general must not expect his plan to be a precise operation.

Friction--causative element that makes which appears to be easy in war difficult in reality.

Friction (Recognizing/Overcoming)--Experience and a strong will, when combined with other rare qualities of the mind are required to make a man a strong general.

Enormous friction is created when forces re brought into contact with chance incidents (arising out of chance, such as the effects of weather, per Clausewitz's example)

Resistant medium--activity in war is movement in a resistant medium.

Experience in War--(The ability to identify and resolve) Knowledge o this friction is based on experience in war and is required (as a personal characteristic) in a good general. The general must be aware of friction and overcome it.

Experience (Tact/Judgment)--experienced officer will decide the suitability of the occasion to exercise the appropriate steps.

6 What does Clausewitz mean by the "moral forces" and what are the main forces with which he's concerned? DLO 3.

(p. 99) Clausewitz classifies the "moral forces" as among the most important in the war. They are an amalgamation of two components--Spirit and Will. Together the two serve as the constant in warfare which carries with it all the other powers that guide the conduct of war. Spirit, he observes, is present in all aspects and elements of war. Spirit as its own quality of war may be found in all levels and at every sector of a country including the general. He notes spirit and other moral forces "animate" the general and others.
Moral forces escape definition in word yet are essential components in war. Further, they are above the realm of rules which Clausewitz observes as being “folly” in any event and “made for fools”, that is, rules are for fools—so much for doctrine.

(p. 100) Moral forces are ever-present and cannot be disassociated from War and are therefore also present in all physical action associated with the War—the philosophical moral forces must necessarily be the philosophical guiding mindset for War. When viewed metaphorically, the moral gleams against the dullness of the physical. History is the source of examples from which the general’s mind can absorb the moral force values and ultimately their influence.

(p. 101) Three main moral forces—or powers—exemplify Clausewitz’s philosophy of the extension of theoretical moral forces to the actual war itself. These extensions (worldly) are The Talents of the Commander, The Military Virtue of the Army, and It’s Natural Feeling. He draws three real world examples to support these characteristics or Chief Moral Forces. First, his “Natural Feeling” which he labels as enthusiasm, fanatical zeal, faith is in his own dialogue similar to the elite force feelings of the armed forces of today or as found in the third world fanatical forces. Looking at his era in time, the descriptions applied to mountain forces and campaign levies, especially those drafted in a province of their general where they might regard him highly. This strangely was not within the realm of a general as the true testing of his capabilities as mountains would not provide clear control and continuity of command would be lacking. Second, the Military Virtue of an Army—as a philosophical title—really reflected on the drilled and disciplined forces, who when fighting in open country and employing drilled maneuvers, would also be beneath the true skill as a commander as the troops would be merely carrying out in war what they had drilled for in peace and that the fighting in open terrain hardly represented mobility or tactical difficulties. However, The Talents of A Commander were to be obvious when the general commanded forces in closely intersected and undulating country.

7. In evaluating the soundness of a strategy, which of the Principles of War would be paramount?

Strategy can be tested against the opposition on one hand and the support of the people on the other. Accordingly, objective sets the pace by establishing the goal in accordance with the political policy which it is intended to support. Any objective must be attainable

Maneuver gives a strategic flexibility to not only the key objective but remain mobile enough to re-direct forces to other areas to support policy.

Simplicity is the yardstick to gage all plans and to enlist the will of the people.

Unity of Command ensures all players can be aligned and know mission intent.
No matter what, all nine principles provide guidance at all phases of planning and execution as guidance markers, not hard rules to be followed with blinders.

8. Compare and contrast the advantages and disadvantages of using Clausewitz's instruction on how to think about war versus using the Principles of War themselves. Which is better suited to prepare senior officers to think at the strategic level?

One must always place philosophy and principles of war in perspective. First and foremost they are not specific rules and must not be followed. They complement the frameworks in place within the defense planning guidance. Wars require imagination and initiative. Planning formulae can be service arm specific or generalized for coordination such as JOPES. Clausewitz concepts for absolute war and two minor variations coincide with an AirLand Battle approach where resources are brought to bear or for LIC or surgical operations were very specific functional organizations are tasked to achieve the results. Key both in Clausewitz's mind and within the defense establishment are the concepts of the political driving the National Security Strategy and the relations taken by the State Department. As we all know, even the forces are staffed at the top by secretaries and the Department of Defense as well. There is a distinct political buffer in the decision process. Who are, for example, the National Command Authority. Simple the President as Commander in Chief and the Secretary of Defense, not the Chairman of the Joint Chiefs of Staff. He is an advisor and implementer. Moral Forces really roll back to the ethics constantly preached as well as the schooling and the character of the man shaped in service, in battle and in certain instances derived from patriotism, dedication, and unit esprit d’corps. We have all known the friction of war. Even in daily issues, the dependence on various staff elements, aircraft availability, personnel training levels and deployability, material availability and readiness, and still, even weather. How about funding as well. The dangers of war are perhaps still present yet we deal with them using a greatly improved technology. The uncertainty has been made more sure strategically through all-source intel collection and analysis. Still, a bomber of fighter flying into an AA/AAA zone certainly has a heightened crew pucker factor as danger, uncertainty, and chance are all awaiting. We formulate tactics (security, maneuver, economy of force) yet a “lock-on” can still mean the sortie's termination in flames. We have all gone the physical effort route and in many instances, surprise and offensive demand extreme physical effort to achieve their success.

Senior officers need to be like motion picture directors in a sense. They know the script and have to employ a vision across the spectrum to lay the operation into perspective. Their ability to summon all their theory, the guideposts, to call their experience into play, and to understand the philosophy of the art of war is vital. The study of Clausewitz from a philosophical point of view is essential. Clausewitz is one person with a number of ideas. These provide the senior officer with a sense of vision by which the military art can be employed. The principles of war serve as a yardstick and checklist. They may be employed vertically throughout the different levels of planning from the top to the soldier, sailor, or airman conducting the operation. All nine must be thought through by the senior
officer during planning, wargaming, and plan evaluation as tests to ensure the plan has covered as many of the principles as feasible to make the plan work.

DLO 4. Comprehend Clausewitz's views on the relationship between policy (the ends) and the war (the means).

(pp. 79-80) Clausewitz took War quite seriously and literally stated "...it is a serious means for a serious object." Barbarism may employ war as its own end and Clausewitz believed that the uncivilized employed it in that manner, having no other concept of interaction with another group than as a belligerent. However, in the civilized world, relations would proceed on a diplomatic basis, the political. When politics and diplomacy worked to achieve their end, they were sufficient. When policy could not be achieved and the analysis bore that only by creating a submissive posture in the opponent would policy be accepted, then war became the logical extension of the political arena. Political motive, the political act, then the introduction of war to achieve the political end followed in sequence. No always would the War need to be absolute. Once the forces achieved the submissive posturing of the opponent, further need for combat was over. Destruction of enemy forces in total war might be the objective, but a hurried reduction of resistance to the point of acceptance could resolve that portion of the political chain of events. After all, a war is a chain, not merely one act, per Clausewitz. Further along, the aim of war is always the overthrow of the enemy. To achieve this, theoretically the center of gravity must be identified and all efforts be massed to destroy it. In his day, Clausewitz further assessed that the most essential aspect of the war was the "conquest and destruction" of the enemy's Army. Further accounting for Allied relations, Clausewitz believed that if a single enemy's capture/destroy would end all the allied operations, that is, disarm them all, then the effort needed to be massed against that power's center of gravity (pp. 112-113).

Alternate acts of war such as the conquest of minor territory or temporizing by defending one's own territory were also a part of his limited object theory (p. 116).

War essentially exists as part of "political intercourse, therefore by no means an independent thing in itself" (p. 118). Policy uses war as an instrument to achieve the political end and this concept is employed as a tool of foreign relations today by the U.S. (p. 119). As a matter of policy then, it characteristically assumes the magnitude of the policy itself, conceivably in its most "absolute form (p. 119)." Military staff planners necessarily form an official strategy based upon or subordinate to the political point of view. The art of war's highest point of view or its ultimate perception is policy, though the end product is combat rather than diplomatic discussion and cables (p. 120).

"War is an instrument of foreign policy, it must necessarily bear its character, it must measure with its scale: the conduct of War, in its great features, is therefore policy itself, which takes up the sword in place of the pen, but does not on that account cease to think according to its own laws (p. 122)."
CLAUSEWITZ CONDENSED

INTRODUCTION

Carl von Clausewitz (1780-1831) was a Prussian soldier and scholar during and after the Napoleonic wars, an age in which Clausewitz said, "War itself...had been lecturing." 1/ Despite the fact that his writings remained unfinished at the time of his death, his study On War is "the first" to grapple with "the fundamentals of its subject, and the first to evolve a pattern of thought adaptable to every stage of military history and practice." 2/ The extent to which Clausewitz endures today, in an era of nuclear weaponry and "Star Wars" defense projects, attests to the success of his systematic attempt to describe war's universal dynamics. Indeed, American strategist Bernard Brodie, like many other military authorities, believes that On War "is not simply the greatest but the only truly great book on war." 3/

What explains the durability of Clausewitzian thought? The key lies in the fundamentally persistent nature of war, for it is the fundamentally timeless aspect of war that most strikes the modern reader of On War. Clausewitz views war more as an art than a science. One can no more establish a rigid manual for combat, Clausewitz thinks, than one can define strict principles for great painting.


2/ Ibid., p. 93.


War, like art, is essentially creative, not imitative. A sound theory of war, therefore, has to accommodate change and flexibility. This Clausewitz attempts to do by distilling basic elements and broad patterns of war from the record of
great Napoleonic battles and commanders in ways that will be applicable, despite future changes in the political, economic, social, legal, and technological landscape.

The purpose of this paper is to extract from On War the principal thoughts of Clausewitz still relevant to contemporary strategists, present them with minimal editorial comment, then list a few caveats concerning interpretation. 1/

1. WAR CONTINUES POLICY BY VIOLENT MEANS

Clausewitz defines war as "an act of force to compel our enemy to do our will." (75) One salient point emerging the On War is the political purpose of fighting. Armed combat, Clausewitz argues, is only the means to a political end, without which war becomes "pointless and devoid of sense." (605) Clausewitz repeatedly states that "war is nothing but the continuation of policy with other means." (69) Therefore, war should not be removed from its political context:

...[W]e also want to make it clear that war in itself does not suspend political intercourse or change it into something entirely different. In `6£`6 Š essentials that intercourse continues, irrespective of the means it employs. The main lines along which military events progress, and to which they are restricted, are political lines that continue throughout war into the subsequent peace. How could it be otherwise? Do political relations between peoples and between their government stop when diplomatic notes are no longer exchanged? Is not war just another expression of their thoughts, another form of speech or writing? Its grammar, indeed, may be its own, but not its logic. (605)

1/ Quotations for this paper are followed by the page number(s) of the Howard and Paret translation of On War.

2. TRIAD OF GOVERNMENT, ARMED SERVICES, AND PEOPLE

The close interplay between politics and military affairs suggests a second conclusion reached by Clausewitz, namely that war is waged by a "remarkable trinity" of the government, armed services, and people. "A theory that ignores
any one of them or seeks to fix an arbitrary relationship between them would conflict with reality to such an extent that for this reason alone it would be totally useless." (89) The government established the political purpose; the military provides the means for achieving the political end; and the people provide the will, the "engines of war." All three are indispensable legs of Clausewitz' strategic triad.

Clausewitz takes special note of the symbiotic relationship between strategy and statecraft. Not only must military leaders prosecute the war, they must also remember the political end for which it is being waged, the difference between ends and means and between tactics and strategy:

If we do not learn to regard war, and the separate campaigns of which it is composed, as a chain of linked engagements each leading to the next, but instead succumb to the idea that the capture of certain geographical points or the seizure of undefended provinces are of value in themselves, we are liable to regard them as windfall profits. In so doing, and in ignoring the fact that they are links in a continuous chain of events, we also ignore the possibility the their possession may later lead to definite disadvantages. This mistake is illustrated again and again in military history. (182)

Hence, at the summit of power, the distinction between strategy and statesmanship can no longer be discerned. Ultimately, what the strategist has wrought must be judged on political, not military, terms. The telling criterion of his work, however, is how effectively he has used available means to accomplish desired ends: "A prince or general can best demonstrate his genius by managing a campaign exactly to suit his resources, doing neither too much nor too little." (177)

3. ROLE OF POLITICAL LEADERS

A. Policy makers Shape Military Strategy

Clausewitz illustrates how political leaders and their policies can have a profound impact on the operational conduct of a war. He sums up the process as follows:

No one starts a war—or rather, no one in his sense ought to do so—without first being clear in his mind what he intends to achieve by that war and how he intends to conduct it. The former is its political purpose; the latter its operational objective. This is the governing principle which will set its course, prescribe the scale of means and effort which is required, and make its influence felt throughout down to
the smallest operational detail. (579)

B. Policymakers Should Grasp Military Affairs

Given the impact of policy on strategy, political leaders must combine statesmanship with strategy, just as military leaders need to possess an understanding of national policy. Yet history is replete with examples, Clausewitz shows us, of politicians making erroneous military decisions, primarily because they lacked a solid grounding in the military means at their disposal:

Only if statesmen look to certain military moves and actions to produce effects that are foreign to their nature do political decisions influence operations for the worse. In the same way as a man who has not fully mastered a foreign language sometimes fails to express himself correctly, so statesmen often issue orders that defeat the purpose they are meant to serve. Time and again that has happened, which demonstrates that a certain group of military affairs is vital for those in charge of general policy. (608)

Among other things, Clausewitz suggests policymakers maintain diligent consultation with chief military officials.

4. ROLE OF MILITARY LEADERS

A. Political Leaders are Paramount

Because "policy is the guiding intelligence and war only the instrument," Clausewitz argues that no "other possibility exists, then than to subordinate the military point of view to the political." (607)

...[T]he assertion that a major military development, or the plan for one, should be a matter for purely military opinion is unacceptable and can be damaging. Nor indeed is it sensible to summon soldiers, as many governments do when they are planning a war, and ask them for purely military advice." (607)

In fact, Clausewitz writes, "No major proposal required for war can be worked out in ignorance of political factors...." (608) Moreover, the political purpose, and hence the political leadership, must determine the intensity and length of any conflict:

Since war is not an act of senseless passion but is controlled by its political object, the value of this purpose must determine the sacrifices to be made for it in magnitude and also in duration. Once the
expenditure of effort exceeds the value of the political object, the object must be renounced and peace must follow. (92)

B. Military Leaders Should Help Shape Policy

While the thrust of On War is directed primarily at the primacy of policy, Clausewitz nonetheless contends that military leaders should not be subject to the capriciousness of some government policies:

If we keep in mind that war springs from some political purpose, it is natural that the prime cause of its existence will remain the supreme consideration in conducting it. That, however, does not imply that the political aim is a tyrant. It must adapt itself to its chosen means, a process which can radically change it; yet the political aim remains the first consideration. (87)

Hence, while the statesmen must retain authority over the general or admiral, the latter should, in Clausewitz' mind, be in a position to influence the former.

5. CONDUCT OF WAR

A. Theory is a Guide

In the theory of war, Clausewitz says, there can be no "prescriptive formulation universal enough to deserve the name of law." (152) He cites three reasons why a theory of war cannot be subjected to rigid scientific principles: (1) information is subjective and not fixed in war; (2) moral and psychological forces are intertwined with physical forces; and (3) war consists not of unilateral but reciprocal action, and thus one can never be sure of what the enemy will do.

Moreover, most theorists usually are guilty of at least one of the following three flaws, according to Clausewitz: (1) An "impermissible use of certain narrow systems as formal bodies of law." This pseudo-scientific approach often attempts to "use elaborate scientific guidelines as if they were a kind of truth machine," (168) despite the fact that chance cannot be quantified. (2) Overuse of jargon, technicalities, and metaphors, where at times the analyst "no longer knows just what he is thinking and soothes himself with obscure ideas which would not satisfy him if expressed in plain speech." (169) (3) Misuse and abuse of historical examples. Here the analyst drags in analogies from remote times and places just to show off his erudition, perhaps without recognizing the dissimilarities. The effect is to "distract and confuse one's judgement without proving anything." (169)

In sum, theory should confine itself to simple terms and straight-
forward observations of the conduct of war; it must avoid spurious claims and pseudo-scientific formulae and historical compendia; and it must above all never forget the human element, the moral forces, of war. "Pity the theory, writes Clausewitz, "that conflicts with reason!" (136)

B. Friction of War

"Everything in war is very simple," Clausewitz notes, "but the simplest thing is difficult." (119) "In war more than anywhere else things do not turn out as we expect. Nearby they do not appear as they did from a distance." (193) Moreover, "...every fault and exaggeration of [a] theory is instantly exposed in war." Clausewitz terms "friction" the "only concept that more or less corresponds to the factors that distinguish real war from war on paper." (119)

Friction is caused mainly by the danger of war, by war's demanding physical efforts, and by the presence of unclear information or the fog of war. First, the intrinsically dangerous nature of war means that in an atmosphere of blood, bullets, and bombs, "the light of reason is refracted in a manner quite different from that which is normal in academic speculation." (113) Only the exceptional soldier keeps his incisive judgment intact during the heat of battle.

Second, physical effort in war also produces friction: "If no one had the right to give his views on military operations except when he is frozen, or faint from heat and thirst, or depressed from privation and fatigue, objective and accurate views would be even rarer than they are." (115) Clausewitz hence reminds strategists not to forget the immense effect of physical effort upon the soldiers engaging in combat.

Ambiguous information in war is yet a third element which Clausewitz says distinguishes real war from war in theory. Although strategists should gauge plans by probabilities, it is sometimes impossible to do so during war, when most intelligence is indeterminate:

...[A] general in time of war is constantly bombarded by reports both true and false; by errors arising from fear or negligence or hastiness; by disobedience born of right or wrong interpretations, of ill will, of a proper or mistaken sense of duty, of laziness, or of exhaustion; and by accidents that nobody could have foreseen. In short, he is exposed to countless impressions, most of them disturbing, few of them encouraging....(193)

To offset the friction of war which results inevitably from human frailty, Clausewitz advocates pushing ahead with all one's might:

Perseverance in the chosen course is the essential counter-weight,
provided that no compelling reasons intervene to the contrary. Moreover, there is hardly a worthwhile enterprise in war whose execution does not call for infinite effort, trouble, and privation; and as man under pressure tends to give in to physical and intellectual weakness, only great strength of will can lead to the objective. It is steadfastness that will earn the admiration of the world and of posterity. (193)

C. Proper Focus for Armed Force

There "is no higher and simpler law of strategy," (204) Clausewitz says, than to concentrate force on the enemy's weak link, his strategic "center of gravity."

...[O]ne must keep the dominant characteristics of both belligerents in mind. Out of these characteristics a certain center of gravity develops, the hub of all power and movement, on which everything depends. That is the point against which all our energies should be directed. (595-596)

Thus, the task is to locate the adversary's center of gravity, which might be his capital, his key ally, or his armed forces.

D. Economy of Force

Closely connected to the idea of concentration of force is the concept of economy of force. Clausewitz underlines the need to ensure that "no part of the whole [military] force is idle." (213) Some writers have misinterpreted his use of the word "economy" to mean economizing rather than effective use of force. Clausewitz makes it clear, however, that emphasis should be placed on the effective use of armed force, and that ultimately force should continuously adhere and contribute to the political purpose: "Any unnecessary expenditure of time, every unnecessary detour, is a waste of strength and thus abhorrent to strategic thought." (624)

E. Defense

Defense is a stronger form of warfare than offense, Clausewitz argues, because it is "easier to hold ground than take it. It follows that defense is easier than attack, assuming both sides have equal means." (357) In other words, "...defense has a passive purpose: Preservation; and attack a positive one: conquest. The latter increases one's own capacity to wage war; the former does not. So...we must say that the defensive form of warfare is intrinsically stronger than the offensive." (358) Clausewitz pictures defense not merely as passive, but as consisting of two parts: the first, waiting for the attack, and the second, parrying it, the counterattack. "So the defensive form of war is not
a simple shield, but a shield made up of well-directed blows." (357) "Even when the only point of the war is to maintain the status quo, the fact remains that merely parrying a blow goes against the essential nature of war, which certainly does not consist merely in enduring." (370)

Defense nevertheless remains negative, for it is not the end for which war is to be fought:

If defense is the stronger form of war, yet has a negative object, it follows that it should be used only so long as weakness compels, and be abandoned as soon as we are strong enough to pursue a positive object. When one has used defensive measures successfully, a more favorable balance of strength is usually created; thus, the natural course in war is to begin defensively and end by attacking. It would therefore contradict the very idea of war to regard defense as its final purpose.... (358)

Moreover, although the defense has the advantage of its object to preserve, it suffers from a serious psychological side effect, namely that a defensive retreat or loss of territory can cripple domestic and military morale. The armed services and population cannot be expected to "tell the difference between a planned retreat and a backward stumble." (471) Psychological factors impede defense as well as offense.

In addition, perhaps the criteria for the advantage of defense over offense have altered since Clausewitz' day. Although his arguments still seem valid in the context of conventional warfare, they appear less credible with regard to nuclear weapons, for which no country currently has an effective defense. Thus, Clausewitzian defensive doctrine probably needs to be reassessed in light of nuclear arsenals.

F. Offense

"Once the defender has gained an important advantage," Clausewitz writes, "defense as such has done its work." (370) Now it is time for a "sudden powerful transition to the offensive—the flashing sword of vengeance." (370) This is the culminating point of battle. Unless an offensive results in the defender's collapse, there will be a pivotal point at which the attack is about to lose effective superiority. To push beyond this threshold without a good chance of victory is dangerous. In fact, "every attack which does not lead to peace must necessarily end up as a defense." (572)

In addition to the culminating point of battle, Clausewitz raises two vital questions concerning offense: "Destruction of the enemy's forces is the means to the end. What does this mean? At what price?" (529) It is formidable enough to
develop a strategy that will achieve specific political ends; it is even more so unless decision makers know precisely what they are trying to destroy by combat and how much they are willing to commit to that effort. Regarding offensive maneuver, Clausewitz notes that it has the virtue of being able to create something "out of nothing" by seizing upon the adversary's mistakes. He concludes, however, that it is fruitless to attempt to devise systematic rules for maneuver, and that, in any event, maneuver remains dependent upon the superior application of force:

...no rules of any kind exist for maneuver, and no method or general principle can determine the value of the action; rather, superior application, precision, order, discipline, and fear will find the means to achieve palpable advantage in the most singular and minute circumstances." (542)

G. Numerical Superiority

"The best strategy," writes Clausewitz, "is always to be very strong; first in general, and then at the decisive point." (204) Like other succinct principles, however, Clausewitz carefully qualifies this one, for "to reduce the whole secret of the art of war to the formula of numerical superiority at a certain time in a certain place [is] an oversimplification that [will not stand up] for a moment against the realities of life." (135) Indeed:

...superiority of numbers in a given engagement is only one of the factors that determines victory. Superior numbers, far from contributing everything, or even a substantial part, to victory, may actually be contributing very little, depending on the circumstances. (194)

"But superiority varies in degrees." (194) Thus, "a significant superiority in numbers...will suffice to assure victory, however adverse the other circumstances." (195) In sum, quantitative superiority "must be regarded as fundamental—to be achieved in every case and to the fullest possible extent...But it would be seriously misunderstanding our argument, to consider numerical superiority as indispensable to victory..." (197)

H. Surprise

Clausewitz contends that surprise is of more use to tactics than strategy. "It is still more important to remember that almost the only advantage of the attack rests on its initial surprise. Speed and impetus are its strongest elements and are usually indispensable if we are to defeat the enemy." (624) While surprise, "is more or less basic to all operations," it is also somewhat overrated, if only because it is difficult to achieve in practice:
But while the wish to achieve surprise is common and, indeed, indispensable, and while it is true that it will never be completely ineffective, it is equally true that by its very nature surprise can rarely be outstandingly successful. It would be a mistake, therefore, to regard surprise as a key element of success in war. The principle is highly attractive in theory, but in practice it is often held up by the friction of the whole machine. (198)

I. Morale and Will

For Clausewitz, war is an inseparable marriage of physical and immaterial or "moral" forces such as will, but for him the moral forces are more fundamental to war. In his words, "Fighting...is a trial of moral and physical forces through the medium of the latter...." (127) The physical factors "seem little more than the wooden hilt, while the moral factors are the precious metal, the real weapon, the finely-honed blade." (185) Furthermore, if "moral forces" are the ultimate determinant of war, it then follows that the destruction of the enemy's will to resist should be the primary target in any conflict. "Battle is the bloodiest solution," observes Clausewitz, but it should be considered an act aimed as "killing...the enemy's spirit [rather] than...his men." (259)

(1) Importance of Military Morale

Clausewitz stresses the importance of morale and will for both the soldier and the commander. The soldier’s first requirement is moral and physical courage, both the acceptance of responsibility and the suppression of fear. In order to survive the horror of combat he must have an invincible martial spirit, which can be attained only through military victory and hardship. The soldier has but one purpose: "The end for which a soldier is recruited, clothed, armed and trained, the whole object of his sleeping, eating, drinking, and marching is simply that he should fight at the right place and the right time." (95)

In order to penetrate the "psychological fog" of war, the commander foremost requires sound judgment, which Clausewitz describes as an intuition rooted in experience and sober calculation, and determination, so that he not waver from his decisions:

In the dreadful presence of suffering and danger, emotion can easily overwhelm intellectual conviction, and in this psychological fog it is so hard to form clear and complete insights that changes of view become more understandable and excusable. Action can never be based on anything firmer than instinct, a sensing of truth. (108)

To be sure, the commander also needs to be bold, but: "The higher up the chain
of command, the great the need for boldness to be supported by a reflective mind, so that boldness does not degenerate into purposeless bursts of blind passion." (190) These attributes form "military genius," which is "the inquiring rather than the creative mind, the comprehensive rather than the specialized approach, the calm rather than the excitable head to which in war we would choose to entrust the fate of our brothers and children, and the safety and honor of our country." (112)

(2) Importance of Political Will

Will also plays a key political role in Clausewitz' calculus of war. As the armed services provide the means for war, those means must not be diverted from their prescribed political purpose:

Once it has been determined, from the political conditions, what a war is meant to achieve and what it can achieve, it is early to chart the course. But great strength of character, as well as great lucidity and firmness of mind, is required in order to follow through steadily, to carry our the plan, and not to be thrown off course by thousands of diversions. (178)

The complete execution of armed force for political ends is far more arduous than the mere establishment of those political goals in the abstract. Clausewitz thus admonishes those with muddled political goals:

The first, the supreme, the most far-reaching act of judgment that the statesman and commander have to make is to establish...the kind of war on which they are embarking; neither mistaking it for, nor trying to turn it into, something that is alien to its nature. This is the first of all strategic questions and the most comprehensive. (88-89)

6. CAUTIONARY NOTES

Clausewitz, perhaps to a greater degree than any other writer, captures the unchanging elements of war. His accomplishments notwithstanding, there nonetheless are many reasons to take care interpreting Clausewitz. First, his observations are incomplete and, at times, ambiguous and contradictory. Second, his writing tends toward the metaphysical and is steeped in early 19th-century German philosophy. Third, some of On War has been overtaken by events, such as the rise of air power and the advent of nuclear weapons, and parts are therefore outdated. It also ignores relationships between land and sea power. Finally, some professed disciples of Clausewitz, such as Lenin, Trotsky, and the Prussian General Staff, have tainted On War with sinister connotations.

Despite these problems, however, so much of On War seems as timely today as
when it was first written. The challenge is to use his ideas as a guide, not a blueprint, so as to constantly strive for the versatile, efficient, and effective armed forces that can win their assigned battles, without losing sight of the political purpose for which they are being waged.

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CERTIFICATE AND DISCLAIMER</td>
<td>ii</td>
</tr>
<tr>
<td>I INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>II BACKGROUND</td>
<td>2</td>
</tr>
<tr>
<td>US National Strategy of Engagement and Enlargement</td>
<td>2</td>
</tr>
<tr>
<td>Military Operations Other Than War</td>
<td>4</td>
</tr>
<tr>
<td>Three Recent US International Peace and Humanitarian Operations</td>
<td>6</td>
</tr>
<tr>
<td>III ISSUES ANALYSIS</td>
<td>7</td>
</tr>
<tr>
<td>Impact on US National Security</td>
<td>7</td>
</tr>
<tr>
<td>Role of International Agencies/Organizations</td>
<td>8</td>
</tr>
<tr>
<td>Regional Stability</td>
<td>10</td>
</tr>
<tr>
<td>IV POLICY EVALUATION</td>
<td>12</td>
</tr>
<tr>
<td>National Interests</td>
<td>12</td>
</tr>
<tr>
<td>Costs</td>
<td>13</td>
</tr>
<tr>
<td>Risks</td>
<td>14</td>
</tr>
<tr>
<td>US Public Support</td>
<td>14</td>
</tr>
<tr>
<td>Military Readiness</td>
<td>15</td>
</tr>
<tr>
<td>V CONCLUSIONS/RECOMMENDATIONS</td>
<td>17</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>20</td>
</tr>
</tbody>
</table>
SECTION I
INTRODUCTION

The impact of United States (US) force employment in international peacekeeping, peacemaking and humanitarian operations on US national security is vital and in a positive way critically important, while at the same time destabilizing and fraught with risks. These operations are a vital contribution to the US national security strategy of engagement and enlargement; at the same time, the effect of these operations can be seriously debilitating to military readiness. The purpose of this paper is to argue that the cause of this deterioration is the failure of these operations to properly plan and/or achieve an end-state. The paper will offer recommendations for improvement.

To accomplish these purposes, the paper will begin with a background section containing brief discussions of the US national security strategy of engagement and enlargement, military operations other than war and a brief discussion of recent operations in which US armed forces contributed to international peace and humanitarian operations. Next, the paper will analyze the issues of the impact of peace and humanitarian operations on US national security, the role of international agencies and organizations and regional stability, and how and why each of these issues impacts the US decisions to use armed forces in the operations identified in the background section. The next section of the paper will evaluate the policies of using US forces in these operations in terms of their impact on US national interests, costs, risks, US public support and military readiness. The paper will conclude with a brief summary, conclusions on the effect of these issues on international peace and stability, and a recommendation for improvement.
SECTION II

BACKGROUND

U.S. National Strategy of Engagement and Enlargement

Beginning in late 1989, several seminal events took place to cause a reshaping of US national security strategy. Previously, the Cold War drove the US to follow a strategy of containing communism worldwide, with strategies ranging from diplomacy to large-scale forward stationing of US forces to full-scale engagement in armed conflict. (26:82) The first of the world-defining events occurred in 1989 when Moscow acknowledged and encouraged the independence of the former Soviet Republics. (6:178) With the ensuing break-up of the Soviet Union one of the poles in the bipolar world dissolved, leaving the US without a clearly-defined foe around which to center its national security strategy. (25:115)

With these events in the former Soviet Union came a very destabilizing effect. A continued degradation of the economies of the Republics, coupled with a lawlessness caused by the failure of the police and the judiciary, has created an environment conducive to the sale of arms (including weapons of mass destruction). (22:827) Whether sold to domestic arms brokers or directly to other nations with aggressive or terrorist-sponsoring agendas, the potentially destabilizing impact on international affairs of this loss of control of the Former Soviet arsenal caused the US to focus some of its national security strategy on the proliferation of weapons of mass destruction to non-state actors, such as terrorists. (27:110)

Also in 1989 came the fall of the Berlin Wall and the reunification of the Federal Republic of Germany. A victory for the proponents of democracy, the reunification of the country had a very serious economic impact on the German economy, for decades seen as the strongest on the continent of Europe. (25:121) German economic prosperity has slowed due to huge capital investments to revitalize the economy of the former East German state as well as the extension to the East of the same “cradle-to-grave” social security and healthcare that the state has provided its West German citizens. (25:122) These
destabilizing economic demands, coupled with the social and political derisiveness created by reunification, will likely have the effect of limiting Germany's ability to take the lead in Europe, both economically and politically, into the 21st century. (25:122)

At about the same time, across the world in the Pacific rim, China and Japan were emerging as US security concerns for nearly opposite reasons. China, long the isolationist in the world community, began to emerge as an international player, at least in economic terms. (25:123) A doubling of its gross national product, an increase in trade not only with its Asian neighbors but also with the West and an opening of its import markets all combined with its strong military, suggest a China with the potential to carry significant sway on the international stage. (25:123) On the other hand, Japan, for decades the economic strength of the Asian world, has experienced an economic downturn beginning in the early 1990s. (25:124) Overextended business ventures, corrupt business practices and stock market losses have combined to weaken the Japanese economy and affect the economies of its Asian trading partners, particularly South Korea and Thailand. (25:124) While its basic strength remains, Japan, like Germany with its domestic economic problems, is likely to be a distracted player in the international arena. (25:124)

Finally, the late 1980s also has been witness to a weakened American economy. Foreign competition, European tariffs, Asian trade restrictions, relocation of US industry to sources of foreign (cheap) labor and failure to invest in American research and development all combined to challenge the traditional notion that the US economy was the undisputed leading economic power in the world. (25:119) While the US economy is rebounding since the end of the Gulf War, at the time of the president's reassessment of US national security strategy and with remaining potential to return in the future, the downturning US economy played a significant role in his strategy decision. (25:120)

That Presidential decision produced the current US national security strategy of engagement and enlargement. Most recently detailed in the 1997 National Security Strategy Report (NSSR), the policy of
engagement is one that promotes US involvement throughout the world to exert US leadership to deter aggression and foster conflict resolution, while at the same time promoting enlargement of US leadership by opening more and wider foreign markets to US trade, and instilling and strengthening democracies, especially newly emerging democracies. (15:161) To promote this strategy of engagement and enlargement, the NSSR is based on strategic priorities that include fostering a peaceful Europe, forging a strong and stable Asia, continuing America’s leadership as the world’s most important force for peace, creating a more open and competitive trading system, confronting new security threats characterized by greater transnational complexity, and strengthening US military and diplomatic tools to implement these priorities. (15:161). Domestic support for this strategy begins with what one author describes as a “refreshingly positive approach,” one premised on the fact that the line between domestic and international interests is blurring to the point of disappearing. (24:139) Stability and democracies overseas translates into open market-based trading opportunities, which translates into American security and prosperity at home. (15:160)

**Military Operations Other Than War**

To support these efforts the US needs to keep available a full spectrum of diplomatic and military tools. Under the rubric known as Military Operations other than War (MOOTW), the Department of Defense (DoD) provides a wealth of these tools, both diplomatic and military. Ranging in scope from arms control efforts, to combating terrorism, enforcing sanctions and exclusion zones, noncombatant evacuation operations to strikes and raids, MOOTW engage US military forces in the full spectrum of international relations. (32:III-1).

Three MOOTW efforts most often supported by the employment of military forces are humanitarian assistance, peacemaking and peacekeeping operations. If placed on a spectrum of operations likely to involve US forces in limited armed conflicts, near the lowest end of this spectrum of MOOTW are
such diplomatic programs of enlargement as Humanitarian Assistance (HA) operations. Limited in scope and duration, these exercises and operations are intended to supplement or complement efforts of host-nation or international civil authorities or agencies to relieve or reduce the results of natural or manmade disasters or endemic conditions (such as famine, disease or hunger). (32:III-4)

Also of a diplomatic character, peacemaking operations (PMO) encourage exchange of democratic ideals through the exchange of military personnel, equipment and tactics. Defined as the process of diplomacy, mediation and negotiation that arrange an end to a dispute or resolves issues that lead to conflict, PMO include military-to-military operations and security assistance. (32:III-13). For example, the DoD Military-to-Military Contacts Program involves travel of US military members to states (especially emerging democracies) requesting exchange of information and experience on military matters from how to establish training programs to how to improve logistics. (17:51) The Department of State (DoS), in conjunction with DoD, sponsors a variety of military aid and sales programs such as Foreign Military Financing and Foreign Military Sales. (17:50) All of these DoS/DoD efforts concurrently have the positive effect of US engagement by enhancing regional stability in crisis response as well as the enlargement effort to open foreign markets to US trade. (32:1-3)

The MOOTW most likely to engage US forces in limited forms of armed conflict are those involving peacekeeping. In terms of the political distinctions between these operations, peacekeeping operations (PKO) involve the use of military forces at the invitation of the warring factions in order to maintain a peace whose terms have at least in principle been agreed to. (32:III-12) Part of a broader category of Peace Operations, PKO are designed to monitor and facilitate implementation of an agreement (cease-fire, truce or other armistice). (32:III-12) Distinct from Peace Enforcement Operations (PEO), which apply military force to compel compliance with sanctions or resolutions regardless of whether
belligerents invite PEO forces into the country, PKO, PMO and humanitarian operations are intended to support diplomatic efforts to conclude long-term settlements. (32:III-13)

The military distinctions between these operations are subtle. Peacemaking operations are distinct from PKO and HA primarily because peacemaking efforts are intended to supplement and support diplomatic peace activities. (32:III-13). On the other hand, peacekeeping and humanitarian operations differ only slightly in the likely dangers that will be faced by the intervening forces: even when belligerents call for outside assistance, PKO forces may face resentment and demonstrations of that resentment in the form of armed attack. Numerous such attacks faced the PKO in Bosnia. (18:A1) Similarly in HA operations, military forces entering a foreign country with disaster aid may find itself faced not just with inhabitants desperate for relief, but also with segments of a fractionalized society in competition for control of that society. (1:A1)

**Three Recent US International Peace and Humanitarian Operations**

The latter scenario is an apt description of three operations the US has engaged in since 1992. In response to the drought and famine suffered by the people of Somalia, the US contributed to an international military deployment known as UNOSOM. (26:92) Also, beginning in April 1992, US forces have been involved in Operation DENY FLIGHT, which began in response to a call by the United Nations (UN) to stop the conduct of air bombardments in the conflict in Bosnia-Herzegovina and which has evolved into an important part of the current peacekeeping operation conducted by the United Nations Stabilization Forces (SFOR). (7:47) Finally, the most illustrative peacemaking operation the US has been engaged in since 1992 is the US Military Training Mission (USMTM) in Riyadh, Saudi Arabia; established in 1977, these US military members sustain a foreign assistance program to Saudi Arabia which contributes immeasurably to the long-term diplomatic effort at peace in the Middle East. (21:2409)
SECTION III
ISSUES ANALYSIS

Impact on US National Security

In making the decision to employ US forces in international peacekeeping, peacemaking and humanitarian operations, the most important issue influencing that decision is the impact the operation has on US national security. Undisputed from as long ago as the days of Karl von Clausewitz, the use of military forces outside national borders is an attempt to impose national interests through other than diplomatic means. (35:79) If there is no gain to be realized in terms of national security strategy, then the use of US forces in peacekeeping, peacemaking and humanitarian operations will quickly become indefensible. (29:138) All other issues at play in the decision to use forces are subordinate in importance to the impact the operation has on national security strategy; if there is no positive contribution to the strategy, that fact will eventually overshadow any other perceived gain in areas such as human rights, economics, regional stability or military readiness. (29:138)

How best to analyze the impact of the operation on national security strategy is through careful issues analysis. The critical issues to be assessed are those that demonstrate the degree to which the operation will further the strategy of engagement and enlargement. (36:42) The more it is likely that the deployment will assist in resolving a regional conflict, providing humanitarian aid, promoting democracy, or enhancing US economic interests, then the more likely the operation will be seen as furthering US national security interests. (36:42)

The reason why it is so important to demonstrate the impact on US national security is the role such a justification plays in gaining domestic support for the decision to employ forces. That domestic support takes two, related, forms: support from the general populace as well as support from the Congress. (36:28) If the gain of employing US armed forces in peace and humanitarian operations is not obvious to
the general population, it will not take long for the people to make known their objection to sending their sons and daughters in harm's way. (36:42) Often an outgrowth of public resistance, but sometimes independent of it, the Congress, in its collaborative role with the President on foreign policy, must be convinced of the benefit of the use of armed force vis-à-vis US national security. (5:71) Left unpersuaded, the Congress is likely to employ the War Powers Resolution to demand the return of forces deployed by the President. (16:54)

To illustrate these issues, in Operation DENY FLIGHT, denying the warring factions the medium of the air from which to launch armed attacks was seen as directly contributing to the strength of the European alliance (i.e., NATO) and the resolution of the Balkan regional conflict. (11:A1) Along with other US interests (like maintaining a leadership role in NATO and the relatively low risk of casualties involved), this demonstration of how the operation impacted US national security strategy was critical to sustaining popular and congressional support. (18:A1) Similarly, both popular and congressional support waned under the security concerns for vulnerable statins such as USMTM's in the days and weeks that followed the 19 American fatalities at Al Khobar Towers, in nearby Dahran, Saudi Arabia. (31:30) Finally, the UNOSOM deployment, at least at its outset, seemed to address two of the four issues in the national security strategy analysis: providing humanitarian aid and promoting (at least the image) of democracy; however, popular and congressional support disappeared as quickly as it was determined that American blood was being spilled to achieve ends (nation-building, Aideed arrest) that no longer related to the issues involved in the national strategy of engagement and enlargement. (36:21)

Role of International Agencies/Organizations

The role played by international agencies and organizations during the course of a planned mission can have a tremendous impact on the decision to employ US forces in international peacekeeping, peacemaking and humanitarian operations. During the Cold War a great deal of the role of the UN, for
instance, was as a forum in which one of the superpowers exercised its veto power and precluded the other from obtaining Security Council support for a given operation. (28:103) In today’s post-Cold War world, non-governmental organizations (NGOs) as well as the UN and regional organizations like NATO, play a much larger role in providing assistance (especially humanitarian assistance) and deciding when and how world support will be lent to a proposed use of force. (33:II-3) This illustrates why this issue impacts the US decision to employ forces in peacekeeping, peacemaking and humanitarian operations. Specifically, in a world in which the US is the best (and perhaps only) nation capable of projecting military power, often it is in the best interest of the US to have the imprimatur of international agencies to demonstrate the international, as well as the US interests to be served by employment of US forces. (30:4;11:A1)

In both Operation DENY FLIGHT and UNOSOM, international organizations played pivotal roles in the US decision to employ forces. NATO was intimately involved in the decision to enforce the no-fly zone over Bosnia, as well as in key operational decisions such as rules of engagement. (4:A1) Similarly, the UN Security Council passed several resolutions before calling for forces to create UNOSOM, thereby providing US decisionmakers with objectives (although later subjected to change) of UN intentions to set a secure environment in Somalia. (29:136)

On the domestic side, this issue impacts the decision to employ forces in terms of the degree to which these international organizations exercise control over the operation. (13:1588) Congress has passed resolutions rejecting the prospect of US forces falling under the command of foreign officers. (23:A1) For example, when the US was making its decision to deploy forces to help UNOSOM extract from Somalia in September, 1993, the Congress made its intentions clear that it would not support such a deployment if the forces were placed under the command of the UNOSOM commander, who at the time was assigned from the Turkish armed forces. (14:18)
The domestic impact of international agencies and organizations may also have a positive effect. Specifically, if NGOs are ready to contribute aid (such as food and medicines to Somalis and Bosnians), US contributions, especially to HA operations, may be significantly simplified and reduced in terms of personnel and cost. (33:I-2)

Regional Stability

How and why regional stability impacts the US decision to employ forces in peacekeeping, peacemaking and humanitarian operations is best analyzed in terms of the correlation between the objective of the proposed mission and whether that objective may be expected to affect regional stability. (32:I-4) The more the operation is expected to enhance regional stability, the more support exists for the use of US forces. (30:1) The less the operation's objectives are seen to contribute to regional stability, the less it will support the employment of US forces for that operation. (30:2)

This issue is separate from the concept of whether the mission advances US national security strategy, and focuses independently on whether a successful mission objective will contribute to regional stability. Because regional stability tends to create a climate which resolves conflict, operations which contribute to regional stability are often seen as having a positive impact on US national security strategy and its goal to resolve conflict. (30:5) This issue of regional stability will likely lend credence to a decision to employ US forces; however, a positive contribution to regional stability will not carry the decision to employ US forces if the troop employment does not make a positive contribution to US national security strategy. (30:4)

In light of the three operations previously discussed, the issue of regional stability factored most heavily in the US decision to employ its forces in Operation DENY FLIGHT. Most analysts saw the need to contribute to the operation to help create stability in the Balkan region, the tinderbox from which the first world war was fueled. (37:E5) Nothing seemed to convince the warring factions in that region of the need
to cease their genocidal tactics of "ethnic cleansing" until the aircraft flying Operation DENY FLIGHT missions were tasked with conducting sustained, punishing air attacks in November and December 1995.

(3:A32) These strikes have been identified as the greatest incentive for the factions to conclude the Dayton Peace Accords. (2:A21) Operations such as the USMTM in Southwest Asia have been identified as a vital demonstration of US commitment to the peace and security of the Persian Gulf region; equally important, USMTM is an example of the effective way the US assists allies in improving their self-defense and deterring regional aggressors. (34:44) The US decision to withdraw from the operation in Somalia is one of the best illustrations of a decision to cease employing US forces where regional stability might be enhanced but no national security strategy is strengthened. (36:28)

Pretty good section overall.

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SECTION IV
POLICY EVALUATION

National Interests

The use of US forces in meeting the engagement and enlargement strategy objective of pursuing national interests has been effective in PKO, PMO and HA operations after 1992. The biggest advantage the US has in using its forces to advance its strategy objectives and policies is that the forces are so well manned, equipped and trained as to be flexible enough to succeed in the missions given to them. For instance, in Operation DENY FLIGHT, the US national interest to maintain its leadership role in NATO was directly supported by the breadth of US forces' contributions to those operations, as well as the command leadership roles those forces played. (3:A32). Similarly, the US interest in engagement in providing relief to suffering peoples was, at least initially, swiftly and successfully accomplished in the early days of the UNOSOM contribution. (29:136). Finally, the years of successful implementation of the security assistance mission by USMTM military personnel has immeasurably assisted in advancing US national interests in stability in the Middle East. (34:44)

The shortcomings of these uses of US forces are that they are not the only means by which to advance US national interests in these regions of the world. US leadership in NATO may be advanced by other means, such as diplomatic and financial contributions to that regional alliance. While the US, using its military forces (especially its transportation assets) is probably the most capable nation to contribute to HA operations, it is by no means the only force, as witnessed by the continuing contributions of other nations, especially Italian and Turkish forces, to the UNOSOM mission. (14:18) Finally, the shortcoming of using US forces for such missions as USMTM's in Saudi Arabia is that it lends support to the criticism of the lagging US diplomatic efforts to better invigorate the Middle East Peace Process. (14:19)
**Costs**

In terms of costs, the US policies of using military forces to support engagement and enlargement strategies have few supporters and many detractors. Key to this circumstance is the fact that the gains to US engagement and enlargement strategies are difficult, if not impossible to quantify. The costs of operations are quantifiable, almost to the dollar, in terms of military expenses, but the benefits are not nearly so easily accounted. This was especially important to both the President and the Congress on the eve of the expansion of US contributions to the expanding Operation DENY FLIGHT forces. (10:A21) Hotly debated at that time was the issue of whether such US commitment of forces would have any, much less $1.5 Billion worth of benefits toward the stability and humanitarian contributions to US engagement strategy. (10:A21).

Similarly, the costs of HA operations can be astronomical and can cause a great deal of skepticism for future commitments of US forces. For instance, in Somalia, in 1993 alone, the US intervention cost more than $750 million. (12:75) Not only has this been seen as a phenomenal drain on US military budgets, but also it has been seen as a phenomenal waste, especially given the ignominious departure and subsequent return of lawlessness and suffering by the Somalia people. (12:75)

By contrast, PMO efforts are far more effective in terms of costs and benefits. Military to military contacts teams are usually small in size (5-10 members maximum) and require minimum costs associated with travel. (34:41) Even less costly for US military expenses are the security assistance organizations (SAOs) such as USMTM: in such operations the cost of personnel, logistics and support for the SAOs are incorporated as part of the military sales case and charged to the country receiving the security assistance. (21:2411)

Common to all three types of operations and the costs involved is the overall issue of determining an end-state to the operation. Such a determination would not only provide guidance on the probable

(What is the end-state for U.S. military that has been in Saudi rap.

i.e. decades and will likely remain so?)

KELjd61
ceiling for budget planning purposes, but also would go long strides to assessing the cost of the forces contribution for purposes of cost-benefit analysis and ultimately the decision to use military forces. (12:77)

This issue of establishing an end-state also crosses into other issues involved in the decision to use forces (and will be discussed below in the sub-sections on public support and military readiness); as it relates to costs, the impact of a defined end-state is critical to both short and long-term budget planning and cost-benefit analyses.

**Risks**

Deciding to use of US forces to support engagement and enlargement strategies includes the criterion of risk assessment. Especially since the losses suffered in Somalia (UNOSOM) and Saudi Arabia (Khobar Towers bombing), the final assessment of use of force more heavily than ever evaluates risk to the contributed forces. (28:102) As an outgrowth of the Somalia losses, the President's new national strategies specifically included risk assessment as a key issue determining whether to engage US forces in foreign support of peace operations. (30:6)

The risk to US forces may be lessened by greater emphasis on diplomatic and economic measures; however, as has been illustrated in numerous theaters since 1992, some efforts to advance US engagement and enlargement strategies cannot be accomplished by means other than use of US forces. The best illustration of such an effort is in the Balkans, where years of efforts by the United Nations and other non-military resources failed to stop the fighting. In his determination that US forces would be contributed to the expanded operation there, the President factored heavily in his decision the risks faced by the forces.

(8:A32)

**US Public Support**

Tied to the issue of risks faced by US forces deployed in support of engagement and enlargement strategies is the issue of US public support. As risks grow and cause losses in terms of blood and money,
public support wanes and eventually demands return of committed forces. No better example of this exists than the loss of public and congressional support following the loss of 18 US Rangers in Somalia. (18:A7)

As mentioned earlier in this section, the issue of an established end-state can also have an effect on the criterion of whether the US forces deployment will enjoy public support. If the US were to establish an identifiable and achievable end-state, public support of the decision should be strong; conversely, if there is no end in sight, the decision to deploy is not likely to be well-received or supported by the American public. The operations in Bosnia best illustrate both halves of this argument. When Operation DENY FLIGHT began in 1993, there was no end-state established; rather, its objective was simply to enforce the no-fly zone over Bosnia-Herzegovina. (2:A21) When the war dragged on and especially as media reported the continued atrocities associated with a war without end in sight, public support for continued commitment of US forces and money waned. (2:A21) Yet, after the Dayton Accords were signed and the efforts were made to establish a certain end-state (unrealistic as it may have been to set a date as an end-state), the decision to commit US forces to that expanded military effort received strong public support. (19:A1)

**Military Readiness**

Tying all of these policies together is the issue of military readiness. The outcome of the decision to employ US forces in support of PKO, PMO and HA operations to advance the national security strategy of engagement and enlargement is that the decision carries with it the tremendous opportunity cost of military combat readiness. Such non-traditional uses of the US military not only depletes the forces of time and money otherwise spent on combat training, but also erodes the fighting edge honed by exercises and operations that take the forces to an enemy and engages the enemy. (12:66) In the HA operation of Somalia as well as the PKO operation in Bosnia, rather than close with the enemy and engage, US forces have had to learn restraint and diplomacy to deal with warring factions. (12:75) In order to teach the purchasing countries how to operate the weapons they secure through SAOs, US forces stationed in
support of missions such as USMTM similarly use their diplomatic and organizational talents in training foreign recipients far more than their warfighting abilities. (12:73)

Not only does the decision to use US forces in non-traditional military roles (like PKO, PMO and HA operations) cause a loss of the fighting edge, it also has caused a fatigue among the members of the force. (20:3) The fatigue stems from repeated deployments for months and sometimes a year at a time to often monotonous and uneventful duties, such as repeated temporary duties in Bosnia and Southwest Asia. (9:B7) The result is a force, especially an aviation force that is being drawn out of the military to better-paying and less taxing duties in the civilian workforce. (9:B7)
SECTION V
CONCLUSIONS/RECOMMENDATIONS

Since 1992, the US has advanced its national security strategy of engagement and enlargement in a number of PKO, PMO and HA operations. The end of the Cold War has seen the US transition from a force to contain communism to one which is staying engaged in conflict resolution and in enlarging both competitive markets and emerging democracies. A key means of advancing this strategy is through MOOTW, especially PKO, PMO and HA operations, each one of which has political and military attributes that contribute positively to the advancement of the engagement and enlargement strategies. Examples of each include the US deployment in Bosnia, the US contribution to UNOSOM in Somalia, and the continuing contribution of US forces to the security assistance mission at USMTM in Saudi Arabia.

The degree to which these operations impact national security, how international agencies advance or detract from the operations and their contributions to regional stability all are critical to the decision to employ forces around the world. As the mission affects national security, the likelihood of using forces increases (or decreases) proportionately. Similarly, the role of international agencies such as NGOs, the UN and regional alliances (such as NATO) may also factor in both positive and negative ways into the equation of whether to deploy forces. Finally, there is also a direct correlation between the expected effect on regional stability and the decision to employ forces: the more likely to stabilize the region, the more likely the operation will be supported by US forces. Likewise, US policies of use of forces are affected by the way the use of force may be viewed as having positive or negative effects on the advancement of national interests, costs of the operation, risks to the personnel involved, likelihood of public support and effect on military readiness.

Recommendations

This last issue—effect on military readiness—must be seen as the greatest current challenge to US national security strategy and must be addressed with new and aggressive changes in policy. National
decision-makers must consider the plan for a proposed operation in detail before they conclude that US forces will be used for a MOOTW. The first recommendation of this paper is a change to the way operations planning is done. That process needs to add the consideration of the drain on military readiness. Planners must assess all current deployments of forces capable of performing the mission but already suffering fatigue from a crushing operations tempo. Planning for proposed operations should include a session that identifies all current operations, the forces currently in use for those operations, forces required for the proposed operation, forces eligible for the proposed operations and foreseeable combat training requirements for eligible forces. Only after such assessments are made can national decision-makers have a realistic perspective on the issue of whether a proposed use of US forces will further deteriorate their military readiness.

As a second recommendation, this author suggests that no use of US military force be made unless the proposed use includes a careful plan for conclusion at an identifiable, achievable and realistic end-state. The longer a mission lasts, without an end in sight, the more the forces will be stretched in terms of a fighting edge, both in terms of talent and energy. Having an end-state in mind, with a reasonable expectation that that state is achievable is immeasurable in its positive effects on personnel spending their talents and their time away from the roles and missions which drew them to military service in the first instance. Especially as that deployment takes them continents away from the land and the loved ones they serve, military personnel are vulnerable to the loss of the fighting and energy edges they have honed in their regular military service. The use of forces in MOOTW to advance national security strategies of engagement and enlargement continues to reap great dividends for the United States. Perseverance in maintaining the containment policy of the Cold War paid huge dividends in terms of the proliferation of democracy and international economic benefits. We should stay the new course of engagement and enlargement with the same doggedness. When we decide to use US military forces in MOOTW to advance
this strategy, we should do so very cautiously, with greater sensitivity to the potential impact such a
decision has on military readiness. There are additional costs involved, beyond that associated with the
national budget: the costs of readiness and retention of forces. Those costs can carry a very big price-tag,
Illustrated with the recurring deployment of forces, especially to Saudi Arabia and identified by the
commanding general of the Air Force's Air Combat Command, General Richard Hawley, "The price will
become increasingly steep. The longer we stay over there [in the Middle East], the higher the price ... on
morale, on retention and on the condition of our equipment. If there's one thing we can do to make a huge
difference, it would be to get [troops] out of the [Persian] Gulf." (20:3)

likelihood?
BIBLIOGRAPHY


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Lesson 7

Development of Air Doctrine in the Interwar Period

Lesson Objective: To comprehend significant factors influencing the development of American air power doctrine in the interwar years

- Douhet's and others' concepts based on WWI experience
- Increased air power awareness (by Billy Mitchell et al)
- Belief that the bomber would get through
- Visionary doctrinal centers of air tactics, primarily ACTS, and their instructors and graduates
- Tireless advocacy and leadership
- Interservice rivalries
- Foreign experiences
- Culmination: AWPD-1
Lesson 7

The Development of American Air Doctrine in the Interwar Period

DLO #1 Explain Douhet's concepts concerning the new nature of warfare.
Giulio Douhet, WWI Italian airman, writer of The Command of the Air, 1921

- Douhet distinguishes from the previous surface-bound nature of warfare with the "new" (1921) nature of warfare resulting from the characteristics of the evolving technology of Air Power. Air Power:
  - Is the future; Douhet advises best national defense is a strong aerial offense—an Independent Air Force that can achieve "command of the air"
  - Prevent the enemy from flying or carrying out any aerial action at all;
  - Compares to navy's command of the sea—effective naval disposition is not guarding borders, but projecting and controlling the seas; air the same
  - Command of the air means victory; resources should be allocated to this end at expense of land and sea forces if necessary
- Is offensive in nature; should be able to operate independently from army/navy
- Has speed and flexibility; offers path of least resistance; not bounded by terrain nor dependent on surface "breakthroughs"; can bypass static defenses and strike enemies' vitals
- Forces total war; no more "non-combatants;" war zone bounded by warring counties' boundaries, not some isolated front; civilian targets vulnerable (Douhet has no qualms about hitting civilian targets with incendiaries, explosives or even gas)
- Should concentrate on large targets (industrial, commercial, transportation centers) not protected or hardened against bombardment
- Can deliver bombs requiring less metal of less quality and precision than artillery shells (more bang for the lira)

DLOc #2 Summarize the factors which Douhet argues will make wars shorter.

- Air power and command of the air will make wars shorter, says Douhet; compares future wars to the attrition of WWI
  - WWI long and drawn out; civilian centers producing war materials undisturbed; civilians isolated from the "dying minority" at the front; impossible to invade enemy's territory without a massive, expensive break through defensive lines
  - Air power emphasizes the advantages of the offensive which leads "to swift, crushing decisions on the battlefield"
  - Air power is unconstrained by terrain, so possible to go beyond lines of defense without a breakthrough
  - Hitting industrial, commercial, and transportation targets can slow replenishment of armaments and forces
  - Hitting civilian centers can destroy morale and will to fight
  - Air power can make wars relatively bloodless; aerial threat to homeland at the outset could shorten hostilities
DLO #3 Describe the contributions and concepts of the key men who influenced American air power doctrine between the wars.

BG Billy Mitchell – fought hard for recognition of air power; supported an independent air arm; used public opinion to fight bureaucrats of the General Staff; relentless speaker and prolific author of articles and newspaper stories on air power; attacked the Navy, saying money spent on battleships was wasted—aircraft and submarines could defend nation; pushed for a test of his theory in 1921 and his aircraft sank German ships including the heavily compartmented Ostfriesland; court-martialed for outspokenness; trial widely publicized leading to new awareness of air power

MG Mason Patrick – Chief of the Air Corps; supported separation between auxiliary “air service” for the Army (20% of total air strength), and an “air force” for offensive aviation with the remaining 80%, under its own command structure.

LtCol Donald Wilson – Air Tactics Director, Maxwell Field; believed (like Douhet) future wars would be attacks on the economic and social fabrics of enemies; “any method which causes the people to prefer the terms for peace to continued suffering is effective,” he said; had low estimate of the usefulness of pursuit aircraft, except in air defense role; feared diversion of production to fighters at the expense of bombers; escort should be adopted only if indispensable to bomber operations; saw pursuit aircraft in harassment role rather than destructive—threat of pursuit would force enemy to increase armament (reducing bomb loads), and could impact bombing accuracy.

MG Frank Andrews – GHQ Air Force/CC; supported a long range bombing capability; believed US could best defend its frontiers by attacking the enemy, including its national structure, as far from US shores as possible; “air power,” he said, “is measured in terms of bombardment aviation”; had faith that the bomber would always reach its target, regardless of pursuit aircraft or antiaircraft fire, due to its speed, altitude, and defensive firepower (though he ultimately recognized the necessity of long range escorts); pushed for procurement of four engine bombers—larger aircraft offered greater efficiency and usefulness and could strike enemy bases and naval forces at maximum range; fought acquisition of two engine aircraft; sought to free Air Corps development programs from limitations related to surface forces.

MG Oscar Westover – agreed with Andrews; supported procurement of long range bombers to “insure the Army’s responsibility in defending the US.”

John C. Slessor, RAF – “leading air thought abroad” paralleled ACTS; believed military aviation should be an offensive striking force against enemy’s national structure of armed forces; interested in the selection and priority of targets in a sustained program of strategic bombardment; writings probably confirmed ACTS theorizing.

MG Haywood S. Hansell – described ACTS’ approach to target selection; sought industrial targets which were early in the production process, which when disrupted,
cause disruption at subsequent production centers; eg, bombing ball bearing plant causes a standstill at subsequent productions centers dependent on ball bearings.

Gen Ira Eaker – believed in effectiveness of area bombing over precision bombing; more conscious of the effect of fighter defense upon bombing accuracy.

Col Hugh Knerr – GHQ Air Force Chief of Staff; believed function of pursuit plane was to shoot down bombers—not as a bomber escort. Supported Andrews’ bomber superiority theories. Andrews & Knerr: relentless, tireless advocate for Air.

Maj Clayton Bissell – ACTS pursuit instructor; though a pursuit guy, tended to have defeatist view of pursuit interception; believed bomber was superior to all existing countermeasures; pursuit could not neutralize bombers without a speed advantage of 40-50%; not in favor of Chennault’s ground communication scheme; judged attack aircraft as having adequate firepower but lacking accuracy;

Col Millard Harmon – ACTS asst commandant; recognized role of bomber, but pushed for a balance with pursuit aircraft in interception and escort roles; supported the “limited aim” approach for interception, ie the harrassment of enemy bomber tactics as put forth by LtCol Wilson; advocated this approach for defense of US—a thin line of general air defense in addition to more concentrated defenses of key centers and installations; could result in up to 35% loss of payload of attacking bombers (as estimated by Maj James Parker, ACTS pursuit instructor).

Capt Earle Partridge – ACTS pursuit instructor; believed bombers needed escorts when ever they expected enemy interceptors; especially required if on daylight missions; spoke of other missions in support of ground forces, such as denying aerial observation or attack, reconnaissance, and air to ground attacks on enemy forces; endorsed Chennault’s aircraft interception net idea.

Capt Claire Chennault – saw role of pursuit aircraft as flexible, offensive-defensive, and opportunistic; one of the first to recognize need for a ground information net for successful bomber interception.

LtCol Carl Spaatz – wrote statement on doctrine of attack aviation; regarded as more useful than bombardment for close support of or resistance to infantry attacks; feared low level vulnerability, however; believed large, long range bombers would be required for operations against the homeland of potential enemies.

LtGen Hap Arnold – believed acquiring long range planes was dependent on Army having the coastal defense mission; primarily nurturer of theorists; saw Japanese air power in 1937 as confirmation of ACTS positions.
DLO #4 Summarize the effects of interservice rivalries on the implementation of evolving air power doctrine in the 1930s.

These rivalries were a "three-cornered struggle" involving the Air Corps, the General Staff, and the Navy. Air arm almost always opposed by the senior services. Conflict nearly wrecked the Air Corps program. Rivalries, though for the most part were the result of sincerely held beliefs interested in the national defense, resulted in slowing the implementation of evolving air doctrine

- General Staff was entrenched in the belief that air power was *tactical* and an auxiliary to ground forces; resisted a separate air arm that would compete for resources not beneficial to ground operations
  - Looked at bomber procurement from the standpoint of traditional methods of warfare; and immediate availability; Air Corps looking more to future, new war of air offensive in a *strategic* role
  - Supported large aircraft for recon and coastal defense—not for long range offensive purposes
  - Air Corps doctrine called for procurement of many long range four engine bombers; General Staff proposed procurement of 91 two-engine bombers and additional two-engine B-18s; GHQ Air Force (Gen Andrews) said there were no two-engine airplanes suited to carrying out the Air Force mission, and B-18s were slow and deficient compared to four-engine B-17s.
  - Slowed down and nearly strangled Air Corps bomber program
  - Even used Navy's desire to restrict Air Corps bombardment to create a "united front" against heavy bomber procurement
  - R&D scaled back also, to the point when Roosevelt directed procurement of long range bombers in 1938, Air Corps had fallen behind on technical developments
    - Aircraft accepted with obsolete designs; no incentive for superior designs
    - Ordnance, radar, and other auxiliary equipment development retarded
    - Failure to obtain heavy bombers requested handicapped training, development of tactical doctrine, and the building of a strong ready to go organization
- Navy
  - Since days of Billy Mitchell, Navy feared a strong air arm and resisted its development
  - Saw off shore recon and attack as a Navy function
  - Moved to block long range Air Corps operations; succeeded in arranging a ban on Air Corps flights beyond 100 miles offshore
  - Wanted their own long range bombing capability, land based

DLO #5 Identify the relationship between visionary doctrinal thinking and its influence upon subsequent technological developments to support high altitude, daylight, precision, strategic bombardment.

Visionary doctrinal thinking, though never identified as such in the text, refers (I believe) to the propensity for Air Corps theorists to not restrict their thinking and doctrine development based on governing national defense policies or existing technologies. They
developed concepts in opposition to national and service policies. They developed plans of employment, specifically long-range strategic bombing, which could only be executed by airplanes not yet built. They saw the need and envisioned the capability to make war on an enemy’s national structure and thereby reduce or destroy his capability and will to fight. They determined that precision bombing of primarily economic production centers from high altitude, even in daylight, was the way to do this, and had little doubt that the technology could and would be developed to allow this doctrine to be implemented.

Even when this doctrine appeared to be discredited at the outbreak of WWII, it was held on to tenaciously by Air Corps theorists, who had deep conviction and faith in the effectiveness and survivability of the precision bomber. Even when convinced that pursuit aviation had evolved to the point it could “bar the air to the bomber,” the doctrinal beliefs continued to be held.

By stubbornly refusing to change the doctrine, it forced the supporting technologies to be developed. The Air Corps ultimately improved bomber armament and armor, defensive formations, and eventually procured the long range fighter escorts needed to enhance survivability. The doctrine led to heavy losses of men and materiel, but daylight strategic bombing of Germany was to become one of the success stories of WWII.

DLO #6 Summarize the nature and purpose of AWPD-1.

Air War Plans Document-1
- Prepared on the eve of WWII at the request of Roosevelt
- Articulated American air doctrine and became the blueprint for air action in the war
- Assumed Britain would be an ally and European theater would take precedence
- Estimate for air needs for the coming conflict
Produced independently of the General Staff; a wholly airman’s document
- On this occasion, Air Staff assumed a position of equality with Army & Navy Staffs
- Developers graduates of ACTS; deeply imbued with school’s concept of air power
- Said air mission in Europe would be offensive from the start; support of ground forces a subsequent mission “if it becomes necessary to invade the continent”
- Identified breakdown of Germany’s industrial and economic structure as a basic concept
- Called for a selection of targets and use of precision bombing tactics, possibly followed by area bombing
- Four key target systems identified: electric power; transportation; oil; and aircraft production; identified numbers of precision targets to be destroyed
- Futrell says it provided three lines of US air action:
  - Disruption of electrical power, transportation, oil, and civilian concentrations
  - Neutralization of German air forces through attacks on bases, factories
  - Protect air bases through attacks on submarine bases, surface craft, ports
- Precision targets called for daylight bombing, using large numbers of aircraft with high speed, defensive firepower, and high altitude

AWPD not entirely consistent w/views of War Dept. but was accepted w/o change.
- Stated that reliability of air offensive would be enhanced by development of an escort fighter
- Gave numbers and types of bomber groups required, but not fighters since nothing suitable yet existed – this was viewed as AWPD-1’s chief weakness.
- Called for aircraft disposition for hemispheric defense and strategic defensive in Asia
- Said ideal force would consist of B-29s; accelerated development of the B-36

DLO #7 Identify the connection between AWPD-1 and the air doctrine of the Air Corps Tactical School.

The connection is clear. The air doctrine developed primarily at the ACTS and resisted by the General Staff would find nearly unopposed articulation in the AWPD-1, which was authored by ACTS graduates. A strategic air offensive, operating independently from other services, and based on the range, firepower, and survivability of large numbers of heavy bombers attacking selected precision industrial and economic targets, could lead to the swift and decisive defeat of an enemy. The lack of adequate support and doctrinal development for pursuit aviation also manifested itself in AWPD-1 authors’ inability to adequately identify numbers and types of escort fighters needed in the detail they provided bomber requirements.
Desired Learning Objectives:

1. Explain the elements, characteristics, and lessons of a military-technical revolution (MTR), using Krepinevich's ten historical examples as illustrations.

A military revolution occurs when the application of new technologies into a significant number of military systems combines with innovative operational concepts and organizational adaptation in a way that fundamentally alters the character and conduct of conflict. It does so by producing a dramatic increase in often an order of magnitude or greater in the combat potential and military effectiveness of armed forces. Military revolutions comprise four elements: technological change, systems development, operational innovation, and organizational adaptation (Krepinevich pg. 141).

Ten military revolutions since the fourteenth century:

**Infantry Revolution**: infantry displaced dominant role of heavy cavalry on the battlefield. During the first half of the fourteenth century, the infantry in the form of Swiss pikemen and English archers emerged as a combat arm fully capable of winning battles. Development of the six-foot yew longbow gave archers a much enhanced ability to penetrate the armor of cavalrymen. The English developed a tactical system based on integrating archers with dismounted men at arms. Archers were far less expensive to equip. (Krepinevich pg. 142).

**Artillery Revolution**: gunpowder artillery displaced the centuries-old dominance of the defense in siege warfare. The lengthening of gun barrels permitted substantial increases in accuracy and muzzle velocity resulting in an increase in range and destructive force (and rate of fire). Metallurgical breakthroughs reduced the cost of iron. Finally, the coming of gunpowder made artillery more powerful and cheaper to use (Id.)

**Revolution of Sail and Shot**: great navies of the western world moved from oar-driven galleys to sailing ships that could exploit the Artillery Revolution by mounting large guns. By 1650 the warship had been transformed from a floating garrison of soldiers to an artillery platform (Id.).
C. Asymmetries in national objectives and strategic cultures, as well as limitations on resources and the potential number and strength of enemies, allow for niche, or specialist, competitors;

D. War and revolution in warfare are quite separate entities;

E. Though most militaries will be quick to recognize a competitor's advantage, there are no certainties;

F. Technologies that underwrite a MTR are often originally developed outside the military sector and then imported and exploited for their military applications;

G. A MTR does not ineluctably imply a quantum leap in the cost of maintaining military forces.

Question: Why does Krepinevich claim that military organizations that do not adapt quickly to a military-technical revolution quickly decline? Which of his lessons are most applicable today? Why?

In the cases outlined within the reading, all major military organizations fairly rapidly gained access to the emerging technologies. Failure to realize great increases in military effectiveness typically resulted not so much from ignoring technological change as from a failure to create new operational concepts and build new organizations [Lesson 1, above] (pg. 145). Example: Germany's defeat of allied forces in conquering France in six weeks.

Lessons from the West's prior MTRs (pg 149 - 150):

A. U.S. should anticipate that one or more competitors seeking to exploit the coming rapid and dramatic increases in military potential may soon arise;

B. Continued American technological and operational leadership is by no means assured;

C. It is by no means certain that competitors will follow the same path as the U.S.

D. It is not clear that the U.S. can rely on the cost of competition acting as an effective barrier to others.

2. Summarize the arguments of Bacevich that modern warfare is not currently undergoing a technical revolution.

Bacevich claims that institutions under siege embrace grandiose visions of change in order to deflect external pressures and preserve the essence of the status quo. He opines
3. Describe the different characteristics, applications, and future issues of netwar and cyberwar.

Characteristics:

**Netwar** - refers to information related warfare between nations or societies through internetworked modes; focus is public opinion, propaganda, psychological, cultural subversion, deception of local media, attempts to promote dissidents across computer networks; spans economic, political, social, and military forms of war.

**Cyberwar** - refers to conducting and preparing to conduct military operations according to information-related principles; turning the balance of information in one’s favor; examples are smart weapons, electronic blinding and jamming, overloading, and intruding into an adversary’s information and communications circuits.

Applications: Second Punic War of the 3rd Century B.C., Carthaginian forces under Hannibal routinely stationed observers with mirrors on hilltops, keeping their leader apprised of Roman movements. During the Napoleonic Wars, the British Royal navy’s undisputed command of the Mediterranean Sea sealed at the Battle of the Nile in 1798, cut the strategic sea communications of Bonaparte’s expeditionary force in North Africa, leading to disaster. A few years later a lone British frigate was able to put French forces into total confusion along virtually the entire Mediterranean coast of occupied Spain by raiding the French signaling stations, then striking spectacularly while French communications were disrupted. Mongol practice of learning exactly where their enemies were while keeping their own locations secret until they attacked. Mongols identified the linear, forward dispositions of their foes and avoided them. Superior CCI and real time intelligence. German Blitzkrieg doctrine made the disruption of enemy communications and control an explicit goal at both the tactical and strategic levels. Viet Cong may have applied cyber principles more effectively than did the U.S. The allied coalition effectively used both netwar and cyberwar in the Gulf War.

Future Issues: The 1870 development of the French machine gun was deployed behind the front with the artillery and had almost no effect on the Franco-Prussian conflict. People try to fit the new technology into established ways of doing things; the new developments are expected to prove themselves in terms of existing standards of efficiency and effectiveness. Improved surveillance and intelligence-gathering capabilities that help identify timely opportunities for surprise (new Joint Targeting network (JTN)) can be of service to a traditional attritional warfare strategy. New capabilities for informing the members of a unit in real time where each other is located and what each is doing (inter-vehicular information systems (IVIS)) may improve the ability to concentrate force as a unit and maintain that concentration.

Cyberwar depends less on the geographic terrain than on the nature of the electronic
to-nation conflict waged, in part, throughout the worldwide internetted and interconnected means of information and communication.

Current capabilities in psychological operations, public affairs and civil affairs, together with the intelligence agencies, satellite drivers, communications specialists, computer wizards and the men and women in Air Intelligence Agency or the new Joint Information Warfare Center, represent some of the key learning environments in which we will develop some of the new capabilities of IW.

U.S. military strategy for IW: The services are starting this new thinking under the label "command and control warfare." The technology, however, is not just a force multiplier. It is the interaction of strategic vision with new technology that will produce the revolution in military affairs and a new warfare form. Although the U.S. does not have a current military strategy for IW, the author poses several "visions of the future." Insertion of computer viruses by direct satellite broadcast; fry air defense radar with an electromagnetic burst from a remote unmanned aerial vehicle; transfer a dictator's Swiss bank accounts to the IRS; project holographic images of 15 squadrons coming in from the north when we are actually invading from the south.

U.S. military doctrine for IW: There is no official IW doctrine. The Air force has focused almost exclusively on "C2W" that is defined as the "integration, coordination, deconfliction, and synchronization" of OPSEC, deception, PSYOP, electronic warfare, and physical destruction efforts targeted against the opponent's fielded military forces represents a failure to appreciate either air and space power or to appreciate how airpower doctrine could guide the development of an IW campaign. The objective of IW is to control the "infosphere" in order to exploit it while protecting friendly forces from hostile actions taken via the information realm. So any, strategy and doctrine of information control must address counterinformation in terms of offensive and defensive counterinformation. Offensive counterinformation, could be seen as involving information exploitation through psychological operations, deception, EW, or physical attack and information protection as again, physical attack, EW, and public and civil affairs. Defensive counterinformation, would include active protection such as physical defense, OPSEC, comm. Security, computer security, counterintelligence, and, again, public affairs.

**Question:** Is Stein correct in maintaining that the United States military has not articulated an information warfare strategy? Is this a legitimate concern for national security? Why or why not?

Stein is absolutely correct in his assertion that the U.S. military has not articulated an IW strategy or doctrine for that matter (pg 175 - 176). The military currently thinks of IW as only command and control warfare. That is, how does this technology permit tanks, ships, and aircraft to do what they do now a bit better. The questions need to be asked an
communications) at risk;

5. Space denial systems can be employed decisively by denying enemy access to space derived data;

6. Space denial systems can be employed decisively by physically denying enemy access to space;

7. Space protection systems can be employed to assure friendly access and use of space;

8. Total space control (the combination of space denial, space protection, and passive space defense measures) is neither achievable nor necessary.

9. Space combat power must be centrally and independently controlled;

10. Space power is not intrinsically linked to air power.

The major issues facing the U.S. in its development of a space combat capability are the moral issue of its citizens' desire to maintain space as a sanctuary not filled with weapons and political considerations have limited pursuit of space combat capabilities.

**Question:** What are the three major missions of space combat? Which of Mantz's space axioms appear to coincide with conventional approaches to war and which do not? What are the major issues that impact the ability of the United States to develop a space combat capability?

The three major missions of space combat are listed in the answer to DLO 5, above. The major issues impacting the U.S. ability to develop a space combat capability are as follows: First is the physical challenge of getting into space; second is the cost of spacelift; third is the challenge of the cost of space combat systems themselves; fourth is the political resistance in Congress stifling the development of space combat systems; fifth is the challenge of technical viability and finally is that the employment of space combat weapons violates the self-imposed space sanctuary policy established by President Eisenhower.
THE IMPACT OF INTERNATIONAL PEACEKEEPING, PEACEMAKING AND OPERATIONS ON UNITED STATES NATIONAL SECURITY

by

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A RESEARCH PAPER SUBMITTED TO THE FACULTY

IN

FULFILLMENT OF THE VOLUME 2
OPTION 2
WRITING ASSIGNMENT

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Lesson 12

The Challenges of the Future Introduction
(Class 59B)

1. DLO: Explain the external and internal paths that could lead to the extinction of the Air Force by 2025 (pp. 263 - 269).

a. External:

   (1) The ascendency of other services:

   (a) US Army as backbone of America’s defense will become more technology adept; will continue to invest in rotary wing aircraft, UAVs and long range attack missiles; will encroach on the tactical and even strategic missions of AF; will seek to digitize battlefield and a portion of information dominance.

   (b) US Navy continues to whittle away at what AF saw as it’s mission (e.g., using submarines as a power projection force, Marines as light but unified crisis-deployable force, transporting most logistics by sea); global operational capability with nuclear powered carrier battle groups.

   (c) Space: The combination of divergent technology choices, massive budgetary support for space initiatives, and the political difficulty of trying to control both atmospheric and exoatmospheric to deep space...all suggest the creation of a separate Space Force may be a matter of common sense and ultimate reality.

(2) Economic and budgetary constraints: Downsizing, reorganization, and declining budgets will likely continue for the military, but not at crisis proportions.

(3) Policy Choices in a Changed Strategic Environment: Unstable world with ambiguous or novel threats to US security could cause military to respond ineffectively. Examples: Traditional problems--nationalist inspired civil wars, disputes over borders and resources, religious or ideological crusades--may mix with threats inspired by drug cartels, international crime syndicates, vendettas of wealthy individuals or corporations, computer hackers, resurgent communist regimes, renegade nuclear scientists, or organized international terrorism.

(4) Technology may well prove the death knell of the AF: As the service most closely tied to technological progress, the AF may be particularly vulnerable when there are no airborne technological solutions to many of the threats that confront us. Example: proliferation of weapons of mass destruction which can be deliver via a small portable delivery system (e.g., truck, suitcase, water supply, etc.).
(5) The nature of war and warfare is changing: non-traditional adversaries that threaten national and international order, such as: international crime cartels, domestic terrorists, multinational nonstate actors, drug lords, international business and economic espionage, large numbers of refugees fleeing economic, social and political oppression, the international transmission of disease, and everyday corrosive corruption.

(6) Jointness “über alles:” For the Army and Navy, Jointness is a paying proposition. They get and the AF gives. In other words, the AF is always in the supporting mode, never in the supported mode. Example: close air support for the Army and CAP for the Navy, while navy performs bombing missions.

b. Internal:

(1) The AF loses its Vision and Mission: The AF may be pulled in so many directions by Jointness, the need to perform and sustain multiple MOOTW missions, and the effort to maintain combat-ready pilots and planes, that it loses sight of its fundamental mission...the employment of air and space forces in defense of US National Interest.

(2) The AF mismanages its people: taking quality of life to the extreme may price itself out of business...for example: better quarters and creature comforts, retention bonuses, morale services, etc. It is also expensive to be in the Commissary and exchange business and to support the high number of personnel associated with its hospitals and medical facilities. Also, intense competition for senior level slots causes a lot of well trained personnel to leave the AF.

(3) The AF mismanages its programs: Cost overruns for major aerospace defense systems continue; acquisition, logistics, and comptroller career fields are increasingly civilianized; specially trained civilians are becoming their own stove pipe in the system; concentration into fewer players and larger contracts is becoming more of a reality as the defense industry downsizes, merges, and realigns; with a defense budget that is stagnant or likely to fall and AF losing its share of those resources, hugely expensive new systems may never be acquired in sufficient numbers to replace existing capabilities.

(4) The AF chooses the wrong path for the future: the AF has yet to integrate space successfully into its thinking as well as its operations. Reason: pilots run the AF and may not want to accept the reality that the era of the manned air-breathing aircraft may eventually end. The AF may not be institutionally able to choose intelligently among competing objectives and capabilities; it might well spread itself too thin or, worse, make no choice which could spell the end of independently organized and controlled airpower.

(5) The AF is too good at its fundamental mission—strategic war: For most of the period known as the cold war, the primary mission was strategic nuclear deterrence. It became so committed to nuclear deterrence that it nearly forgot it’s conventional strategic war-fighting and war-winning role.
(6) The AF fails to adopt to changing realities: The reason for extinction of any species is failure to adapt. The AF must continue to assess the strategic environment, be reinforced with appropriate objectives, matched with the necessary resources, and blended with requisite leadership in order to adopt the correct strategy. For the future, the AF needs educated people who are morally sound, operationally adept, and technologically and politically capable.

2. DLO: Explain how the Air Force can avoid extinction (pp. 279, 284).

   a. The AF must maintain the capacity for mutation and adaptation to a changing environment. Air Vice-Marshal Tony Mason: "By placing airpower in the evolutionary process of warfare, as a whole, unnecessary claims of superiority and unfounded fears of subordination may be abandoned along with the growing pains of infancy and adolescence." It is no longer necessary to defend a revolution called airpower; it is time to nurture airpower's evolution through creative adaptation of air and space capabilities. In so doing, we will avoid extinction for both the AF and the nation.

3. DLO: Describe why the Clausewitzian notion of friction is essential in the creation of a comprehensive theory of air power. (pp. 291).

   It is imperative that war planners always consider the notion of friction while developing campaign plans. Experienced planners and operators must be a key ingredient in the planning process if friction is to be anticipated and reduced. Example: Without experience, the ACTS air theorists were unable to adequately assess the total effects of the variable that could potentially degrade the effectiveness of strategic bombing: incomplete crew training; inadequate navigational equipment; enemy defensive action; dispersion of target; and even smoke from the bombing mission itself. Had they explicitly considered the notion of friction in their deliberations, they still would not have been able to come to any precise conclusion regarding bombing effectiveness in the absence of experience, but they might have been able to develop a better estimate of the tactics, techniques, and equipment that would be required to work through this friction.

4. DLO: Summarize the gaps in current Air Force Doctrine regarding constabulary missions. (pp. 302).

   Constabulary missions are different from fighting and winning wars. These missions are more police-like than warlike. They are reactive more than proactive. They typically cede the initiative to those who would violate the rules. The enemy is not persons or things but an act—a violation of rules. The purpose of the constabulary response is not defeat an enemy, it is to deter and suppress violations of the rules. There can be no expectation of winning—any more than we can expect to win a war against crime. We can only hope to reduce violation to a more acceptable level. These are conditions for which neither our equipment nor our doctrine have been designed. We design our forces for speed, stealth, destructiveness, payload, and range. Our doctrine emphasizes surprise, initiative, freedom of action, mass, shock, and the
principles of war. These qualities are only occasionally pertinent to constabulary missions.

5. DLO: Describe the advantages and disadvantages in adopting a more flexible air power doctrine that would recognize attacks on less traditional strategic centers of gravity (pp. 308).

Advantage: The original Gulf War air campaign plan regarded the fielded forces (Republican Guard) a lower priority target (less traditional). By diverting resources from the strategic air missions to widen attacks against the Iraqi Army could delay final victory. The results of the campaign do not support this assertion. In fact, Coalition air attacks failed to prevent Saddam form effectively controlling or supplying his forces in Kuwait. “Strategic Paralysis” was not achieved. The point is that while technology had given air power the ability to locate and strike strategic targets with a high degree of precision, it also increased it’s potential to destroy an enemy army in the field. Air attacks on the fielded forces also threatened Saddam’s continued leadership, as well as his strategy.

Disadvantage: Some airmen believe that including attacks on an enemy army in a strategic air campaign may open the door to a greater role for ground commanders in the planning and execution of air operations. This stimulates concerns that JFACC’s could lose the ability to exploit air power’s characteristics fully or mass sufficient force at the decisive points. At worst, this could result in air units being parceled out to corps commanders to employ according to their own operational concepts. While centralized control of theater air forces brings coherence to the planning process and preserves unity of command, it is an insufficient rationale for rejecting a broader, more flexible air warfare doctrine.

6. DLO: Evaluate how well the core competencies articulated in Global Engagement: A Vision for the 21st Century Air Force address future potential problem areas facing the Air Force as presented in the first four articles. (non-testable)

Discussion: Will the core competencies help the AF avoid extinction by the year 2025?
Questions

1. Explain how the US Army and/or Navy could become the preeminent service.

   AF supports Army through Transport and CAS; AF supports Navy through CAP and refueling; No Service supports AF; senior AF leadership has avoided strategy formulation and implementation; there has been no regional CINC; AF has shown little support for Army's AirLand battle Doctrine; having difficulty supporting publicly defensible funding priorities (e.g., B-2, C-17, F-22, Space Systems, etc.); failure to capitalize appropriately on success of Gulf War.

   Bottom-Line: Unless present circumstances and trends are reverse, the AF will become extinct by 2025. It will no longer exist as a separate service, would have no sustainable rational for an independent existence, and would find it's roles, missions, and assets parceled out to others.

2. Describe the historical impact of budgetary constraints on the AF.

   For some time now, the US defense budget has been a target of opportunity for budget cuts. With all the economic problems in the world today, it could become an even bigger target of opportunity to a Congress of the future. In the competition for increasingly scarce resources, AF is the supporting, rather than supported, service. It has taken a greater percentage of the hits on it's highly visible, very large systems. For example, since the Gulf War, a review of service requests and Congressional budget cuts reveals a similar tendency: AF cuts are nearly double those of the Navy; Army has lost the least in percentage of terms. In the future, the AF may have severe problems as the numbers of each new generation of fighter or bomber shrink precipitously due to higher unit costs.

3. How could an increase in MOOTW effect the AF?

   The AF is particularly vulnerable to declining readiness due to MOOTW in such places as Iraq, Somalia, Bosnia, etc. In support of these operations, the AF has nearly 50 percent of it's fighters deployed overseas. Many of AF's recon, transport, and tanker assets and resources are also deployed abroad. These peacekeeping operations cost billions of dollars, degrade combat skills, use up precious service life of military systems, and seriously impair retention in both the active forces and the reserve and guard components of the military. Spending scarce military resources in this way may degrade them. Keeping the peace may promote insecurity when a test of force arises.

4. The AF is the service most closely tied to technology, how could that prove to be a disadvantage in the future?

   The AF may be particularly vulnerable when there are no airborne technological solutions to many of the threats that confront us (e.g., proliferation of conventional weapons, and weapons of mass destruction, etc.). While war has become more deadly and costly in the West, the choice to initiate war is seen as uneconomical.
at best and suicidal at worst. Also, the means with which to wage war are such as to make conventional war irrelevant and other forms of war more horrible. If the AF can't protect US citizens and win the wars the nation has to fight, and if technology costs continue to increase, the citizen might well ask why we need an AF.

5. Describe why a rise in nontraditional (allies or adversaries) threatens the existence of the AF. (I could find nothing on nontraditional allies. I think it should be adversaries instead. See page 267)

Increasingly, the threats to national and international order are coming form what we might call nontraditional adversaries--international crime cartels, domestic terrorists, multi-national nonstate actors, drug lords, international transmission of disease, large number of refugees, social and political oppression, fouled air and water, etc. Investment in expensive and sophisticated space-based systems seems even less appropriate than it really is.

6. Why does the increasing emphasis on Jointness hurt the AF?

I get the feeling the author really hates the “Joint” concept. He says the following: “The investment in Jointness, intellectually and operationally, is diluting the importance of air power. Increasingly, the incentives for service competency are being sacrificed on the altar of jointness. The concept of joint fires is restricting and limiting the effectiveness of airpower. The surface forces, in the name of jointness, argue about the processes by which the war is conducted. The AF, alone, is more concerned about strategic effect than the process. And the AF has the most to lose because it’s very identity is enshrined in the concept of the independent application of airpower for maximum strategic effects. Consider these scenarios: Not having AF regional CINCs, the JFACC being hobbled with a joint targeting review board, having the other services guaranteed a right to support from AF assets, abolishing the term air campaign from military usage and deleting it from PME—all in the name of jointness—virtually guarantees that air campaigns will disappear. Can the AF be far behind”?

7. Explain how the AF could lose its vision and mission.

The AF may be pulled in so many directions by jointness, the need to perform and sustain multiple MOOTW missions, and the effort to maintain combat ready pilots and planes, that it loses sight of it’s fundamental mission—the employment of air and space forces in defense of US national interest.

The AF worries more about self-promotion rather than self-examination and has failed to understand the problems it confronts. Unless, or until, the AF is seriously concerned with doctrine, with the uniqueness of airpower, with the understanding of the men and women in blue suits about what they contribute as a service and what makes that special, then there is no real identity, no real self-confidence, no vision for the future.

KELjd89
8. How could AF personnel systems eventually weed out risk takers while rewarding the risk adverse?

While the officer corps has been assured that it is not a "one mistake" AF, the competition is so fierce, this may be the perceived reality if not the intent. It is not wise for an armed service to select out the risk takers and reward the risk averse.

9. Explain how rising weapons costs and declining budgets could lead to extinction.

Cost overruns for major aerospace defense systems continue, making Congress and public less supportive; the public doesn't know about the defense budget, but does care about it's tax dollars and is led to the erroneous conclusion that cost overruns are examples of fraud, waste, and abuse; acquisition, logistics, and comptroller career fields are increasingly civilianized—specially trained civilians are becoming their own stove pipe in the system, complicating things further and separating the operator from the procurers; with a defense budget that is stagnant or likely to fall and the AF losing it's share of those resources, hugely expensive new systems (e.g., F-22) may never be acquired in sufficient numbers to replace existing capabilities.

10. Describe how an over reliance on air-breathing weapons systems could lead to extinction.

The wars of the future may well be short, sharp, limited affairs; longer insurgencies; nuclear, chemical, or biological contests—or even ones characterized by nonlethal weapons. Whatever they may be, one needs to be making important choices now for a not too distant future in which such an array of threats is a demonstrated reality. The AF may not be institutionally able to choose intelligently among competing objectives and capabilities. It might spread itself too thin or, worse, make no choice at all.

11. How could an over reliance on strategic warfare hurt the AF?

Breaking things and killing people to win a war, if it is absolutely necessary, may be permissible, but only in very small numbers and for very short time periods. We may be entering an era in which deterrence no longer works against our would-be adversaries who will happily risk martyrdom for faith, religious or political purposes. We may deter ourselves from using the weapons at our disposal because of the death and destruction necessary to win.

12. Explain how the AF leadership has at times failed to adapt to change?

AF leadership fails to identify or misutilizes the people who think conceptually, critically, and creatively. AF leadership must permit bottom-up thinking, not merely to-down directives. It is on the edges of an organization that one first senses change and tries to respond to it. Few of the AF's best or brightest become general officers who know, care, and try and do something about, the AF's problems often have to fight their colleagues as well as the defense establishment to succeed. For the future, organizations need educated people who are morally sound, operationally adept, and
technologically and politically capable. That means fostering insight, imagination, innovation, and integration.

13. Explain why Dr. Hammond argues that air power should be one word instead of two.

Airpower is a unique form of power. It is, thus, one word, not two. Airpower is the term which refers to the third dimension—what is up, vertical and above. It includes space as well as the atmosphere.

14. Describe the attributes of air power and explain why they are vital to an understanding of the existence of the AF.

Airpower is characterized by a combination of attributes:

- **Perspective**: what airpower provides from the vantage of the third dimension (to see the other side of the hill); knowing what is going on in near real time is the prerequisite for providing security.

- **Speed/tempo**: The speed with which airpower may be brought to bear is far superior than that which can be attained by surface forces; speed conveys responsiveness and is essential to airpower.

- **Range**: there is no place over the surface of the earth where airpower cannot go and no point on the earth's surface airpower cannot affect in one way or another; involves distance and reach.

- The combination of mass/energy and maneuver: with airpower, one need not make the choice between mass and maneuver like surface forces do; using high tech photonic beams as sensors and communications (energy) simultaneously with mass and maneuver create an observation, orientation, decision, action (OODA) point—not OODA loop.

- **Versatility**: being able to perform a variety of tasks capable of many uses; airpower is able to change from one task to another quickly and easily; most platforms have multiple roles.

15. Describe the similarities and differences in Mitchell's and Douhet's air power theories.

**Similarities**: Both agreed on the requirement for a national aeronautical policy; the need for a department of national defense; and the imperative of a separate air force.

**Differences**: Mitchell differed from Douhet on several points:
- the efficacy of destroying aircraft in air-to-air battles (Douhet argued that enemy aircraft were best destroyed on the ground);
the necessity of producing multiple types of aircraft (bombardment, attack, pursuit);
- a generally more accurate appreciation of the technical capabilities of airplanes based on extensive personal experience.
- believed in bombing “vital centers” such as industrial production, power generation, and transportation while Douhet suggested population and administrative centers.

16. Explain why Mitchell’s theoretical work is considered inferior to Douhet’s.

Mitchell’s work was distinctly inferior to Douhet’s - Mitchell ignored the connection between aerial warfare and other forms of war. He never really defined air power, nor did he develop a systematic body of propositions that could be proven or disproven by subsequent students of the subject.

17. Describe the key findings of the post-World War II US Bombing Survey.

- Effectiveness of strategic bombing against civilian morale. The survey concluded that the German peoples morale, their belief in ultimate victory or satisfactory compromise, and their confidence in their leaders declined, but they continued to work efficiently as long as the physical means of production remained (in other words, it did not bring about morale collapse)
  - Unescorted, heavily armored bomber were vulnerable to enemy air defenses.
  - Control of the air was vital and regarded as necessary for success; could only be achieved with coordinated team-play of ground, air, sea forces and backed up by supporting services and home front.
- Strategic bombing and economic blockade were key reason for Japan’s decision to surrender.

18. What are the four areas air power theory should examine according to Dr. Winton?

- Control Operations - those that allow the use of the medium
- Denial Operations - those that deny use of the medium to the enemy
- Power projection operations - those that project power from one medium to another
- Power protection operations - those that protect from power projected from another medium

19. Explain what Builder means by the term “doctrinal frontiers.”

- The future of airpower; counter mainstream; will eventually become mainstream; examples include: space and special operations.

20. What are constabulary missions and why are they important?

- See DLO 4.
21. Describe the historical precedence behind constabulary missions.

Trenchard (Chief of Royal AF) proved to British government and people he could save government money and do the job better by handling territorial problems and squabbles in the Middle East. After success, he did the same thing in India. He proved to the British that disbanding the AF was dumb.

22. Describe strategic air warfare theory employed in Desert Storm.

Theory was founded on classic WW II bombing doctrine, including air power’s potential to defeat an enemy by attacking key centers of gravity (COG). Precision weapons, stealth technology, and large force of modern aircraft gave airmen the potential to wage “parallel warfare” -- the ability to strike all the enemy’s COG’s simultaneously.

COG was organized into five concentric rings with leadership in the center (most critical to enemy), key production next, then infrastructure, population, and last fielded forces. Plan was called “inside-out warfare.”

23. Why is national will such a difficult target?

- Bombing the German cities in WW II had little impact on the will of the people; they continued to do their jobs efficiently.
- Doesn’t guarantee loss of will.
- In limited warfare, military targets (e.g., Republican Guard) may have more impact on government surrender.

24. Why would a change in the traditional tenants of strategic air warfare be perceived by some airmen as an attack against the AF?

- Challenging the traditional tenets of strategic air warfare is still perceived by some airmen as an attack against the AF as an equal, independent service...loss of control.

25. Describe the new AF Core Competencies.

- Air and Space Superiority - control over what moves through air and space.
- Global Attack - attack rapidly anywhere on the globe at any time is unique.
- Rapid Global Mobility - provides the nation it’s global reach and underpins it’s role as a global power.
- Precision Engagement - enables our forces to locate the objective or target, provide responsive command and control, generate the desired effect, assess our level of success, and retain the flexibility to engage with precision when required.
- Information Superiority - dominant battlefield awareness will depend heavily on the ability of air and space-based assets to provide global awareness, intelligence, communications, weather and navigation support.
- Agile Combat Support - enables air and space power to contribute to the objectives of a Joint Force Commander.
26. What are the Core Values of the AF?

- Integrity first
- Service before self
- Excellence in all we do

27. How well do the Core Competencies and the Core Values address the future?

The Core Competencies and Values are aimed at a future in which dramatic changes wrought by technology will be the norm. It is also a future in which the values of service, integrity and excellence will continue to sustain the men and women of the AF. Most importantly, the AF's devotion to air and space power will continue to provide the strategic perspective and rapid response the nation will demand as it enters the 21st Century.
Desired Learning Objectives & Questions:

**DLO 1.** Describe the American dilemma as posed by Kennedy, the terms he uses to characterize the American culture, and the significance of the relative decline in the United States economy.

The American dilemma (p. 200 & 208): How can the US continue to fund the same level of military security *and* attend to its social needs *and* repay its debts? Opinion polls show that most citizens feel certain major aspects of society have worsened in the US since the 1980’s. These include the social fabric, race relations, public education, economic performance and the conditions of the average American family. In addition, most feel these conditions will be worse for their children and grandchildren. This has led to a demand for major overhauling of taxation systems, schools, health care and industrial policies, as well as waging an all-out assault on poverty and crime. A related dilemma is this: Since most reforms would require a transfer of resources, and since some of them would imply a change in lifestyles, each individual reform provokes opposition. Examples of the results of such reforms would be a longer school year or much higher energy taxes.

Terms used to characterize the American culture: Basic terms Kennedy uses to describe the American culture are differentiated, decentralized and individualistic (p. 214). He uses these terms to describe the way the US is meeting the future challenges of global change. Despite concern by various reform movements at the global trends for the US, and despite the spottily-implemented corrective measures as the 1990’s advance, the nature of American society and politics makes it unlikely that a national “plan” for the 21st century will emerge, such as may be formulated by France or Japan. Instead, there will be differentiated responses and local initiatives, in the traditional American way:

-- States and school districts will push ahead with their individual schemes
-- Communities will grapple with local environmental problems
-- Towns and cities will attack urban poverty in various ways
-- Some regions will benefit from fresh foreign investment, others will suffer as American companies transfer production overseas
-- “Preparing for the 21st Century” will be seen as a matter of individual company strategy, not the result of a plan conceived by Washington, especially in the business world

Kennedy suggests that since our response to global change is likely to be differentiated, decentralized and individualistic, a “muddling through” rather than a coordinated, centralized attack on the problems, will result. The long-term implication of muddling through is a slow,
steady, relative decline in comparative living standards, education levels, technical skills, social provisions, industrial leadership and ultimately, national power. Kennedy makes the analogy to Great Britain in the late 19th century, when it faced similar global challenges and simply "muddled through" some crucial times. As a result, Britain became the 2nd rate power that it is today.

Other terms used to characterize the American culture (p. 207): Kennedy implies that our decentralized system of education (as opposed to nationalized education systems in other democracies) might be to blame for the "trivialization" of American culture. Local and state school boards, education authorities and teachers' unions all resist efforts to formulate national standards of education in the US. The "trivialization" of American culture refers to the emphasis on consumer gratification, pop culture, cartoons, noise, color and shallow entertainment over serious reflection. When these are combined, a "self-inflicted wound" results. Kennedy suggests that an anti-intellectual youth culture might be perpetuated partially by the:

-- Fascination with sports or "soap" shows
-- Disintegration of the family
-- Great rise in female employment so that the "first educator," the mother, is absent from the home most of the day.

Significance of the relative decline in the United States economy: The cost of maintaining military security and a high global position for the US is $300 billion per year. This money diverts resources from nonmilitary production. For example, in 1988, > 65% of federal R & D money was allocated to defense, compared with 0.5% to environmental protection and 0.2% to industrial development. Countries like Germany and Japan have allocated much lower percentages of their national resources to the military (p. 199). Rates of US economic growth have slowed considerably in the final third of this century compared to the middle third. Countries like Switzerland or Luxembourg have a high, fairly evenly distributed standard of living, a favorable current-accounts balance and no foreign commitments. Such countries might be able to suffer a long period of sluggish economic growth and survive (p. 200). Wealth in the US, while considerable, is unevenly distributed, resulting in major domestic social problems (Example -- Managers earn > 90x as much as industrial workers). Americans have an aversion to paying taxes, but unlike Europeans, they do not enjoy such higher tax benefits like free college tuition, health care, subsidized cultural events and efficient public transportation (p. 205). The US has a large current-accounts deficit and needs to borrow from foreigners. A continuously declining rate of growth of the GNP since the 1940's (Chart 12, p. 200) compounds its existing problems, making it unlikely that the US can continue to fund the same level of military security, attend to its social needs and pay its debts. Real weekly incomes have fallen steadily since 1973. As a world leader, the US cannot maintain this status indefinitely if its economy is in relative decline. Because this decline is relative and gradual, it is not observed as being dramatic (p. 200). Most US industries were producing an export deficit by the late 1980's. If this continues, and if foreign countries acquire a world monopoly in certain industries, then the availability of strategic products that the Pentagon wants to purchase might diminish (p. 202). In summary, Kennedy implies that traditional American thinking of the last 100 years will not provide the solutions to carry the US into the 21st century as a world leader (p. 215).
Question (1). What does Kennedy suggest to solve the American dilemma? Kennedy implies several suggestions for the US to solve its dilemma. The US should: 1) enhance its per capita productivity for the sake of long-term growth, 2) reduce the trade deficit, 3) formulate a national "industrial policy," 4) consider centralizing education, 5) consider redistributing the wealth and 6) minimize special interest groups that influence Congress. He basically warns that we need to consider becoming the opposite of a "differentiated, decentralized and individualistic" society. These qualities served us well in the past, but won't in the future.

Question (2). When in your personal experience have you found Kennedy's definition of American culture valid, and when not? Kennedy's basic terms for the American culture are differentiated, decentralized and individualistic.
Valid: Disproportionate quality of education among school districts, American desire for individual automobiles for transportation rather than an excellent public transportation system, lack of concern for environmental and social problems outside one's region (Example -- Southeast vs. Northeast US)
Not valid: Near-unanimous support of the US for all military campaigns during World War II.

Question (3). What are some of the examples Kennedy uses to support this relative decline theory?
-- Decline of American farms, leading to lower wage laborers and disappearance of small towns
-- US lack of a systematic approach to vocational education when retraining of workers is needed.
-- Slow decline of the system of American education
-- Lack of a national health care system places the US last in many aspects among industrialized nations
-- Imbalance of trade over the last 20 years
-- Possibility of bankruptcy of Social Security in the 21st century
-- Lack of centralized efforts in education and environmental protection
-- Great Britain "muddling through" similar economic times 100 years ago and becoming a 2nd rate nation

DLO 2. Describe the major considerations, which Jablonsky says shape the process of developing the United States National Military Strategy.

Background --
The 3 core national interests are:
-- Physical security: The survival of the US with its fundamental values and political institutions intact
-- Economic prosperity
-- Promotion of values that the country was founded on (p. 221)
Two key documents outline the role of the US in the world, and the means necessary to maintain that role and the 3 core national interests (p. 221):

-- President’s National Security Strategy (an annually-required document, started 1987)
-- Joint Chief of Staff’s National Military Strategy (not a required document, started 1989)

The National Security Strategy discusses:

-- Vital global US interests and objectives
-- Proposed short and long term use of all elements of national power to achieve US objectives
-- Commitments and defense capabilities required to deter aggression and implement the strategy while achieving balance among all elements of power (p. 232)

The National Military Strategy is derived from the National Security Strategy and presented in unclassified form to the President and Congress (p. 236).

Major considerations shaping the process of the National Military Strategy (p. 236-9) --

-- The end of the Cold War (1989). In 1989, there was a general public expectation of world peace as the Cold War came to a close. To military leaders, this was a naïve assumption. It was thought that if military strategy was to be formulated for the 1990’s and beyond, the public wouldn’t accept it blindly unless it was presented in writing. Without any apparent major overriding danger, the US’ role would not have to focus on containment of the Soviet threat. A new military strategy would have to be written.

-- Regional rather than global focus. More limited overseas stationing of personnel meant increased deployments and exercises. There was also the possibility that forward presence forces might be called upon to exercise less traditional operations like combating illegal drugs or humanitarian assistance.

-- Concept of “reconstitution,” designed to “forestall any potential adversary from competing militarily” by providing a “global warfighting capability” based on the fielding of new fighting units and the activation of the industrial base “on a large scale.”

-- Crisis response. This is the basic rationale for a power projection strategy against the background of unthreatened air and sea lines of communication, but with the possibility of forced entry.

-- Linking the smaller numbers of the base force with the “urgent domestic needs” of the country. This particular strategy places a premium on efficiency without compromising effectiveness, and is designed to be implemented with a significantly reduced defense budget.

-- A continued military drawdown, in accordance with the framework outlined in the Bottom-Up Review (BUR).
-- Being able to “thwart” aggression through credible deterrence and robust warfighting capabilities. The key is to have forces of sufficient size and capabilities, in concert with regional allies, to defeat potential enemies in major conflicts that may occur nearly simultaneously in 2 different regions.

-- The military need to “hedge against the unknown to provide a hedge against the emergence of a hostile coalition or a more powerful or resurgent adversary.” In other words, our military strategy must account for a possible rapid change in military capabilities and intentions of other nations, so that any regional conflicts don’t escalate into a global conflict.

-- Deterrence and conflict prevention. Despite our overseas presence, deterrent forces will be based primarily in the US. Conventional forces will have a strategic rather than theater capability.

-- Rapid conflict termination. This is the opposite thinking of the Cold War graduated response. This new philosophy requires an intense and overwhelming application of offensive force.

-- Promotion of stability through regional cooperation and constructive interaction. The major component of stability promotion is through peacetime engagement. Peacetime engagement activities range from nation and security assistance to peacekeeping and humanitarian operations. Promoting stability is by nature open-ended, and is used on a “case-by-case” basis.

Question (4). What does Jablonsky mean by his fox and hedgehog analogy? It relates to a Greek fable. “The fox knows many things, but the hedgehog knows one big thing.” The “many things” are the strategic fads and fashionable theories that tend to overwhelm the cumulative understanding of history, making it difficult for the strategist to distinguish the transient from the permanent and structural (unchanging). The strategist must be a hedgehog and focus on one big thing, for example, the response to the danger of unbalanced power as the central structure in an anarchical, state-centric world (p. 220).

Question (5). What are the two key objectives of the National Military Strategy, and how are they to be met? (p. 238-9)
Key objectives:
1) To thwart aggression through credible deterrence and robust warfighting capabilities by
   a. having forces of sufficient size and capabilities, in concert with regional allies, to defeat potential enemies in major conflicts that might occur simultaneously in 2 different regions.
   b. deterrence and conflict prevention
2) To promote stability through regional cooperation and constructive interaction by
   a. peacekeeping engagement
   b. nation and security assistance
   c. humanitarian operations
Question (6). Who are principal A, B and C competitors with the United States?
There are 3 types of states that the US will have to deal with in the future. “C” competitors are military ineffectual nations with complex or complicated security problems. Examples are Yugoslavia (ethnic civil war), Peru (insurgency), Egypt (terrorism) and Somalia (civil disorder). The “B” competitors are mid-level developing states with modernized conventional forces, with the possibility of rudimentary nuclear, chemical and biological (NBC) forces. An example would be Iraq around 1990. The “A” nations will be peer competitors, or major regional competitors, with which the US may have to deal (p. 225).

Question (7). How do the assumptions in the United States Military Strategy fit with Kennedy’s views of the future in the “American Dilemma?”
Recent National Military Strategy documents indicate a continuation of a near decade-long drawdown, and the military will be reduced and reshaped according to the BUR. Fewer troops will be permanently stationed outside of the US, and more troops will be made deployment-ready on American soil. Kennedy maintains that in the 21st century, the US will not be able to fund its military like it did in the 1980’s and still tend to its social needs and repay its debts. A military drawdown fits into solving the dilemma, as long as the US targets the funds saved toward fixing social/domestic problems and the national debt.

Question (8). Are there reasons to believe that the United States should not assume the worldwide obligation called for in the United States Military Strategy?
As long as facilities and personnel are not cut back so much as to make foreign access by the military difficult, the nation’s political and military leaders will more likely accept the risk of engagement. The transitional period following the Cold War is full of uncertainty. The US Military Strategy document calls for pragmatism when deciding on a mission. The public is insistent on a case-by-case examination concerning the use of force, and in favor of the strategy of selective engagement. The author makes the assumption that Americans will fight for others if the cause is just and rightly explained, even in the absence of an overriding threat. Public opinion polls indicate not a return to isolationism, but the application of pragmatism in international affairs (p. 242-4).

DLO 3. Summarize the United States Air Force Core Values and Core Competencies.

Air Force Core Values (p. 252 & 259):
-- Integrity first
-- Service before self
-- Excellence in all we do

Air Force Core Competencies (p. 253-8):
-- Air and Space Superiority. The control of air and space allows all US forces the freedom from attack and the freedom to attack. With air and space superiority, the Joint Force can dominate enemy operations in all dimensions -- land, sea, air and space.
-- Global Attack. This is the unique ability of the Air Force to attack rapidly anywhere on the globe at any time. This is accomplished by:
   a. Long-range bombers
   b. Ballistic missiles
   c. Deployment of nearly 25% of Air Force personnel overseas at any given time
   d. Air Expeditionary Force, rapidly deployable from the US and ready to fight in less than 3 days.
   e. Mix of long-range and theater aircraft, both in the US and forward-based

-- Rapid Global Mobility. The ability to move rapidly to any spot on the globe ensures a quick and decisive response to unexpected challenges to US interests. Airlift and aerial refueling are key players. Fighter forces with precision weapons can deploy worldwide and sustain high in-theater sortie rates.

-- Precision Engagement. This is the capability "... that enables our forces to locate the objective or target, provide responsive command and control, generate the desired effect, assess or level of success, and retain the flexibility to engage with precision when required." In the 21st century, it will be possible to find, fix or track and target anything that moves on the surface of the earth. Precision Engagement will remain a top priority in the 21st century.

-- Information Superiority. Dominant battlefield awareness will be achieved by the ability of the Air Force's air and space based assets to provide global awareness, intelligence, communications, weather and navigation support. Future Battlefield Management/Command and Control systems will enable real-time control and execution of all air and space missions. Unmanned Aerial Vehicles (UAVs) will be used for Intelligence, Surveillance, Reconnaissance and communications. Eventually, suppression-of-enemy-air defense missions might be conducted from UAVs. Information Operations and Information Warfare (IW) in particular, will grow in importance. The top IW priority is to defend our own increasingly information-intensive capabilities.

-- Agile Combat Support. Agile Combat Support has its central role in enabling air and space power to contribute to the objectives of a Joint Force Commander. Effective combat support operations allow combat commanders to improve the responsiveness, deployability and sustainability of their forces. When combat commanders require an item, a time-definite delivery system will reach back to the continental US and deliver it where and when it is needed. This will reduce the number of personnel and functions deployed, thus reducing the vulnerability of our forces forward.

**Question (9).** How is the Air Force structured to support the United States National Strategy? It is structured in the core competencies: Air and Space Superiority, Global Attack, Rapid Global Mobility, Precision Engagement, Information Superiority and Agile Combat Support (p. 253)
Question (10). What changes in the Air Force mission, strategy or doctrine are necessary to meet the requirements of the United States Military Strategy?

-- Focusing on preparing for and conducting military operations by Air Force personnel, while support activities not deployed for combat will be performed by the private sector
-- Exploiting emerging technologies and accelerating their acquisition
-- Reducing infrastructure costs wherever possible
-- Civilianizing, outsourcing and privatizing many combat support functions (p. 259-60)

DLO 4. Explain the concepts of netwar and cyberwar and why the United States may or may not be able to conduct an information war.

Arquilla and Ronfeldt (p. 158-171) developed the concepts of “netwar” and “cyberwar.”

Netwar (p. 262) is “a societal-level ideational conflict waged in part through internetted modes of communication.”

-- It is most likely to be a nation-against-nation strategic level conflict.
-- It is about what is known and how it is known.
-- It would be waged largely through a society’s communication systems.
-- Its target is the human mind.

Propaganda is usually targeted to influence a mass audience. Technology in netwar can be customized to reach a certain population group. Examples are:

-- Internetted communications that might result in financial chaos
-- Fictional direct satellite broadcasts to a certain region to provoke rebellion
-- Computer-generated “virtual reality” television programs (p. 262)

Cyberwar (p. 160) refers to “conducting and preparing to conduct military operations according to information-related principles.

-- It means disrupting if not destroying the information and communications systems, broadly defined to include even military culture, on which an adversary relies in order to “know” itself.
-- It means trying to know all about an adversary while keeping it from knowing much about itself.
-- It means turning the “balance of information and knowledge” in one’s favor, especially if the balance of forces is not.
-- It means using knowledge so that less capital and labor may have to be expended.

In cyberwar, an aggressor might influence the enemy’s ability to “observe” by flooding him with corrupt or contradictory data, disrupt his ability to “orient” by eliminating the possibility of objective reasoning, and force him to make “decisions” by responding to a virtual universe. Any “actions” that are produced will be chaotic, random and unpredictable. Cyber-strategy depends on the ability of the local military commander to exploit opportunities as they evolve, imposing
“order” on the enemy’s “chaos.” Operational-level cyberwar might reduce the enemy without killing (p. 267).

Conducting an information war:
Stein states, “... there are serious reasons to doubt the ability of the United States to prosecute information war successfully.” These reasons are:

1. The US is an open society, thus it might be too vulnerable to engage in netwar with an adversary prepared to “fight back.” Computers have become essential for the daily functioning of American society, from government to industry to the family PC. A well-placed computer virus could cause immediate major damage. Examples of vulnerable communication systems are: military communications, air traffic control system, financial net, fuel pipeline pumping software and computer-based clock/timing systems.

2. Political and legal issues surrounding infowar are murky. It is unclear whether there would be adequate congressional oversight of a presidential plan for information war strategy. It is undecided as to which committees in the House or Senate would have control and oversight of policies relating to information war. The US armed forces execute the national military strategy, but they don’t control it. However, the military is developing the techniques to execute the national military strategy for operational-level cyberwar.

3. The executive agencies that would decide and approve the content to be communicated might not be able to come to a consensus. Since there is no single view of what is morally acceptable, but simply a host of conflicting views, a national security strategy of information war could be developed by the national security decision makers that lacked a moral agreement. (Example: If the US wanted to wage an information war against China to disrupt its drive for regional dominance, the goal would be to “withdraw the Mandate of Heaven” from the rulers. But the US national executive agencies most likely do not sufficiently know the cultural nuances and idioms of the Chinese to be able to pull off such an information war successfully.)

4. The US government most likely does not have the philosophical sophistication to cause an alternative way of thinking that replaces the emotions, motives, reasoning and behavior grounded in the culture that we propose to influence. A successful information war might destroy a country’s objective reasoning, resulting in anarchy, but this is not usually the desired result (p. 266-7).

Question (11). What problems are faced in distinguishing between a “virtual” war and a “real” war?
Lesson 8

World War II: Air Power in the European and Pacific Theaters

1. **DLO**: Identify several obstacles air power had to overcome prior to US entry into World War II (pp 276)?

   As far back as the time of Pearl Harbor the Army Air Forces had the idea; but the idea still remained to be worked out by experiment in the grim practice of war. In order to do this we first had to “forge” the weapon, develop the proper technique to make it decisive in battle, prepare the necessary bases within operational range of the proposed targets, and then establish control of the air before proceeding to the all-out assault. All these things took time. The building of the Air Forces with sufficient striking power to carry out the strategic tasks, as ultimately outlined in the Combined Bomber Offensive Plan, required a national effort of unprecedented magnitude, and two and half years of time. Those years were provided by the unwavering resistance of our Allies to our common enemies.

2. **DLO**: Summarize the strategic mistakes made in the Battle of Britain (pp 238).

   a. The final period of the BoB saw a radical and unjustified shift in Luftwaffe air strategy. The shift to attacks upon the cities with an eye to “morale” bombing, in the rather faint hope that the RAF would be drawn into a losing confrontation with superior numbers of German fighters, was a fatal strategic error. Once the pressure was off of the Fighter Command, it rebounded with startling rapidity.

   b. German prewar decision to cancel the four-engined bomber; the Luftwaffe lacked bombers with adequate range, bomb-load, and defensive firepower, and they were too light and too vulnerable.

   c. The German fighter force was too small, about 700 aircraft, and they lacked the range to go all the way with the bombers.

   d. The unbroken radar chain cost the Luftwaffe surprise, and thereby the battle, and the RAF could avoid destruction at the hands of superior numbers of German fighters.

   e. The RAF out-produced the Luftwaffe in single-engine fighters.

   f. The Luftwaffe’s abandonment of daylight attacks came because of bad weather and insupportable losses.

   g. Goering and his top command changed objectives and failed to concentrate on one point of effort long-enough.
h. The effect of bombing raids on cities was greatly overestimated, and achieved the opposite of the broken morale hoped for.

i. Germany lacked both adequate numbers of U-boats and bombers to strike decisively against the British seaborne lines of communications as called for in Fuehrer Directive No. 9, dated 29 Nov 1939.

j. Once Hitler's decision to attack Russia was taken in July 1940, the war in the west became secondary in importance to Hitler.

3. DLO: Evaluate which Principles of War were or were not met in the BoB.

a. The biggest violation of the destruction principle was when the weight of the Luftwaffe turned to London, a nonmilitary target. The RAF Fighter Command was seldom attacked with great concentration and mass. German bombers were left in the Norwegian air fleet and should have been brought to France and Belgium to be used in the campaign.

b. Germany's attack was weakened by failure to preserve. No objective was maintained long enough, and even while the Germans were concentrating their energy in one area, they repeatedly wasted effort on secondary targets and objects.

c. No principle received greater emphasis than surprise in Clausewitz's writings yet the Luftwaffe disregarded it nearly completely. Nothing should have stood in the way of the destruction of British radar, for radar denied the Luftwaffe the enormous benefits of surprise.

d. The Germans failed to produce the numbers of fighters required to sustain the losses during the BoB. They seldom massed the numbers of aircraft required to swamp British defenses.

4. DLO: Assess the ideas and strategic principles which underlay the Combined Bomber Offensive.

The objective agreed upon at Casablanca was to bring about the progressive destruction and dislocation of the German military, industrial, and economic system and undermine the morale of the German people to a point where their capacity for armed resistance if fatally weakened. The Casablanca Directive clearly did not seek the weakening of Germany only to the degree which would permit a successful invasion. "Fatally weakened" obviously carried with it the intent that the whole military, industrial, and economic system and the morale of the German people should be depleted to a point where Germany was no longer capable of waging effective warefare. Principle Objective systems included: German aircraft industry, submarine construction yards and bases, ball bearings, oil, synthetic rubber and tires, and military transport vehicles.
5. **DLO:** Summarize the lessons learned from the Combined Bomber Offensive.

   a. The strategic air plans were not closely followed and their effect was consequently diluted. If the strategic air effort had not been so often diverted to tactical targets the mortal wounding of Germany would probably have been attained through air warfare by Jun of 1944 rather than March 1945.

   b. Pattern bombing by formation against precision targets 1,000 feet square was roughly one-third as effective as bombing by individual bomb runs. It was also determined, due to testing errors at Aberdeen Proving Grounds, that the bombs used were too small.

   c. The evolution of the P-47 and P-51 into superb long-range escort fighters was most fortuitous and contributed enormously to the success of the strategic air offensive. These same aircraft provided us with the best means to provide effective close ground support. The fighter plane, with minor modifications, became a fighter-bomber and performed admirably in a role once reserved for the light bomber.

6. **DLO:** Assess the role of strategic bombing in the formulation of US strategy in the Pacific.

   a. The primary factor governing all bombing enterprises in the Pacific and China areas was range. Until bases could be captured close to Japan the only prospect of bombing was to produce an aircraft that could fly further. The B-29 “Superfortress” was presented by Arnold as the weapon most suitable for Far Eastern bombing attacks, and although developed too late for wide use in Europe, it was available for the end of the Pacific war.

   b. The US moved bomber bases out of China after Japanese attacks on main communications lines. “Matterhorn” was canceled and Army air forces moved to the Pacific theater.

   c. Arnold had a personal desire to use bombers in a strategic role rather than tactical, as before. He wanted to attack mainland economy.

   d. Strategic attacks were launched in Nov 1944 when Japanese economy was already in decline, the merchant marine available was only a fraction of what was necessary and military resources and morale already low. Three main target areas were selected to achieve victory through blockade and bombing campaign: shipping, the aircraft industry, and six major urban industrial complexes.

   e. In the beginning, Arnold favored precision bombing of ac industry targets, but tactical problems reduced their effectiveness and accelerated the move to area bombing. Due to heavy losses of precision bombers by Japanese fighter attacks, LeMay (XXI Bomber Command commander) demanded and secured permission to revert to urban area attacks with fire-bombing techniques. Purpose was to reduce morale.
f. Lessons learned from Europe also influenced bombing strategy in the Pacific.

7 DLO: Evaluate the reasons for the decision to employ atomic bombs against Japan and the effectiveness of strategic bombing in ending the war.

a. The Japanese were ready to surrender. However, they hesitated in accepting Truman’s Potsdam Declaration because it was silent or, at least, ambiguous on the subject of the emperor’s status. In response to the Potsdam Declaration, the Japanese government issued a statement to its people, which led to one of history’s most consequential “failures to communicate.” While posturing with the Russians, the Japanese suggested that they were “withholding comment” on the Potsdam Declaration. From reports in Japanese newspapers, the US concluded that the Japanese believed the declaration was of “no great value” and was being “ignored.” Taking this response to be a rejection, Truman ordered that the atomic bombs be dropped as a means of ending the war promptly and of “influencing” Stalin.

b. Air power was more effective in the Far East than in the European theater for several reasons. America had from the start placed great emphasis on a general air strategy in the Pacific and Asia as the fastest and surest way of containing Japan until forces could be released from the European area. Secondly the geography of the region placed a premium on air power combined with powerful naval support in the form of floating aerodromes. Thirdly, the Americans in particular were able to draw on the lessons of battles in Europe and to deploy forces with greater economy and effect in the Pacific. American air power succeeded more conspicuously in the east because of the relative strength of the two main combatants. Japan’s air force was outnumbered; its economy was weakened by American blockade strategy; its industrial homeland was poorly defended and provided an ideal target for firebombing.
Questions 1-11

1. What errors by the Luftwaffe led to its failure in the BoB? (pp. 237) (Also, see DLO 2)

   a. Fighters escorting bombers made a great difference. It is easy to conclude that the Luftwaffe lacked adequate numbers, but also lacked range which is more important.

   b. The Luftwaffe failed to apply the fighter force they had effectively. Without the operational approach used by the long-legged Mustangs, that of not being closely "tied to the bombers," coupled to free-ranging offensive counter-air sweeps after the bombers turned for home, and the license to "hunt the enemy" air-to-air across the face of the country, the Luftwaffe would not have been likely to succeed against the RAF in 1940.

   c. The Luftwaffe's failure to ever "mass their bombers" in order to really destroy a target, not to mention the failure to "keep the target down," reinforces the arguments of other writers that they failed to observe the "principles of war."

2. Why were changes made in the target sets selected by AWPD-1, AWPD-42, and CBO? (pp. 254)

   In the final analysis, the CBO Planning Team came up with a list of targets which, it felt, promised to the Germans the most harm within the capabilities of the existing and projected bomber force. In a way, this list was "evolutionary," having gone through AWPD-1, the refinement of AWPD-42, and the comparison and evaluation of the Committee for Operations Analyst. But although changes were made as the capabilities changed and new intelligence data was added, the initial plan, AWPD-1 still proved surprisingly stable.

3. What Principles of War are illustrated by, and perhaps influenced, plans for the Allied strategic bombing campaign? (pp. 276)

   a. The principle of mass, by it's capacity to bring all it's forces from widely distributed bases simultaneously to focus on single targets. Such concentration of combat power has never been possible before.

   b. The principle of objective, by it's capacity to select for destruction those elements which are most vital to the enemy's war potential, and to penetrate deep into the heart of the enemy country to destroy those vital elements wherever they are to be found. These main objectives, reached during hostilities by strategic bombing following the establishment of control of the air, have not been attained historically by surface forces until toward the end of field campaigns.
c. The principle of economy of force, by its capacity to concentrate on a limited number of vital target systems instead of being compelled to disperse its force on numerous objectives of secondary importance, and by its capacity to select for destruction that portion of a target system which will yield the desired effect with the least expenditure of force.

4. How did the execution of the CBO differ from the plans? (pp. 268)

In the last few months of the war a peculiar trend pervaded the air offensive. When command of the air was so completely established that RAF Bomber Command was free to roam the air over Germany in daylight, there was every reason to expect the Bomber Command would take up at long last the selective destruction of industrial targets which it had been forced to abandon early in the war. But this did not transpire. Instead, Bomber Command, after a few sporadic attacks against select targets, reverted to area urban bombing in an effort to give a last body blow to the wavering morale of the German State. The US Strategic Air Forces did not conform completely to the new direction. But in the spirit of “cooperation,” they did attack selected targets in proximity to the urban targets of Bomber Command, and by doing so diluted the intensity with which they pursued the American interpretation of the CBO.

5. What major planning oversights became apparent during the execution of the CBO? (pp. 264)

Nearly all authorities, German as well as Allied, agreed that effective disruption of the German electric power system and transportation system would have contributed as much toward the winning of the war as the campaign against oil. In particular, analysis of the German electric power system would have added immensely to the chaos which was growing in Germany. Also, they failed to recognize the importance of the chemical industry to the war-making capability of Germany, particularly it’s close relationship to the synthetic oil industry.

6. What were the principal features of the US strategic bombing plan in the Pacific?

See DLO 6.

7. How did the geographical nature of the Pacific and China-Burma-India theaters influence the development of strategy to defeat Japan? (pp. 286)

- Supply lines were extremely important for sustaining US forces in the China theater.
  - India-China route provided only way to reinforce China and US forces.
  - 10th AF in New Delhi responsible for protecting trade route, command of China air task force, and defense of India.
- Problems: not enough transport aircraft or experienced personnel, and few satisfactory air bases.
- Supply sustainment was being performed for political reasons (keep Chaing Kai-Shek in war).
- Stilwell, Chennault convinced bases in this theater would provide best means to strategically bomb Japan from distance.
- Sufficient resources in the China theater could not be maintained for effective bombing campaign. Also, if Japanese decided to do their own bombing campaign, US wouldn’t be able to protect and bomb Japan at the same time.
- Attempt to use B-29 from China bases (codename Matterhorn) broke down due to more suitable bases being secured in the Pacific.

8. How did considerations of the employment of air power influence the evolution of strategy during the war? (pp. 288)

- Lessons learned in Europe helped decision makers determine best approach.
- American strategy was designed to take advantage of the weak economic position of Japan, first of all, by overwhelming resistance through sheer numbers, secondly, by a long-term program of blockade and attrition. In both enterprises the gaining of air superiority was vital. Aircraft, either from land bases or carriers, were the main instruments of carrying out the attrition of Japanese naval and air force, the blockade on trade and, later in the war, the bombing of the mainland economy.

9. What role did air power play in forcing the Japanese surrender? (pp. 288, 292)

- Additional difficulties were created for Japanese forces by the American attrition of shipping which left front-line forces short of fuel, supplies and adequate maintenance facilities, all of which the American forces possessed in growing abundance, flown or shipped in along the Pacific supply routes. Shipping losses consisted of both naval and merchant ships, although the air forces inflicted much greater losses on the former. Aircraft accounted for 50 percent of all warship losses and 32 percent of merchant losses, as well as assuming much of the responsibility in spotting ships.
- Strategic Bombing: The destruction of 58 cities by fire-bombing between May and August 1945 was to force the Japanese surrender through the collapse of morale and economic strength.

10. Were “the bombs” necessary? (see DLO 7) What were the alternatives? (pp. 302)

The rationale most often proffered to justify the use of such awesome weapons is “military necessity.” Dropping the bombs actually served to save lives, especially right after the Okinawa campaign where 49,151 servicemen were either killed or wounded. Years later, Truman cited Gen Marshall’s observation that approximately 1.5 million soldiers would have been required to invade Japan. Of this number, 250,000 would likely have been casualties and an equal number of Japanese would have died.
Desired Learning Objectives:

1. Explain Douhet’s concepts concerning the new nature of warfare.

As long as man remained tied to the surface of the earth, his activities had to be adapted to the conditions imposed by that surface (p. 136). Because of its independence of surface limitations and its superior speed, the airplane is the offensive weapon par excellence (p. 139). The greatest advantage of the offensive is having the initiative in planning the operations - that is being free to choose the point of attack and able to shift its maximum striking forces. Therefore, an aerial force is a threat to all points within its radius of action, its units operating from their separate bases and converging in mass for the attack on the designated target faster than any other means so far known. For this reason air power is a weapon superlatively adapted to offensive operations, because it strikes suddenly and gives the enemy no time to parry the blow by calling up reinforcements (p.140).

The striking power of the airplane is, in fact, so great that it results in a paradox: for its own protection it needs a greater striking force for defense than for attack. (p.140).

Accuracy of aerial bombardment is unnecessary (p. 141). Aerial bombs have only to fall on their target to accomplish their purpose. Bombing objectives should always be large vs small targets. The guiding principle of bombing actions should be: The objective must be destroyed completely in one attack, making further attack on the same target unnecessary (p.141).

In general, aerial offensives will be directed against such targets as peacetime industrial and commercial establishments; important buildings, private and public; transportation arteries and centers; and certain designated areas of civilian population as well. To destroy these targets 3 kinds of bombs are needed—explosive, incendiary, and poison gas-apportioned as the situation may require. The explosives will demolish the target, the incendiaries set fire to it, and the poison-gas bombs prevent fire fighters from extinguishing the fires (p.142).
CERTIFICATE

I have read and understand the Academic Integrity Section of the Program Guide. I certify that I have not used another student's research work and that the creative process of researching, organizing, and writing this research report represents only my own work. I have read the instructions regarding purpose, scope, format and content of this effort and have accomplished the research paper in accordance with the appropriate Research Report Review Checklist.

[Signature]
Gregory P. Holder, Lt Col, USAFR

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>SECTION</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CERTIFICATE AND DISCLAIMER</td>
<td>ii</td>
</tr>
<tr>
<td>I INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>II CONFLICT AND CAMPAIGN BACKGROUND</td>
<td>2</td>
</tr>
<tr>
<td>III STRATEGY ANALYSIS</td>
<td>5</td>
</tr>
<tr>
<td>What is it all about?</td>
<td>5</td>
</tr>
<tr>
<td>Is the National Military Strategy Tailored to Meet the National Political Objective?</td>
<td>5</td>
</tr>
<tr>
<td>What are the Limits of Military Power?</td>
<td>6</td>
</tr>
<tr>
<td>What are the Alternatives?</td>
<td>7</td>
</tr>
<tr>
<td>How Strong is the Homefront?</td>
<td>8</td>
</tr>
<tr>
<td>Does Today's Strategy Overlook Points of Difference and Exaggerate Points of Likeness Between Past and Present?</td>
<td>9</td>
</tr>
<tr>
<td>IV AIR CAMPAIGN EXECUTION</td>
<td>10</td>
</tr>
<tr>
<td>Air Campaign Plan</td>
<td>10</td>
</tr>
<tr>
<td>Air Campaign Phases and Dates</td>
<td>10</td>
</tr>
<tr>
<td>Forces and Targets</td>
<td>11</td>
</tr>
<tr>
<td>Results</td>
<td>13</td>
</tr>
<tr>
<td>V AIR CAMPAIGN EVALUATION</td>
<td>15</td>
</tr>
<tr>
<td>Objective</td>
<td>15</td>
</tr>
<tr>
<td>Offensive</td>
<td>15</td>
</tr>
<tr>
<td>Mass</td>
<td>16</td>
</tr>
<tr>
<td>Maneuver</td>
<td>16</td>
</tr>
<tr>
<td>Security</td>
<td>16</td>
</tr>
<tr>
<td>Surprise</td>
<td>17</td>
</tr>
<tr>
<td>Unity of Command</td>
<td>17</td>
</tr>
<tr>
<td>Economy of Force</td>
<td>18</td>
</tr>
<tr>
<td>Simplicity</td>
<td>18</td>
</tr>
<tr>
<td>VI SUMMARY AND STRATEGIC/DOCTRINAL IMPLICATIONS</td>
<td>19</td>
</tr>
<tr>
<td>Summary</td>
<td>19</td>
</tr>
<tr>
<td>Doctrinal Implications</td>
<td>20</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>22</td>
</tr>
</tbody>
</table>
SECTION I
INTRODUCTION

The Anglo-American Combined Bomber Offensive (hereinafter referred to as "CBO") during World War II was selected as a strategy of massive and systematic bombing of German war related factories and cities in order to destroy the German military, industrial and economic system and to undermine the morale of the German people "to a point where their capacity for armed resistance [would be] fatally weakened." (8:135; 9:97; 10:28; 1:80) This paper analyzes the military strategy of the CBO using the six basic questions history suggests that strategist must ask before war (the "Crowl Questions") and then evaluates the air campaign strategy using the "Principles of War" as a framework. (3:24; 20:123)

This framework is useful to analyze the development of a historical military strategy by examining the impact of factors, beginning with the threat confronting a nation, or coalition of nations, on the national interests involved, then how that threat influences the political and military leadership, and in turn, the national policy, in formulating the objective and ultimate strategy. (3:28; 20:123) This analysis will use the framework to show how various factors influenced the development of the strategy of the CBO, why that strategy was used, and the reasons for its successes and its failures.

You never gave any, unlike 1st passage which describes why it was selected.

Half a thesis. Also missing scope of paper & section by section account.
CBO was executed principally in three phases during 1943 and 1944. (8:146) Until adequate escort fighter protection for long range bombing runs were provided, there were unacceptable losses. Although the CBO inflicted immense damage to most of the places attacked, the German war economy was relatively unaffected. (6:113; 8:146) Further, although the weight of bombs dropped on Germany in 1943 was five times more than the year before, German armaments production actually increased by 50 per cent. (8:153)

Such facts do not necessarily suggest the CBO was a failure. Allied strategic bombing diverted an enormous amount of German manpower and material which otherwise could have been used on the Eastern and Western fronts. (8:153) In so doing, as stated by Major General Hansell, at the very least the CBO provided the sine qua non for the invasion of Europe. (9:116)

How strong is the Home front?

The societal values and national resources of each ally in a coalition of powers provide input to the political leadership developing the policy which governs the military and determines the objective. For both the war in general and the CBO campaign, the key societal values of the various Allied powers were sufficiently similar that they may be fairly considered to be shared. Those societal values had a direct influence on the national resources available to conduct the war and the CBO campaign. Civilian life in World War II was "one unbroken stretch of national resolve and sacrifice" which created what has
SECTION II
CONFLICT AND CAMPAIGN BACKGROUND

World War II began September 1, 1939, when Germany invaded Poland, and ended September 2, 1945, with the signing of peace accords abroad the USS Missouri in Tokyo Bay. The genesis of the conflict centered on the ethnocentric policy concepts formulated by Adolph Hitler when he became Chancellor of Germany in 1933. (14:26; 15:566,574)

In the years preceding the war, Hitler's racist ideology and his doctrine of acquiring space (land) to support what he viewed as the superior race focused the attention of Germany primarily on Poland, Russia, Austria and France. Germany's world trade and naval ambitions also posed a direct threat to Great Britain. (14:27-31) An admirer of Mussolini's fascist agenda, Hitler formed an alliance with Italy, with an eye toward aiding Italy in its expansionist program and gaining Italian support in the German annexation of Austria and the conquering of other European states. (15:579) Within two years after its invasion of Poland, Germany was at full-scale war against the Allied powers, including Russia, France and England.

After the direct attack by the Axis, the United States entered the war in support of the Allied coalition of powers. It is fair to say that overall military doctrine of the Allied powers in World War II was based in significant part, if not wholly, upon the policy announced by President Roosevelt that the
Allies would insist upon unconditional surrender from the Axis powers. This reportedly was an unpremeditated comment made at a press conference; a remark which some have criticized as being careless and politically motivated, and one which initiated a policy liable to prolong the war. (12:151; see also, 6:9)

Regardless of one's view as to whether the President's comment was careless or policy well thought out, it became the overriding Allied aim. (6:4)

Since the American national interest required the survival of Great Britain as a great power, one of the key strategic decisions of the United States was that initial efforts toward Japan would be limited to containment and harassment until Germany was defeated. (6:3, 5) Limitations of space prevent a detailed discussion here of the overall air, ground and maritime strategy of the entire war, but it is sufficient for the purposes of the analysis to note that:

The Allied offensive in Europe was to include economic pressure through blockade, a sustained air offensive against German military power, early defeat of Italy, and the buildup of forces for an eventual land offensive against Germany. As rapidly as possible, the Allies were to achieve "superiority of air strength over that of the enemy, particularly in long-range striking forces." (5:209; quotes in original)

Achieving long-range striking air superiority over Germany was to be accomplished primarily through strategic bombing, a (then) new technique of warfare defined by General Carl Spaatz, one of the leading air commanders in World War II and first Chief of Staff of the autonomous United States Air Force, as, "an
independent air campaign, intended to be decisive, and directed against the essential war-making capacity of the enemy." (19:20)

In Europe that air campaign was carried out through the CBO, a product of a directive issued as the result of the conference held in 1943 in Casablanca. At this conference, U.S. President Franklin D. Roosevelt, British Prime Minister Winston Churchill and the Combined Chiefs of Staff of the American and British armed services announced that they had, in essence, established a formula for ending the war. (12:151)

Whether the CBO itself was "decisive" is to this day the subject of some disagreement, but in fact, the effort was frustrated to one degree or another by various factors, including, among others, delays in obtaining adequate long-range escort fighter support, decisions by political and top level military leaders to invade North Africa to ensure control of the Mediterranean, differing interpretations of the Casablanca Directive, and differences between the United States and British airmen as to targeting and methods of bombing. (6:13, 24, 32, 86; 8:136, 139; see also, 18:H12)

You need more background on military leadership during this time and how doctrine was impacted in years of war prior to 1943 -- this would have a big impact on doctrine especially for RAF. Many specifics missing, e.g., Arcadia Conf, ETO day bombing experience 1942, Eaker, Harris, AWP-1, AWP-
SECTION III

STRATEGY ANALYSIS - IS CBO NOT WWII!

What is it About?

In addition to ensuring the survival of Great Britain (6:1), clearly the American national interest in preventing Axis influence, if not expansion, in the Western Hemisphere was a prime factor which shaped national policy and the objective of the war. The interest was truly national in scope, held by virtually every American man, woman and child. As expressed by one who was a child during the war: "In our vivid expectation, losing World War II would mean being occupied...Even if we were not taken over, we had an only somewhat less horrendous anxiety that we would be bombed... the more accurate fear of losing the war itself...was supplanted as a personal preoccupation by a kind of monomaniacal focus on the war and the drive to win it." (7:05)

Is the National Military Strategy Tailored to Meet the National Political Objectives?

After considering the national interests and policy objectives that would be served by military action, the Casablanca Directive appeared to be straightforward: "[The] progressive destruction and dislocation of the German military, industrial and economic system, and the undermining of the morale of the German people to a point where their capacity for armed resistance is fatally weakened." (9:252) The intent of the Casablanca Directive was not so obviously expressed, however, as
evidenced by the fact that by the time the Directive was adopted by the Combined Chiefs of Staff on May 18, 1943, a sentence had been added, apparently to clarify what was meant by "fatally weakened": "This is construed as meaning so weakened as to permit initiation of final combined operations on the Continent." (9:257)

In an attempt to clarify "fatally weakened," the added sentence created more interpretations and raised further doubts as to the basic strategic purpose of the CBO. (9:257) However, the American strategy and supporting operations focused on those aspects of the Directive that targeted "the progressive destruction and dislocation of the German military, industrial and economic system... as a path to the fatal weakening" through the use of selective daytime precision bombing. (9:257) The CBO was executed to achieve the overriding goal of the total defeat of the enemy through the use of both daytime and nighttime bombing--round the clock. (6:10; 19:121)

**What are the Limits of Military Power?**

The Americans initially supported the CBO for political reasons. President Roosevelt felt that American isolationism would be overcome through the low casualties and relatively low costs offered by the bomber alternative. (14:102-105) However, the full impact of the Allied resources was depleted, or at least delayed, by the diversion into North Africa in late 1942 which committed many heavy bombers intended for use in Europe. (9:271;
13:103) Aside from these diversions, the Americans suffered unacceptable heavy losses during unescorted daylight bombing runs, despite changes in combat tactics. (10:231) This problem was eventually remedied by the deployment of the P-51 ("Mustang"), but it was March 1944 before there were sufficient Mustangs available to begin escorting large daylight raids into the heart of Germany. (10:231)

Additionally, the strategic air forces were frustrated by the requirement to divert efforts to targets not considered vital to the German war economy, such as German submarine bases along the French coast. (14:116; 10:231; 13:153) Taking the resources of the Allies in mind, the resources of Germany were targeted according to a set of established priority targets. (9:251) The goal was to arrest the German strengths with carefully planned strategies utilizing the combined forces and resources of the Allied forces.

What are the Alternatives?

What if the goal to arrest the German strengths according to the prescribed plans failed? Although there were operation plans, staff studies, war game scenarios and solutions, these were all based upon conjecture and speculation. (3:27) Blueprints were drawn up stipulating in detail the location, movement, and preferred courses of action for vast numbers of men, ships, planes, tanks, guns, and supplies. (3:27) Nevertheless, the superior strategist must above all else be flexible. (3:27) The
been described as "an unmatched economic and technological colossus." (11:H6; see also, 7:114) As one observer noted: "By war's end, U.S. plants were turning out 50,000 warplanes and a thousand cargo ships a year...In all, the U.S. war effort produced 296,601 aircraft, 71,060 ships, 86,388 tanks. This miracle of production, as much as manpower using the weapons coming off the lines, won the war." (11:H7) Although the numbers may differ, the societal values of English citizens had a similar impact on British national resources available for the war overall and the CBO campaign. Undoubtedly, those "inputs" led the American and British political leadership to develop the resolute policy for the total defeat of their enemies. Does Today's Strategy Overlook Points of Difference and Exaggerate Points of Likeness Between Past and Present?

Theories of air power were under constant development after World War I. No power "ignored, or could afford to ignore, the advent of air power." (14:18; 16:20-25) The Axis threat impacted military leadership thinking on force structure, technology and doctrine. American doctrine adopted the untested principles underlying the mass-bombing strategies of Mitchell and Douhet—"that in modern total war, civilians and armed forces were inseparably linked in national war machines." (16:33)
SECTION IV

AIR CAMPAIGN EXECUTION

Air Campaign Plan

World War II was the first extensive use of air power on both the tactical and strategic level. (2: 214) The CBO Plan concluded that "the destruction and continued neutralization of some sixty (60) targets would gravely impair and might paralyze the western Axis war effort." (9: 255) From the original potential target list, six systems, comprising seventy-six precision targets, were selected. They included as principal objectives the following facilities: German aircraft industry; submarine construction yards and bases; ball bearings; oil, synthetic rubber and tires; and, military transport vehicles: (9: 255)

Air Campaign Phases and Dates

The strategic air war in Europe has been described as having three or four phases: first, during 1942 as the U.S. attempted to organize its air effort; second, during 1943 and the first half of 1944, establishing allied air superiority and paving the way for a successful cross-Channel invasion (800 U.S. heavy bombers on hand by July, 1192 by October and 1746 on hand by January 1944); and finally, after June 1944, as a purely strategic air campaign in support of the Allied invasion (2702 U.S. heavy bombers on hand). (9:255; 10:228) These last two phases of the strategic air war in Europe began to combine the
activities of the United States and England in a coordinated
effort to destroy the German military, industrial, and economic
system as well to fatally weaken and undermine German morale and
resistance.

Forces and Targets

The primary forces used in the CBO were the RAF Bomber
Command flying the Lancaster, the B-24 "Liberator," and B17
"Flying Fortress" of the American Eighth Air Force. Consistent
with their air warfare philosophy, the British had developed the
large Lancaster for heavy night bombing, while the American
bombers were designed and built for precision daytime bombing.
(19; 121)

In January 1943, the Army Air Forces had only 12 heavy
bombardment groups and the maximum strength of 62 heavy bomber
groups was attained in May 1944. "The total of first-line B-17s
and B-24s deployed against Germany increased from 413 in January
1943 to a maximum of 5,072 in March 1945." (5:77) The RAF Bomber
Command strength increased from 515 light, medium, and heavy
bombers in January 1943 to a total of 1,069 in April 1945. (5:77)

The first raid of the CBO took place on August 17, 1942 with
12 B-17s attacking the French city of Rouen dropping 18.5 tons of
bombs. This was followed two days later with an attack on
Abbeville. (1: 83-84) By early October 1942, American forces had
flown 13 missions against German targets in France, Belgium and
Holland. On October 9, 1942, American forces launched 108
bombers including B-17s and B-24s against Lille. Although the Allied invasion of North Africa cost the CBO nearly 100 planes, attacks continued that Fall on submarine facilities. However, by the end of 1942, the daylight offensive had flown only 27 missions with not one bomb dropped on German soil. (1:85-86)

Subsequent to the Casablanca Directive, on January 27, and again on February 26, 1943, Allied bombers attacked the German city of Wilhelmshaven. Not to be outdone, on March 5, 1943, 367 RAF planes attacked Essen and on March 18, 1943, 97 American bombers attacked Vegesack in northwestern Germany marking according to General Eaker, "a new chapter" in daytime, high-level precision bombing. (1:90) In late June, Allied Forces launched Mission No. 69 attacking the U-boat pens at Saint-Nazaire with 191 bombers and using 50 bombers to attack a German airfield near Brussels. Source? Common knowledge? Your own idea? Then cite!

In July, Allied Forces began around the clock bombing of Hamburg with 740 RAF bombers beginning the attack followed by 68 B-17s and then 722 RAF bombers on the next wave. These actions were repeated days later and the American forces attacked the German naval base at Trondheim as a diversion. Pressing on preparing for the Allied invasion of Europe, In August 1943, three massive U.S. raids took place on Ploesti (oil refineries), Regensburg (Messerschmitt plant) and Schweinfurt (ball bearings). On August 17, 1943, RAF bombers attacked the city of Peenemunde followed five days later with an attack on Berlin itself.
The Americans waited until October 14 to again attack Schweinfurt with 291 B-17s and again suffered severe losses. After this, General Eaker halted American raids deep into Germany while the RAF continued its night bombing attacks. On November 18, 1943, the British launched the campaign known as the Battle of Britain lasting four and one-half months including 35 major raids using an average of more than 500 bombers per mission. Nineteen of the raids were directed against German cities with 16 missions against Berlin itself. (1: 136-137)

Results

As Major General Orvil Anderson stated: "If you will only let experience be your teacher, you can have any damn lesson you want." (5:75) An analysis of the Anglo-American Combined Bomber Offensive in Europe during World War II clearly shows that force structure, air war doctrine and technology all affected the timing and ability to attain the objective of the CBO.

Ultimately, the object of the CBO was to accomplish as much destruction of the enemy as cheaply as possible. With this objective comes the realization that this goal could only be achieved by combined operations between the Army, Navy, and the Air Forces. (14:203; 5:75) The Allied forces practiced a general air strategy involving the pursuit of all four major aspects of air doctrine simultaneously: air defense, strategic bombing, naval cooperation and air support of ground troops (14:204)

Although the concept of strategic warfare had been advanced
prior to the CBO, the scope of this operation and the general "strict" adherence to its underlying plans resulted in the overwhelming success of allied forces. (9:273)

What was BLITZWECK?
How was GAF defeated?
How did CBO support operation OVERLORD?
What was the - P-51? Its role?
When did CBO end? Why?
Did CBO ever achieve strategic objectives? When?

Obviously a lot left undeveloped--
and not minor details either!

Marginal section at best!
three-eighths of the bomb tonnage delivered by U.S. Air Forces in Europe were diverted from the primary targets of the CBO and applied to other targets. Source? Did CBO take the offensive? Isn't strategic bombing by its very nature offensive?

Mass

In the context of overall strategy, the U.S. should have committed the majority of its national power to those regions where the threat to vital security interests is greatest. (20:126) The CBO clearly evidenced the fact that strategic bombing is the most powerful instrument of war through "its capacity to bring all its forces from widely distributed bases simultaneously to focus on single targets. Such concentration of combat power has never been possible before." (19:276-277)

Maneuver

As General Starry stated: "[I]n the strategic sense, this principle has three interrelated dimensions--flexibility, mobility and maneuverability." (20:127) Although strategic bombing has this principle as its basis, the CBO in its greatest sense failed to capitalize on this principle given the delay in the delivery of heavy bombers, the diversion of forces to North Africa and errors with respect to the priority given to various target systems. (6:92; 9:260-264; 17:56)

Security

Security enhances flexibility by reducing vulnerability to hostile acts, influence or surprise. (20:128) Allied forces suffered heavy losses during the campaign due to technological
advances made by the German war machine as evidenced by the heavy losses suffered by American forces at Ploesti and Peenemunde. The early warning network developed by the Germans assured the loss of the element of surprise during these operations. (1:131-133) Perhaps more importantly, the Germans modified their tactics ultimately halting American bombing within Germany during the Fall of 1943. Source?

Surprise

The ability to strike the enemy without observation creates opportunities. The CBO clearly took Germany by surprise given the unprecedented rapid deployment of U.S. combat forces into England. More importantly, the initial success enjoyed by the Allied bomber offensive was due in large part to the element of surprise fully utilized by General Baker. Sources?

Unity of Command

"For every objective, there should be unity of effort under one responsible commander." (20:127) In October 1941, General Spaatz had formally proposed that GHQ be eliminated and that overall command be delegated to the Army Chief of Staff. The Air War Plans Division proposed that "coordinate ground, air, and naval services be created, with unity of command to be secured by a common head of all armed services, who would report directly to the President. . . ." (5:63) Thus, unity of command could be ensured. This plan was rejected despite General Marshall's belief that "there must be one man in command of the entire
"Did THIS happened? c.e. OveKed!"

The Arcadia conference ultimately answered the question by establishing the Combined Chiefs of Staff, a composite organization of the British chiefs of staff and their American counterparts.

**Economy of Force**

There is much debate as to whether the CBO defines the principle of Economy of Force due to the diversion of assets previously mentioned. While strategic bombing itself allows the capacity to concentrate on a limited number of vital targets rather than dispersing its force on objectives of secondary importance, the Allies failed to appreciate or follow this principal by diverting forces, delaying forces, and diverting effort to secondary targets. (9: 260; 20:276)

**Simplicity**

In both the strategic and tactical sense, plans should be as simple and direct as the situation will allow. (20:128) The CBO in its simplest form was a "Capability Plan" prescribing what should be done to achieve the objective with forces already committed to production. (9:251) While the Casablanca Directive did much to clarify confusion about the Objective, "it did not completely clear the air." (9:251) While initially simple with respect to phasing and targets, the plans were seriously out of phase with the intended timing with a resulting delay in attainment of the overall objective. (9:258)
CBO, however, there seems to be unanimous agreement among all historical analysts that the CBO was certainly a significant factor in determining the outcome of the war in Europe. Further, if one views the objective of the CBO as making possible as invasion of the continent, it can be seen as nothing less than an overwhelming success.

Although there appears to be no real consensus as to the ultimate purpose of the CBO, it is reasonable to conclude that the campaign strategy of sustained, massive day and night bombing of Germany by British and American heavy bombers was selected to weaken the German morale and war making ability to an extent to ensure the success of the cross-channel invasion. For the first time in the history of warfare, such a strategy was not only possible to implement, but its success could be realistically envisioned and, more importantly, attained, given relatively "strict" adherence to the principles of war as previously discussed.

**Doctrinal Implications**

Although the concept of air warfare was not entirely new—it had been around for at least 25 years—the doctrines for the application of the air arm of military power were still evolving. That evolution was shaped not only by changes in perceived growing threats to national interest, but also in large measure by increased technology. Aviation science and engineering were not so advanced in World War I to enable the production of long-
range heavy aircraft, let alone convince, or even influence, top level military leadership to begin thinking in terms of strategic bombing.

By the time World War II was in full swing, however, all that had changed. The newly developed technology enabling the production of the British Lancaster and the American B-17 and B-24 and ultimately the long-range P-51 escort fighter, provided the opportunity for Anglo-American political and military leaders to shift paradigms of military thinking to include strategic bombing as a viable strategy or not! (Pel Amendment to Directive)

Although the RAF was established as an independent arm of the British military in World War II, American airmen within the Army Air Corps were still fighting for an autonomous air force. Decisive or not as to the outcome of the war in Europe, at the very least, the CBO represented the realization of the dreams of American airmen who sough to vindicate their faith in an autonomous military air arm and independent air warfare based on bombing.

Although perhaps not the primary factor, surely the success of the CBO was a significant factor in the ultimate decision in 1947 to establish the United States Air Force as an independent service, coequal with the Army and Navy within what we now know as the Department of Defense.
AN ANALYSIS OF THE ANGLO-AMERICAN
COMBINED BOMBER OFFENSIVE IN EUROPE
DURING WORLD WAR II, 1942-1945

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SECTION V
AIR CAMPAIGN EVALUATION

Objective

The military strategist uses the principles of war to analyze military actions through the use of an operational framework. (20:123; 21:213-215) The strategic military objective of the CBO was, according to the Directive, the "fatal weakening" of the German military system to allow for the allied invasion of Europe. (9:258) While there was some confusion over the meaning of the Directive, General Arnold welcomed the plan as it allowed him to "fight off the demands of naval and military commanders in other theaters for more and more planes, and get his heavy bombers concentrated in Europe." (6:91) Moreover, strategic bombing allowed Allied Forces to selectively destroy those elements which were most vital to Germany's war potential, and to penetrate deep into Germany to destroy those elements wherever they were located. (19:276)

Offensive

One could reasonably question whether all efforts of the offensive were directed toward a clearly defined common goal given the diversion of resources to tactical targets and the subsequent effect on attainment of the objective. (9:258) The diversion of forces to the Mediterranean resulting from political pressure resulted in only 800 bombers or 66% of the planned English buildup being available. (9:261) Moreover, approximately
SECTION VI
SUMMARY AND STRATEGIC/DOCTRINAL IMPLICATIONS

Summary

That the planners of the 1942-1945 Anglo-American Combined Bomber Offensive (CBO) during World War II selected a strategy of methodical bombing of Germany on an enormous scale is an uncontroversial fact of history. However, whether that strategy was selected merely to weaken Germany so as to ensure the success of OVERLORD, the great cross-Channel attack in 1944, or to bring about the total destruction of the whole military, industrial and economic system, as well as the morale of the German people is yet today the subject of some interpretation. The Casablanca Directive, stating, among other things the objectives of the campaign, was subject to differing interpretations when it was written, and it remains so today. Thus, the reason the strategy was selected for this campaign and whether the CBO was successful depends upon one's view of the purpose stated in the Casablanca Directive.

Did the CBO itself bring about overwhelming defeat of Germany? Although the writings of both Generals Hansell and Spaatz reflect the view that Allied air power was decisive in the war in Western Europe, modern historians have reached divergent conclusions about not only the CBO, but also air power in general, and the overall impact on the war. Whatever disagreement there may be regarding the "decisiveness" of the
LESSON 11: The Persian Gulf War and Air Power Strategy

DLO #1: Describe the overall strategy of the Iraqis in the Gulf War

<table>
<thead>
<tr>
<th>Political</th>
<th>Military</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Strategy</td>
<td></td>
</tr>
<tr>
<td>1) Resolve issues with Kuwait</td>
<td>1) Quick invasion/occupation (19th province)</td>
</tr>
<tr>
<td>2) Dominate other Arab oil producers</td>
<td>2) Large conventional force (Soviet-style)</td>
</tr>
<tr>
<td>3) Regional superpower</td>
<td>3) Develop WMD (NBC + missiles)</td>
</tr>
<tr>
<td>Wartime Strategy</td>
<td></td>
</tr>
<tr>
<td>1) Cause high Allied body count</td>
<td>1) Entrench/fortify basic troops in KTO</td>
</tr>
<tr>
<td></td>
<td>Rely on extensive air defense</td>
</tr>
<tr>
<td>2) Ensure regime survival</td>
<td>2) Keep Republican Guard as mobile reserve</td>
</tr>
<tr>
<td>3) Protect high value assets</td>
<td>3) Protect/disperse/hide WMD/aircraft/C2</td>
</tr>
<tr>
<td>4) Break up coalition</td>
<td>4) SCUD launches (bring in Israel)</td>
</tr>
</tbody>
</table>

DLO #6: Identify the elements of the Iraqi strategy which rendered it ineffective

- Strong initial US political response defeats
- US forces were designed to defeat end of Cold War allowed Gulf deployment and desert terrain + static defense makes for perfect employment conditions
- not ready for prime time and US threats of undefined retaliation limits
- Tech destroys IADS allowing aerial sanctuary (mid-altitudes) for Allies to bomb with impunity – KTO troops + defenses battered before ever got to fight (defeat + 
- Aerial destruction of C2 nodes limits – Iraqis did not have real layered air defense systems
- Intel + recce find most hardened structures and special PGM destroy many of them.
- Intrusive UN post-war inspections really finish the WMD job and Iran keeps aircraft.
- is successful for Iraq (major Allied weakness) but political moves (Patriot deployments, diversion of air effort) deny [no confirmed kills for Patriot or aircraft]

Wartime effort worked, but
Political didn’t

KELjd138
DLO 3: Explain the most significant Allied Strategy Components

**Political**

**Pre-War**

DESERt SHIELD

1) Keep the Saudis from folding

2) Justify US intervention

3) Build up forces to protect Gulf states

**War**

DESERt STORM

1) Iraq out of Kuwait

2) Minimize Allied losses

3) Keep coalition together

4) Ensure regional stability + security

**Military**

1) US intel photos to scare
   
   Initial "tripwire" force to reassure
   
   -- F-15s for air superiority
   
   -- A-10s/AC-130s for CAS
   
   -- Rapid airlift of light infantry
   
   -- Tanker support

2) Incorporate Allied forces into coalition

3) Massive airlift + sealift
   
   -- Pre-positioned US and Saudi materiel
   
   -- Lots of time
   
   -- Great airfields and ports

4) Double the DESERT SHIELD force

2) Rely initially on aerial assault

   Build up massive ground force

   Keep amphibious assault as diversion

3) The Great SCUD Hunt

   Deploy Patriot batteries

   Minimize collateral damage

   "Early" termination of hostilities???

4) Destroy WMD (NBC + missiles)

   Weaken Iraqi conventional forces

   Used to prevent a quick recovery: Impaired their WMD for many years.
DLO #2: Analyze the Allied strategy in the Gulf War using Crowl’s questions.


2. Is the NMS tailored to meet the national political objectives? Yes, multi-lateral action [USA as world leader]; minimize civilian damage [USA as “good guy”]; awesome force [USA as sole superpower].

3. What are the limits of military power? NOT an all-out war vs Iraq.

4. What are the alternatives? Economic embargo (keep coalition together?) [opinion] If US took lots of casualties—this would have been the “hindsight” option.

5. How strong is the home front? Bush goes to Congress and public supports. [opinion] Everybody loves a winner.

6. How does the present differ from the past? Cold War is over. Technology finally allows Douhet/Mitchell style of strategic bombing (bombers do get through and can hit + destroy whatever we want).

We paid attention to politicians—No micromanagement; no limits with large casualties.
DLO #5: Use the Principles of War to analyze Allied strategy.

Objective: A bit overdone if only goal was to liberate Kuwait. If the real objective was to knock Iraq out of the regional superpower game - great job.

Offensive: Obviously both in the air and on the ground.

Mass: When you've got that much stuff, you can apply power at numerous places and times.

Economy of Force: (strategic) End of Cold War allowed drawdown in Europe, redeployment of carriers. Note: EOF = minimum to secondary efforts. (tactical) When you've got that much stuff - don't need to worry about tactical EOF too much.

Maneuver: Flexibility, mobility (strategic sealift and airlift; tactical helolift ops) [Note: one of the things that sets US military capability apart from rest of the world], and maneuver (tactically concentrate or disperse to put enemy at disadvantage).

Unity of Command: Schwarzkopf (first test of Gold-Nichols) and Horner (Air commander) [Navy had overwater air command; USMC had autonomy in CAS, especially VSTOL; Army had helos below 500' and long-range ATACMS; Allies had a lot of leeway]

Security: Counter-Terrorism (strategic) and deception (tactical) [USMC amphibious fleet; aerial decoys]

Surprise: Time: (no) Place: "Left Hook" (strategic) Manner: Initial airstrikes on early warning sites

[Simplicity: Strategically simple: "Cut it off, then kill it." Tactically complex but some things like "kill boxes" were nice and simple.]
Objective
- The objective is always important, but it is especially so in aerospace warfare because of the range of options available.
- Airmen are not constrained to achieving tactical objectives as a prerequisite to obtaining strategic objectives.
- Aerospace forces can pursue tactical, operational, or strategic objectives—or all three—at the same time.

Offensive
- Aerospace forces are inherently offensive—even when defending, they attack.
- Aggressive defeat of the enemy’s aerospace forces is the airman’s first priority in warfare—it makes all other operations possible.

Unity of Command
- Unity of command is important for all forces, but it is critical to prudent employment of aerospace forces.
- Aerospace power is the product of multiple aerospace capabilities. Centralized command and control is the key to fusing these capabilities.
- The momentary misapplication of aerospace forces is much more likely to have immediate strategic consequences than is the case with surface forces.

Security
- The lethality of aerospace forces makes the security of friendly forces from enemy air power a paramount concern.
- Security may require the elimination of the enemy’s aerospace capabilities.

Surprise
- Surprise depends on initiative and is made more attainable by the versatility of aerospace power.
- Where, when, or how an enemy is struck is relatively independent of where and how aerospace forces are postured. Choice of time and place always rests with the commander of superior aerospace forces.
- Compared to land and sea forces, terrain and distance are not inhibiting factors for aerospace forces.
- Surprise is aerospace power’s strongest advantage.

Simplicity
- Planning, logistics, and administrative support are complex for all types of forces but, generally, are less so for aerospace forces compared to surface forces possessing equivalent combat power.
- The fluid, featureless, boundless nature of the aerospace environment makes the execution of aerospace operations elegantly simple compared to that of surface forces.

Mass and Maneuver
- The speed with which aerospace forces maneuver in three dimensions allows them to achieve mass faster than surface forces.
- The commander of forces operating in three dimensions does not sacrifice maneuver when mass is achieved—mass and maneuver can be employed simultaneously.
- The simultaneous employment of mass and maneuver by aerospace forces creates tremendous leverage when applied against surface forces.

Economy of Force
- It is ironic that this principle was so well developed before the advent of air power. It describes precisely the greatest vulnerability of aerospace power.
- The misuse of aerospace power can reduce its contribution more than enemy action.
- Because aerospace power is precious, it must be conserved by caring and competent airmen.
DLO #4: Explain and evaluate how closely Allied air operations adhered to USAF basic doctrine.

Pretty much right down the Air Force line.

- Aerospace control first priority (first night strikes)
- Absolute control is the ideal aim (air dominance)
- Offensive counter-air
  - Attacks on enemy warning and control systems
  - Attacks on enemy bases and launch facilities
  - Attack surface-based air defenses
  - Use of surface forces in support of OCA (Apaches, ATACM, SOF)
- Conduct defensive counter-air (45-0)
- PGM allows higher op tempo which reduces risk and decreases collateral damage
- Strategic attacks should be consistent and coordinated
  - Maximum destruction of the ability to wage war
  - PGM has greatly enhanced the efficiency of strategic attack
  - Combine SA with interdiction and surface actions
- Interdiction and surface operations should be planned to reinforce each other
  - Give enemy a dilemma (stay to get bombed or move and run out of supply)
  - Increase the depth as much as possible to reduce fratricide
  - May have a devastating effect on the enemy’s ability to respond to attack
  - Extremely effective means of destroying enemy surface forces
  - Use to trap or channel enemy for “destruction in detail” (highway of death)
- Close air support is least efficient airpower use but sometimes most critical (Khafji)
- Strategic and theater airlift must be available to respond quickly
- Sufficient air refueling capability must be available
- Aerospace assets are best suited to coord and control electronic combat resources
- Situational awareness from surveillance and reconnaissance
- Special operations for infil and exfil (SCUD hunt and scouting, PSYOPS)
- Air base defense (Patriots)

AF doctrine anticipates a “battle” for space too. Gulf War just highlighted how useful it is tactically, especially to US:

Navigation – GPS
Communication – SATCOM
Weather – DSMP
Surveillance – SCUD launches

AF want to have all this folded stuff in SPACE.
Chapter 1

War and the American Military

It is clear that war should never be thought of as something autonomous but always as an instrument of policy.

Carl von Clausewitz

An understanding of aerospace doctrine must begin with an understanding of the nature of war. The American penchant for viewing war as an aberration in the affairs of man, and as an occasional crusade to destroy a clearly recognized evil, often distorts our understanding of warfare and its purposes.

1-1. War is a violent struggle between rival societies to attain competing political objectives. War is just one means used by nation-states, subnational groups, or supranational groups to achieve disputed objectives. (Refer to vol. II, essay A.)

a. War is an instrument of political policy. War is generally the instrument of last resort reserved for those issues deemed vital (disputes that cannot be resolved using nonviolent instruments of policy). War does not replace other instruments of policy, rather it is used in addition to other instruments. (Refer to vol. II, essay A.)

b. The military objective in war is to compel the adversary to do our will. Lasting success (a better state of peace) requires that the adversary's hostile will and ability be overcome. Overcoming hostile will can involve military operations but primarily relies on other instruments of policy. The military is the instrument of power (policy) best suited to attack the ability to resist. Military methods are based upon the principles of war (fig. 1-1) but must be coordinated and orchestrated with nonmilitary instruments of national power. (Refer to vol. II, essay A.)

1-2. War is a human enterprise. The use of violence injects levels of emotion and ferocity into war that tend to undermine the rationality and cloud the vision of friend and foe. (Refer to vol. II, essay C.)

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**PRINCIPLES OF WAR**

(Refer to vol. II, essay B.)

- **Objective.** Direct military operations toward a defined and attainable objective that contributes to strategic, operational, or tactical aims.

- **Offensive.** Act rather than react and dictate the time, place, purpose, scope, intensity, and pace of operations. The initiative must be seized, retained, and fully exploited.

- **Mass.** Concentrate combat power at the decisive time and place.

- **Economy of Force.** Create usable mass by using minimum combat power on secondary objectives. Make the fullest use of all forces available.

- **Maneuver.** Place the enemy in a position of disadvantage through the flexible application of combat power.

- **Unity of Command.** Ensure unity of effort for every objective under one responsible commander.

- **Security.** Protect friendly forces and their operations from enemy actions which could provide the enemy with unexpected advantage.

- **Surprise.** Strike the enemy at a time or place or in a manner for which he is unprepared.

- **Simplicity.** Avoid unnecessary complexity in preparing, planning, and conducting military operations.

Figure 1-1.
Lesson #9

From the Cold War to MOOTW

DLO #1. Explain the nature and origins of the Cold War.

The Cold War and the Korean War

The Soviet Union military and security threat has preoccupied U.S. foreign policy. Policy alternatives on any problem were weighed in light of Soviet actions.

How and Why the Cold War Began

First in a system dominated by power units called nation-states, each necessarily being wary of the possible threat from others, balance of power effects are always present. Even apart from ideology, friction between two "superpowers," was to be anticipated. Second, multiplied against this friction was ideological orientation of both of these superpowers. This is why it is so intense and lasted so long.

Tend to take Soviet communism at worst-case face value. Americans came to see the Soviets as a threat to their security, for decades. Communism came to power in the Soviet Union through bloodshed, through a revolution. Endured through prolonged civil war and Western hostility. No nation lost more territory at the end of WWI than the Soviet Union. Behavior before WWII had shown a clearly hostile face toward capitalist society.

Lenin made it clear that Communists were in "state of partial war" with every capitalist nation. Intended to exploit divisions in capitalist societies through propaganda and subversion. To Russian people, recurrent and prolonged suffering and long series of invasions and wars justified intense suspicion of the outside world. Vikings, Mongols, Tartars, Charles XII of Sweden, French under Napoleon, Germans in WWI, Poles right after, Germans in WWII. Few natural barriers to discourage invasion. Communism took up where national experience had left off.

Hitler's threat to the Soviets caused closer relations (temporarily) with the capitalists. Diplomatic relations with U.S. under Franklin Roosevelt, Soviet Union's admission League of Nations. Expelled from the League - for invading Finland. Failure of the British and French to defend Czechoslovakia meant Western nations hoping to embroil Germany and the Soviets in a war. 1939 and agreed to the infamous Nazi-Soviet Pact.

Despite these events, U.S.-Soviet cooperation against Hitler initially produced American postwar goodwill. Soviets as one of the "Four Policemen". Soviets no longer fearing German and Japanese neighbors, were moved to conviction on ideological grounds. Stalin, Poland and the Balkans, Soviets installing Communist regimes. Stage was set for serious disagreements. What set it off was threatened loss of Greece and Turkey to Communist pressures. Cold War accelerated drastically in an all-out contest for influence in Germany.

Containment Supplies a Concept for a Cold War
In election of 1948, Soviet challenge to force the U.S. out of Berlin was in full swing. Soviet intention to dominate Europe became obvious. Washington search a governing principle. Great debate in the U.S. over whose fault relations were deteriorating. Kennan, foreign service officer in Moscow, detailed analysis. Explained Soviet behavior recommended a specific response. A policy of patience and firmness to contain the Soviets. Under the pseudonym, “X,” the main element of any U.S. policy toward the Soviet Union must be that of a long-term, patient but firm and vigilant containment of Russian expansive tendencies. America respond to Soviet pressures by application of counter-force at a series of constantly shifting geographical and political points, corresponding to the shifts and maneuvers of Soviet policy. Would promote either the break-up of the gradual mellowing of Soviet power.

Containment central to new policy that President Truman announced in 1947, Truman Doctrine.

Formulating the Truman Doctrine

Need to decide how J.S. respond to British request America security backing of the Greeks, fighting a civil war against the Communists. U.S. previously had no real commitments. Truman: “I believe that it must be the policy of the United States to support free peoples who are resisting attempted subjugation by armed minorities or by outside pressures.”

Truman Doctrine Applied: Greece and Turkey

Greece was being threatened by an indigenous Communist aided from abroad. Turkey pressured by the Soviets to governing the Dardanelles Straits, allow Soviet warships easier access to and from the Black Sea and Mediterranean. Money for arms, returning body of the Turkish ambassador, using the U.S.S. Missouri, most powerful battleship in the world. Accompanied by a task force which stayed in the Sea of Marmara. Economic aid and military advice stabilized the situation.

The Marshall Plan


Serious Trouble Begins Over Germany

All Western rail traffic with Berlin was suspended by the Soviets. Berlin food stocks for only 36 days coal stocks only for 45. 2.5 million people in the Western areas of Berlin starve. Spring 1949, 8,000 tons - equivalent to what had entered Berlin by rail and water before the blockade. At the height of the airlift, planes were coming in or leaving every thirty seconds. Ending of the blockade was an admission of Soviet defeat. Cooperation of Germany and the U.S. in a common cause eradicated much of the wartime hostility, forged a new bond. Whatever chance the Soviets had to win over West Germany had evaporated.

And Who “Lost” China?

Chiang K’ai-shek recognized leader of China at the end of WWII, began to lose control of China. Partly due to the Soviets who turned over captured Japanese war equipment in to Communist Chinese. Chiang, very large armed forces. In the countryside, many elements of Chiang’s army deserting and even taking sides with the Communists. End of 1949, Chiang, remnants of his forces, fled to the island of Taiwan (Formosa).

Korean War broke out only seven months after. Assisting whole movement to the right with its increasing hysteria was McCarthyism. Two things were going on in parallel. Foreign affairs, Americans think in a contest with the Soviet Union waged with all weapons, and anywhere. Crises in Greece, Turkey, and Iran, the consolidation of Soviet control in Eastern Europe, Czech coup, the Berlin blockade, fall of China convinced U.S. of an inherently aggressive Communist bloc. Detonation of an atomic bomb by the Soviets added to the growing anxiety. Domestic Affairs, Americans feared subversive elements had crept into positions where they could do harm. McCarthyism.

DLO #2. Understand the notion and reality of limited war and Korea as an example of such.
Limited war: Trying to balance stemming of communist aggression through surrogate warfare while avoiding escalation to all-out war between US (NATO) and the Soviet Union.

The Korean War Begins

North Korean assault, June 24, Truman action took through the United Nations. American view: Soviet Union behind the attack, choosing area of strategic value for its assault to shift balance of power in Asia. UN Security Council. Soviet Union boycott to protest China's seat occupied by Nationalist Chinese. Council adopted U.S. sponsored resolution to end the "breach of the peace" "all members assistance to the United Nations and to refrain from assistance to the North Korean authorities."

UN, the Security Council on June 27 recommended that "the Members of the United Nations furnish such assistance to the Republic of Korea may be necessary to repel the armed attack and to restore international peace and security in the area." Again, the Soviets were not there to veto. In months that followed, two thirds of the sixty, UN members responded including supplies and medical units or actual forces. Fourteen quickly sent armed forces, two more later. Almost all allies of the U.S. By 1951, UN forces totaled 250,000 from the U.S., 26,000 from the other, plus the South Korean army. The South Korean and American forces were pushed back. To form the famous "Pusan perimeter."

MacArthur mounted a daring amphibious assault on Korea's west coast, at Inchon. General Assembly resolution, approving "hot pursuit" by implication. Promised that "United Nations forces should not remain in any part of Korea otherwise than so far as necessary for achieving the objectives specified" - that is, a united and independent Korea. By November, UN forces had penetrated far into North Korea. Reached the Yalu River. Then "a new foe" "Chinese Communist military units". Chinese "volunteers" in a massive counterattack defeated the UN forces, who hastily retreated southward. United Nations and the Chinese were now locked into completely incompatible positions, stabilize a front line, 38th Parallel. A stalemate. From April, 1951, until an armistice was signed in July, 1953.

American Reactions and Ending the War

Dominant themes in American thinking were domino effect and Cold War moves of the whole Communist camp were orchestrated in Moscow. First response to China's entrance into the struggle confirmed the notion that there was a unified Communist bloc. The war should now be extended to China. General MacArthur argued. MacArthur's recipe offered a larger war instead of a stalemated war, he proposed the U.S. should become fully engaged with the Chinese while leaving the Soviet Union fully free to make trouble anywhere else. MacArthur. Nationalist Chinese troops in Korea. Truman had ruled out because it would dramatically increase Chinese Communist anger. View of using those neither conflicted with "logic" nor with the American tradition of meeting force with maximum counterforce as we have never failed to do in the past." He added "that here in Asia is where the Communist conspirators have elected to make their play for global conquest...As you point out, we must win. There is no substitute for victory." In his memoirs MacArthur says that Congressman Martin, "without consulting me, released my letter." 38 The confrontation between Truman's policy. Six days later, Truman relieved MacArthur of his commands.

Second result public disenchantment with the UN Korean War not conform expectations. That aggression against one would be treated as an aggression against all, collective military power smash aggression in quick order. Actual case, only two thirds or less of the UN even as much as send soap. One major power contributing military support to the aggressor, while Soviet Union supplying military equipment to aggressor. Both sides recognized war was stalemated, stage was set for a negotiated peace. Two more years armistice was signed.

The North Atlantic Pact Becomes NATO

Third result of the Korean War was to transform the North Atlantic Pact into NATO. Once establish SHAPE (Supreme Headquarters Allied Powers Europe), the organization grew rapidly. Total NATO membership grew to sixteen.

Summing Up
Academic debate to describe this “limited” war. War limited in that neither China nor the U.S. participated in it under national flags. Made it much easier to disengage. Korean War did in American foreign policy strengthen the belief with which Americans started the war, that U.S. had been engaged in frustrating a Moscow-orchestrated attack on its Asian Flank. Also deepened differences with the Chinese Communists. In retrospect, most important result of the Korean War for American foreign policy it did not clarify that domino theory so that one aggression, unopposed, leads to more. South Korea’s conquest would certainly have altered the strategic balance of power in Asia, enough to accept the American action. Those who saw its justification as arising from its frustration of Communist plans for world-wide aggression.

DLO #3. Summarize the Berlin Airlift and the importance of air power as a part of our Cold War strategy.

Berlin The Airlift: Constructive Air Power

Flexibility of airlift to respond to challenges without armed response.

Origins of a Crisis

Only written agreement for transportation to the city from the west provided three 20-mile wide air corridors between Berlin and western Germany dedicated to French, British, American aircraft. Full-scale blockade began on 24 June 1948. Stated reasons “technical difficulties” on the railroad and highway. “Severe shortages of electric current” limit electrical power to two hours daily in western sectors. Holding the western sectors hostage would force American, British and French occupation forces from Berlin. Two million Berliners in western zones importing 6,000 tons of coal and hundreds of tons of food everyday. Soviet leaders concluded allies could never win this confrontation in Berlin.

A Makeshift Airlift

When Soviet first harassing military trains and vehicles bound for Berlin in March 1948, interim airlift to meet the needs of the American presence. When access slammed shut in June. Larger airlift implemented to supply the entire city. At best, planned operation could be sustained for 45 days. General Clay should be able to bring in 600 or 700 tons a day. increase morale of the German people, seriously disturb the Soviet blockade. Not provide coal, raw material or fuel. President Truman determined to take any action short of war to hold Berlin. Confident could do the job by same techniques used in lifting 70,000 tons one month over the hump from India to China.

Only a stopgap measure. Taking an “unprovocative but firm stand” seeking resolution through diplomatic channels. Big. Gen. Smith’s one month. Implementing basic decisions first airlift fleet managers aim at a goal of 65 percent aircraft every day to allow maintenance and proper management. Second each aircraft three round trips daily. Third “block” system of dispatching C-54 and C-47 aircraft in groups specified times like aircraft travel together. Finally centrally Air Traffic Center in Frankfurt to schedule flights. Organization two sections: Operation, and Supply and Maintenance. Stationed solely at Rhein-Main and Wiesbaden ABS.

The MATS Connection


The Headquarters Element

Airlift Task Force eight major divisions: personnel, communications, airfields, plans, supply, maintenance, cargo handling, and operations. Operations two critical specialties: weather and navigation. Functional parts of headquarters hand-picked officers required both execution of his function and liaison
with the unit of the Air Force that provided the service. Close relationship with the British. Combined Airlift Task Force (CATF) under a single commander, Tunner, RAF Air Commodore as Deputy. Used statistics extensively determine required goals and objectives were being met for virtually every aspect. Establishing effective maintenance and supply facilities. Periodic checks every 25 hours 200 hours, depot for a major inspection. 1,000 hours returned to U.S. for comprehensive overhaul. All planned, executed, recorded, and controlled at the airlift Task Force Headquarters. USAFE Depot at Oberpfaffenhofen short-term. Activate maintenance facility at Burtonwood. Seven 200-hour inspections per day. Using production line maintenance procedures that Tunner had pioneered for the Hump.

A Pattern of Operations

American planes Rhein-Main and Wiesbaden. Expand American operations to RAF Fassberg, in the British sector. Flying time 55 minutes instead of the two hours. Weather and terrain more attractive. Later, Americans expanded operations to nearby RAF Celle. Expansion of operations in Berlin. RAF field at Gatow in British sector of Berlin addition to Tempelhof.

Later, third airfield in Berlin hastily constructed Tegel Airport in the French sector. Transports at same altitude 15 minutes apart. Layer of aircraft was 500 feet. Later intervals reduced to mere minutes. Airplanes converged on Berlin one every three minutes, takeoff and landing times of all aircraft were precise. Instituted rigid set of procedures. For airtraffic control, southernmost air corridor only for inbound traffic. Each pilot knew his exact location in the flow. Takeoff at a precise time flew a precise pattern at altitude and speed entered the corridor at precisely moment planned. Radar coverage from the ground was incredibly accurate. Acted to get airplanes turned around faster. Operations officer roared up in a jeep handed his clearance slip. Passed along this information weather officer in his jeep. Third jeep snack bar.

Ground crews motion study experts streamline the process. Airlift turnaround time at Berlin was reduced from an hour to 30 minutes. Germany's harsh winter weather constituted the greatest single threat to the airlift's transports. Weather personnel grew. Weather reconnaissance flights stepped up. Bring to bear as much weather information as possible to the airlift planning process. Winter of 1948-49 was one of the worst on record, airlift overcame it. Recalled to active duty for 90 days twenty CAA traffic controllers.

Number of ATC personnel rose, so did the reliability of their activities. State-of-the-art electronic and visual landing aids. New area control radar. During the entire airlift only 17 American and seven British airplanes were lost, 276,926 airlift flights. Maintaining the morale and support of the Berliners, “Operation Little Vittles.” Candy dropped by parachute. Easter Parade of 16 April, 1949. Maximal effort for 24 hours. Goal: One mission of every one of the 1,440 minutes of the day. 1,398 missions accomplished. 12,941 tons of food and other supplies.

The End of the Airlift

American diplomats feverishly working to resolve the blockade. Soviets began harassing airlift flights in the corridors by dashing in and out in fighters, firing antiaircraft weapons and other actions of harassment. 733 incidents. None cause any damage. Airlift broken with the Easter Parade. Nine days after the big push, blockade lifted effective 12 May. Clay continued the operation through the summer to lay in a reserve of commodities.

Summary

Berlin Airlift delivered 2,325,509.6 tons of food, fuel, and supplies to Berlin in 15 months and 227,655 passengers in or out of the city. Flying hours, missions and safety most impressive. 441 aircraft, C-54s, C-47s, R-50s, C-82s, lone C-97. RAF contributed 101 aircraft: Dakotas, Yorks, and Hastings. British also occasional amphibious aircraft especially bringing in salt.

Assessment

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Berlin Airlift was significant for foreign relations in demonstrating the resolve of the U.S. to meet a challenge from the Soviet Union. Allies witnessed a triumph of will and it raised morale and built resistance among Berliners. It changed attitudes toward the western powers, raised their esteem for western strength and established a bond between Berlin and the West. It is a blow struck in the cause of peace, freedom, and democracy. Its value as a morale booster to allies cannot be overestimated. Berlin Airlift impressed the Soviets. At no time could the Soviets have mounted such an extensive operation. Stalin was amazed.

Air Force doctrinal influence: it demonstrated that if proper support were available, any tonnage could be moved by air anywhere with minimal consideration for geography or weather. Provided experience in operational techniques, in air traffic control, and maintenance and reconditioning of aircraft. It showed that military airlift is an instrument for achieving foreign policy objectives not only in wartime but also in peacetime. For first time in history US employed its Air Force as a diplomatic weapon. Airlift is a more flexible tool for executing national policy than either bombers or fighters.

Tunner advocated for the remainder of his career the importance of designating a single major command as the sole manager of airlift for the AF. Achieved Dec 74 when TAC airlift resources were consolidated with those of MAC. Also Berlin Airlift spawned a commitment to the procurement of large transport aircraft and prompted additional airlift acquisition programs up to the present.

Operation Vittles accomplished its mission of totally supplying the needs of a major city for more than a year and defeated the Soviet blockade in one of the first major confrontations of the Cold War without leading to war. It taught many lessons about large-scale airlift. Since then, there have been numerous examples of the use of airlift in achieving foreign policy objectives in a noncombat setting. (Yom Kippur War of 73)

DLO #4 Comprehend the concept of deterrence and the important issues in the evolution of nuclear deterrence in the Cold War.

The dominant concept of nuclear strategy is deterrence. Key concept: The most vital step in American security guarantee in case of attack is the possibility of retaliation in kind.

Requirements for deterrence

Minimize that proportion of our retaliatory forces which the opponent can have High confidence of destroying by a surprise blow and to help keep alive in his mind full awareness of the penalties for miscalculation. The Air Force position is that political warning will always be available to get bombers in the air. Today (article written in 1978) we are far superior in numbers of strategic warheads, and we also have a marked advantage in the important factor of accuracy. In the mid-sixties the US defense community could look with satisfaction on our immense superiority in retaliatory forces which appeared also utterly secure by virtue of being for the most part either underground or underwater. The Safeguard ABM was effectively canceled by the agreements of SALT I, demonstrating the greater utility of arms control agreements lies not in enhancing our security, which is usually beyond their power, but in helping to save both sides from wasteful expenditures.

How much power is enough to deter?

Clausewitz's idea is that war would be only senseless destruction if it were not in pursuit of some valid political objective. It is precisely the fact that one finds it difficult if not impossible to find a valid political objective that would justify the destruction inevitable in a strategic nuclear exchange that makes the whole concept of nuclear deterrence credible. There is an ongoing debate over planning to win a nuclear war rather than just planning to deter it. Since we would not initiate or welcome the outbreak of a war, or basic peacetime strategy would still be that of deterrence.

Against what do nuclear weapons deter?

The idea developed that strategic nuclear power deterred only the use of strategic nuclear power and hardly any other form of violence. On the contrary, some argued that the existence of strategic
nuclear weapons made lesser wars without nuclear weapons more rather than less likely. The next step was to argue that nuclear weapons must not be used in theater warfare even in Europe, and that the way to avoid their use was so to build up our conventional forces that the threshold for use of tactical nuclear weapons would be raised too high to be breached.

The role for tactical nuclear weapons

Strongest reason for doing away with tactical nuclear weapons is their alleged escalatory effect. But the strategic nuclear forces of each of the superpowers do inhibit the other from any kind of warlike action against it. The Cuban missile crisis is an example. Indeed the fear that escalation is possible that causes the ultimate sanction to have this general deterrent effect.

The wartime use of strategic Nukes

Schlesinger (former Sec Def) and Lambeth idea is to find some options outside the straitjacketed posture of deterrence, viewed as waiting to be struck then expending our whole nuclear stockpile quickly. Alternative suggested is we should be prepared to initiate the use of strategic nukes, but only perhaps one or two, to show our “determination.” Various people have long questioned the purpose of planning to deliver all our nuclear weapons as rapidly as possible, for many targets are not time-urgent and most of our own weapons are not directly threatened. The main war goal should be to terminate it as quickly as possible with the least damage possible—on both sides. The US military has a different view. Their object is to see to it that the Soviets will suffer so much greater damage to its industrial plants and population than we do, that recovery is much more prolonged. The Schlesinger-Lambeth school makes much of the advantage of expanding the options of any president during a crisis, and to remove the pressure upon the president to use the nuclear option. Kennedy did this by greatly expanding conventional forces and it allowed Johnson to send combat forces to Vietnam without calling up the reserves! Not obvious that the national interest benefited from the result. Certain weapons like the cruise missile because of extreme accuracy lend themselves to “surgical strikes” which some fantasize can grin victory without cost or even danger. The notion that in an extremely tense crisis, any useful purpose is likely to be served by firing off strategic nukes, however limited in number, seems vastly to underestimate both the risks to the nation in such a course and the burden upon the person who must make the decision.

DLO #5. Demonstrate an understanding of the evolution of air power doctrine between Vietnam and the Gulf War in the development of AirLand Battle.

Forming the Partnership, 1973-1979

Early post-Vietnam years were marked by a deliberate effort on the part of the Army and the Air Force to prepare themselves to defend Western Europe. Army’s effort was driven by the creation of TRADOC and the use of doctrine as the device to refashion itself in the wake of the Vietnam trauma. In contrast, Air Force basic doctrine appeared to lack a unifying vision. Nevertheless, the Air Force developed an aircraft tailor-made for killing enemy tanks in Europe (A-10) and it carefully assayed Warsaw Pact ground forces and the Physical environment in which it would have to operate to help the Army defeat them. Finally, a promising start at forging cooperation between the two services was embodied in the TAC-TRADOC partnership. There remained, however, the troubling issue of restoring the higher-level ground-air interface in the wake of the Army’s decision to eliminate the field army as an organizational echelon.

Strengthening the Partnership, 1980-1986

Between 80 and 86, the Army and AF institutionalized the partnership. It centered around the Army’s development and refinement of its AirLand Battle doctrine and series of J-manuals produced by the TAC/TRADOC relationship. AF developed a more coherent statement of its basic doctrine and demonstrated a preliminary vision for how air and ground forces might cooperate at the operational level of war. Divergencies remained about the air-ground interface, apparently resolved by the interdepartmental position paper on Offensive Air Support, but continued to boil beneath the surface.
Army-AF partnership continued to mature. The Army's development of a detailed doctrine for the corps' conduct of deep battle and the publication of a National Defense University thesis entitled The Air Campaign influenced the partnership.

The Air Campaign was an airpower manifesto with a theme of airpower dominance that ran through the book. In it, Warden suggested an airpower-centered approach to warfare.

Conclusions

There was a great deal about which the services agreed: The importance of CAS, that it was an AF mission, that there should be a dedicated CAS platform, and a dedicated group of pilots whose sole focus was to execute the CAS mission. They agreed on the importance of suppressing enemy air defenses, it was a shared responsibility, and the detailed procedures to carry it out. They agreed on the importance of attacking enemy second-echelon forces, that Army helicopters and AF platforms could work in close cooperation to do it, and the detailed tactical procedures required. They disagreed over two issues: the amount of influence that senior ground commanders should have over AF interdiction operations, and the mechanisms for coordinating the effects of fixed-wing air and extended-range Army systems.

From 1973 to 1990, the Army and AF formed a solid partnership centered around the Army's ability to execute its AirLand Battle doctrine with Air Force support. The strength of this partnership was evident in extensive biservice training, doctrinal publication, and programmatic cooperation. There was an underlying tension that can be primarily attributed to diverging perspectives about the modalities of air-ground cooperation at the operational level of war.

DLO #6. In light of the political requirement for MOOTW, analyze key recommendations to enhance Air Force contributions to peacekeeping operations.

The essence of military power is changing. Fiascoes such as the bombing of the Marine barracks in Lebanon—combined with ideological bias and incompetence in the UN—led us to conclude that peacekeeping operations brought risks and costs out of proportion to the political payoffs. Result: military doctrine talked of peacekeeping, but we did not take it seriously. Now, peacekeeping is a growth industry. UN has dispatched more forces since 1988 than it did in the previous 40 years combined. Hostility toward US involvement in third world conflicts has lessened. Many now recognize that the US has no imperial ambitions and that no peacekeeping operation can succeed without US backing.

Peacekeeping, Old and New

To craft effective procedures, plans, and doctrine for the use of US airpower in peacekeeping ops we must understand the nature and associated problems of these operations. The type of peacekeeping that is a recent phenomenon is the ongoing institutionalization of the process under the aegis of the UN as well as regional international organizations such as the Organization of African Unity and Organization of American States. UN charter framers did not foresee that ideological struggle (versus that among nations) and the often-violent process of decolonization would dominate the post WWII global security system. In essence, traditional peacekeeping was a form of military activity organized by the UN on an adhoc basis to act as an interposition force following a cease fire, but prior to any agreement resolving major issues in a dispute. Adaptations of the traditional model are being made on the fly as the UN responds to crises with intrusive, nontraditional activities, many of which involve US forces.

Examples: F-15s and F-16s enforcing the Bosnian no fly zone, and infantry from the Berlin Brigade part of a preemptive deployment to Macedonia.

Secretary-General Boutros-Ghali has called for a new category of UN forces to be called "peace enforcement units." They would be more heavily armed, available to the Security Council on a permanent basis by member states, could intervene without the consent of the local parities, and could abandon neutrality when one party clearly posed the major threat to peace. The author feels the UN's role in peacekeeping is changing in a way congruent with US national interests.
The US should focus on functions that other member states cannot provide. Aerospace power is the sort of task that the US can provide quicker, more effectively, or more efficiently than other nations. The speed, power, and flexibility of aerospace power can be decisive, both as deterrent and actual counter to aggression.

USAF can support UN operations in a number of areas:

- Provision of joint planners
- Training of multinational planning staffs
- Provision of strategic, operational and tactical mobility and resupply for deployed UN forces
- C4I, especially air traffic control
- Provision of basing and repair facilities
- Training of non-US air components
- Refueling of UN aircraft
- Search and rescue
- Medical evacuation
- Intel, recon, and surveillance support, especially from space platforms
- Weather
- Special Operations support
- Suppression of air activity or air exclusion zones
- Traditional air power in support of multinational enforcement actions

IMPLICATIONS

What would it take for USAF to provide more effective support for UN actions? It would NOT require radical force structure changes above those already planned. The crisis-response and contingency forces in the new national military strategy with the planning and intel resources of the unified commands would suffice. Air force should advocate and pursue change in three key areas.

Attitudes

Valuing preservation of peace as much as victory in the traditional sense is key. Give resources of intellectual energy, talent, and training time to peacekeeping efforts. Approaching all conflict as war can be dangerously counterproductive. We must recognize the limitations of the war-fighter ethos lest we erode opportunities to forestall war. Peacekeeping requires a unique form of leadership. There is a point at which a war fighter’s attitude must dominate, even in peacekeeping. Cultivation of leaders must understand this fragile and rapidly changing relationship.

Training and Education

PME should include the fundamentals of peacekeeping. PME should seek instructors from nations with extensive peacekeeping operations...Canada for example, and Americans must recognize that they are the students. Planners and commanders need extensive cultural and political sensitivity and courses in these areas. PME can provide courses in ethnicity, history, and cultural factors, augmented by exercises involving joint, interagency, and combined operations. AF should consider establishment of a formal peacekeeping institute (like that at Army War College).

Doctrine and Planning Procedures

Joint doctrine focuses on traditional peacekeeping operations conducted with the consent of the belligerents. US doctrine has not captured the sense of radical change in the notion of peacekeeping and needs
relevance in the world of more aggressive and intrusive UN actions. Particularly doctrine of the air component. US should assist in the development of UN doctrine, staff, and planning procedures for multinational peacekeeping operations. A systematic plan calls for: 1) a US-sponsored multinational UN military school to train planners, 2) the formation of a strategic plans and policy cell at UN HQ, 3) a high tech UN communications unit

American doctrine and planning procedures for counterinsurgency could be adapted to peacekeeping. US needs better methods for establishing air exclusion zones or air quarantines including nondestructive methods for suppressing hostile air movement, SEAD, IFF and identification of military and nonmilitary air traffic. US planners must consider their impact on budget and on personnel rotation. Peacekeeping operations usually require a small force but protracted presence. Intel agencies must develop guidelines for intelligence sanitation and dissemination.

OBSTACLES TO SUCCESS

It is impossible to tell how serious we are about peacekeeping. Bush and Clinton expressed support for a strengthened UN, Clinton even of creating a UN rapid deployment force. However, actual policy indicates obstacles may still outweigh imperatives. US remains deeply suspicious of the UN's amateurism in peacekeeping operation. During discussions of expanded peacekeeping presence in Bosnia, Clinton administration insisted on NATO control then turned toward unilateralism. Only after extensive debate did US military leaders drop their traditional insistence that US forces always be kept under US command. Enthusiasm for expanded UN peacekeeping follows the traditional liberal/conservative split.

Because of these mixed signals DOD refining of strategy, doctrine, training, education, or force structure have been slow in coming. During downsizing the military has been extremely cautious in assuming new tasks that demand personnel, money, and time. If leaders do decide more effective US support for UN peacekeeping is our strategy, aerospace power will be a vital component of our contribution. No other nation can match our speed and efficiency of that power. The AF should at least begin preparing for the changes in attitude, doctrine, organization and training that such a contribution would require.
Desired Learning Outcomes:

**DLO 1:** Differentiate the American strategy in Vietnam before and after Tet 1968 using the Principles of War

**Objective Before Tet:** "Defeat the enemy rather than to prevent South Vietnamese defeat" (75) Increase offensive operations against the enemy (including increasing destruction of enemy base areas from 10 to 40-50 percent) and defend all military bases and population centers. "Fuzzy" (76) According to the author, "there was a definite lack of clarity concerning our objectives; severely crippling the strategy involving military operations." (79)

**Objective After Tet:** "Vietnamization" became the political strategy pursued (88) which clearly was to hand over the responsibility of the defense of South Vietnam to Saigon.

**Offensive Before Tet:** "Because of the territorial constraints, the enemy retained the precious initiative in the broadest sense - they were free to retreat across the border at any time." (76)

**Offensive After Tet:** "After American ground forces dwindled and national policy dictated "Vietnamisation," seizing, retaining, and exploiting the initiative was left to the air force (88-89)

**Mass Before Tet:** Increased available combat forces from 35 to 79 battalions (75-76), however of the 124,500 B-52 sorties, only 6 percent of the bombs dropped were in North Vietnam, and the vast majority of that 6 percent was on targets far south of the heart of the country, Hanoi-Haiphong (93).

**Mass After Tet:** At the end of Nixon's first year in office, 69,000 American troops had been removed from Vietnam and in 1970 the first U.S. Air Force elements began to leave (88-89)

**Economy of Force Before Tet:** Concentration on "search and destroy" missions and many "approved" targets were secondary and tertiary targets.

**Economy of Force After Tet:** As the policy of Vietnamization resulted in decreased U.S. ground forces, Military Air Power was used to conduct interdiction missions with less constraints in an attempt to drive the North to the bargaining table and defend the sovereignty of the South. (89)

**Maneuver Before Tet:** "There were many constraints in Vietnam-for example places where firepower could not be employed without clearances...the most important check in strategy was the territorial constraint." (76)

**Maneuver After Tet:** No mention of the impact to dwindling U.S. ground troops except in mostly defensive engagements with incursions from the North. However as the North became less serious in its willingness to conduct peace negotiations, "President Nixon sharply contracted the no-bomb zones around Hanoi and Haiphong that had been established during the Johnson
administration” placing the enemy in a position of disadvantage through the flexible application of combat power. (93)

**Unity of Command Before Tet:** Objectives were “Fuzzy” and “almost 70 percent of generals said they were unsure of the war’s objectives” (76)

**Unity of Command After Tet:** All efforts focused on Vietnamization and preventing the North Vietnamese attempt to conquer South Vietnam in an open invasion. (89)

**Security Before Tet:** Westmorland’s strategy included “insuring the defense of all military bases and population centers then under government control.” (76)

**Security After Tet:** Efforts focused on “enemy concentrations, staging areas, and fortifications to prevent the enemy from massing while American forces withdrew and South Vietnamese forces expanded.” (89)

**Surprise Before Tet:** Territorial constraints limited chances at surprise

**Surprise After Tet:** Policy makers had shifted the war’s focus to an honorable withdrawal of U.S. forces and not much is said regarding America’s attempts at striking the enemy at a time or place and in a manner for which he is unprepared, except Linebacker and Linebacker II operations.

**Simplicity Before Tet:** Objectives and goals very unclear and a deep seated strategic failure was “the inability of policy makers to frame tangible, obtainable goals” (76)

**Simplicity After Tet:** It was clear that the strategy had changed to be honorable withdrawal of troops from South Vietnam and the policy of Vietnamization was understood.

**DLO 2: Summarize the North Vietnamese strategy in Vietnam using the Principles of War**

**Objective:** To conquer South Vietnam.

**Offensive:** On various occasions, with U.S. troops unable to chase raiding Northern troops across the border, the north was able to seize, retain and exploit the initiative. Demonstrated their willingness to take the offensive during the Tet Offensive and following America’s policy of instituting “Vietnamization” into the conflict with greater insurgencies. (76 and 88) Retained the initiative as to when and where he would fight (79)

**Mass:** The North used this principle effectively to mount its Tet Offensive. Although fleeting in most cases, the psychological effect of this operation was devastating to continued American support of the war. However the north didn’t use it very effectively in its siege to the Khe Sanh Marine fire base (88) It was unable to mount a successful operation in the Battle for AnLoc when it elected to make a mass attack that was thwarted by superior ground and air power (93, the author asserts that the North’s spring invasion was “utterly frustrated by air power”)
Economy of Force: Used very well in the early stages of the conflict, however as the conflict manured, the North was caught a number of times expending more than the minimum required to secondary efforts, example: the siege at Khe Sanh (87-88)

Maneuver: The North enjoyed freedom of maneuver and understood the advantage it had due to territorial constraints placed on U.S. combat forces. However the North didn’t have it all its way. During the Spring 1972 offensive, because General wanted a quick victory, he moved his forces in daylight. Long heavy tanks and artillery moved down the roads, totally exposing them to air attack by American air power which destroyed much of the exposed North’s assets (91)

Unity of Command: General Giap was the North’s center of gravity in ensuring all the North’s forces were engaged for the common goal and objective of conquering the South.

Security: Almost assured since constraints placed on U.S. troops from chasing the North across borders prevented any pursuit or real threat. Also, limits placed on bombing in and around Hanoi and Haiphong ensured the war effort could continue with relatively minimal interruption. Additionally, the North Vietnamese were masters at camouflage and finding gun emplacements was difficult (91)

Surprise: Used and exploited during every opportunity.

Simplicity: Most of the North’s activities up to the Tet Offensive and the Spring Invasion were very clear and uncomplicated plans. However when the North decided to prosecute largerscoped missions, they were in many cases technical failures (78) and the ability of the North to sustain these operations resulted in heavy losses (78, 88, 93)

DLO 3: Analyze the air strategy in Rolling Thunder using Crowl’s questions.
(Lesson 5, pgs 26-28)

Question 1: “What is it about?” What specific national interests and policy objectives are to be served by the proposed military action? How great is the value attached to those interests and objectives and what is their fair price?
“The stakes wagered in Vietnam, from the American point of view, included American credibility and reputation, the stability and strength of Western defense arrangements and alliances, and the deterrence of other aggressive Communist ventures.” (101)

Question 2: Is the national military strategy tailored to meet the national political objectives? (Is there a close correlation between the political ends of war and the military means employed to achieve those ends.)
No. The broad political objective was simple and clear cut: The independence of South Vietnam and its freedom from attack. However the American military objective did not contemplate winning in the sense that the U.S. and its Allies had won WW II. In essence the American military objective was not to defeat or destroy the enemy. Rather, the military objective was to persuade the enemy that he could not win - far different than defeating the enemy in any traditional sense. (101-102).
Question 3: What are the limits of military power?
Rolling Thunder failed to bring the North Vietnamese to the negotiating table. It failed to stop the flow of men and materiel to the south or even to reduce the flow to the degree that the impact was clearly felt in the south. The bombing had helped the morale of the South Vietnamese, but this success was purchased at a high price. (107)

Question 4: "What are the alternatives?" What are the alternatives to war? What are the alternative campaign strategies, especially if the preferred one fails? How is the war to be terminated gracefully if the odds against victory become too high?
For Rolling Thunder, there were no alternatives discussed in the paper in the context of Crowl's question. Failure was not considered an issue. The JCS did offer alternative strategies to the civilian leadership prior to the one selected by the administration: "A three-phased 11-week bombing plan that would, by the end of phase three, have destroyed the bulk of the targets on the 94 target list. General McConnell, CSAF, favored an even more intensive 28-day program to destroy the 94 targets quickly." (104)

Question 5: "How strong is the home front?" Does public opinion support the war and the military strategy employed to fight it?
Since the North Vietnamese did not waver in their ability or will to continue, "The cost to the United States mounted and the American will to continue began to crumble." (107)

Question 6: "Does today's strategy overlook points of difference and exaggerate points of likeness between past and present?" Has concern over past successes and failures developed into a neurotic fixation that blinds the strategist to changed circumstances requiring new and different responses?
Prior to Vietnam, "American air power doctrine was based on the concept of strategic bombardment. The first assumption was that any American war would be waged to destroy the enemy's ability to wage modern warfare. The second assumed that the enemy the U.S. might engage would be a modern industrialized state. In Vietnam, neither assumption held true." (98)

DLO 4: Categorize the specific criticisms aimed at Rolling Thunder by Drew.

Narrow Air Power Doctrine: Up until the Vietnam War, air power doctrine concentrated on strategic bombing and was very narrow and incompatible with the challenge presented by the North and could not conform to civilian leadership objectives. (98)
"Air power was unwillingly tasked to perform a mission for which it was ill-equipped and doctrinally unprepared." (99)
"The war in Vietnam was not the kind of war the military expected" (109)

Perceptions: The American perception placed the Vietnam War in the context of a worldwide struggle with communism, not just a civil war. (100)
The perception that China might enter the war if the U.S. began intense military operations in Vietnam (101 and 108).
The perception that, in Vietnam, American credibility and reputation, the stability and strength of Western defense arrangements and alliances, and the deterrence of other aggressive Communist ventures was at stake.

The perceived need to concentrate on enemy main-force units in South Vietnam would affect the conduct of the Rolling Thunder campaign in North Vietnam.

**Aircrew Training**: Fighter-bomb crews were very proficient in the techniques required for the delivery of nuclear weapons, but far less practiced and proficient in the delivery of conventional munitions.

**Lack of Trust between the Commander in Chief and his military advisors**: The President was determined to retain tight personal control of the action. He simply did not trust his military advisors who, it seemed to him, saw the war only as a military problem.

**DLO 5**: Break down the air strategy in the Linebacker operations

**Linebacker**: (Pg 93)
- **Political Strategy**: Begin a comprehensive campaign against North Vietnam
- **Objective**: Stem the flow of supplies into North Vietnam from its communist allies, destroy existing stockpiles in North Vietnam, and reduce markedly the flow of materials from Hanoi South.
- **Military Strategy**: Mine Haiphong Harbor and other major coastal points
  - Attack almost all of the original 94 targets in North Vietnam
  - Sharply reduce the no-bomb zones around Hanoi and Haiphong that had been established during the Johnson administration.
- **Operation duration**: May - October 1972
- **Result**: Hanoi indicated that it was interested in serious peace negotiations

**Linebacker II**: (93) Started when Hanoi rapidly began moving supplies south and began stalling at the Paris Peace negotiations
- **Political Strategy**: An all-out campaign against North Vietnam’s heartland
- **Objective**: To force a settlement that would permit America to withdraw honorably
- **Military Strategy**: Initiate missions over North Vietnam attacking strategic targets that would disrupt the economic, military, and political life of North Vietnam so severely that the enemy would have to come to terms.
- **Operation Duration**: 11 Days and over 700 B-52 sorties
- **Result**: Motivated the North Vietnamese to conclude a settlement.

**DLO 6**: Criticize the validity of the criticisms leveled at the Air Force by Tilford.

Tilford’s criticism that, “American generals were unable to devise a plan applicable to the war at hand, forcing presidents JFK and Johnson to turn to their civilian advisers for military strategy,” (153) is difficult to accept as it was the 94 targets originally identified, and endorsed by the JCS, is what brought the North Koreans to the bargaining table in the first place. This is endorsed by
Kissinger in his book *Diplomacy*, that “Without challenging the North Vietnamese logistics bases, no conceivable American withdrawal strategy could have worked.” (693)

“For the Air Force, the Vietnam War came to resemble production-line warfare, in which success was assessed through statistical compilations that became and end unto themselves.” (154) If criticism is to be directed for statistical measurements, it should be leveled at the civilian leadership of McNamara, SECDEF. In Tilford’s book, *Set Up*, he explains that “…the Air Force was responding to initiatives imposed by Secretary of Defense Robert S. McNamara’s quest to impose efficiency throughout the military establishment” (45).

“The most popular and most widely accepted Air Force Vietnam myth is that Linebacker II, the so-called Christmas Bombing, of December 1972, “won” the war.” (156) Tilford attributes more was done with Linebacker than Linebacker II in forcing the North to negotiate a settlement. However the Linebacker II operation was an unrelenting attack that would have lasted indefinitely if required as Tilford explains in his book *Set Up* (255). It just so happens that the North realized that this operation epitomized conventional air power used to stop a conventional invasion, and hit targets with nearly no constraints. Although the original Linebacker operation was indeed larger in scope, it was the nearly unconstrained Linebacker II operation that “made Hanoi blink, perhaps fearing that the war could be lost forever.” (Tilford, *Set Up*, 262)

“Wedded to strategic bombing, the Air Force neglected other missions, particularly close air support, which tended to tie air assets to the needs of ground commanders” (153). The Linebacker operations proved when air assets, be they Navy, Marine, or Air Force, are used in an unconstrained manner to attack the enemy’s strategic centers of gravity and critical nodes, the will of the enemy to continue the conflict is significantly reduced. As early as 1965, CINCPAC and the Joint Chiefs continued a campaign to expand the strategic bombing in North Vietnam. However, General Westmorland insisted that close air support was a priority mission. Admiral Sharp (CINCPAC) “was peeved with McNamara and the administration because they supported Westmorland’s system of placing priority on assigning air power to South Vietnam and Laos with North Vietnam a very poor third.” (Tilford, *Set Up*, 116)

“In Vietnam, the Air Force along with other services was rarely outfought, but like the other services, it was often outthought.” Very interesting condemnation considering the Air Force, like the other services, were fighting a limited war, that had very poor objective definition and often sound military principles were overruled by naïve, untrusting civilian leadership. Tilford points out in his book *Set Up*, a particularly sobering account early on in 1965 when the “Joint Chiefs repeatedly asked for permission to home the (SAM) sites before they became operational, the Secretary of Defense (McNamara) demurred…About a month later, on 24 July, a SAM blew an F-4C out of the air…In 1965 SAMs accounted for about 25 of the 171 aircraft brought down over North Vietnam, scoring a hit for every 13 missiles fired.” (Tilford, 124).
FORMULATING STRATEGY FOR THE U.S.

IN THE 21st CENTURY

LESSON 4

Desired Learning Objectives
1. Describe the American dilemma as posed by Kennedy, the terms he used to characterize the American culture and the significance of the relative decline in the U.S. economy.

- A prolonged period of slow growth makes it unlikely the U.S can continue to fund the same level of military security and attend to its social needs and repay its debits.
- Cost of maintaining a global position during the Cold War approx. $300 Billion/year
- Diverted resources (capital, personnel, materials, skilled labor, engineers, scientists) from non-military production

American Culture
- Worlds foremost military power
- Considerable wealth
- Unevenly distributed resulting in immense social problems at home
- Economy increasingly dependant on service industry vice manufacturing
- Growing indebtedness
- Frail financial system
- Persistent deficits in trade and currency accounts
- Failure in
  - Education system
  - Social fabric
  - People’s well being
  - Political Culture

Significance of Relative Decline in U.S Economy
- The leading Great Power simply cannot maintain its status indefinitely if its economy is in relative decline

2. Describe the major considerations which Jablonsky says shape the process of developing the U.S. National Military Strategy
- The Core national interests of security, economic prosperity, and promotion of values
- The three degrees of intensity - vital, important and humanitarian
- The National Security Strategy of Engagement and Enlargement - calls for America to be engaged around the world with the objective of enlarging the family of democratic nations
- Controlled reductions and reshaping of the military force in accordance with the Bottom-up Review (BUR)
- Rapid conflict termination
- US forces must be able to deter and prevent the effective use of weapons of mass destruction (WMD) against US territory, troops and allies
- Must also maintain a strong peacetime overseas presence
- US forces be able, with regional allies, to fight and win two nearly simultaneous MRCs
- Maintaining the capability of conducting a variety of operations short of MRC scale

KELjd161
3. Summarize the US Air Force Core Values and core Competencies.

- Core Values -- Integrity, service, and excellence. Three simple words that epitomize the core of the military profession: the bedrock of integrity, fortified by service to country, which, in turn, fuels the drive for excellence." Sheila E. Widnall, Secretary of the Air Force

"These ideals are of the heart and soul of our military profession: Integrity first, service before self, and excellence in all we do." General Ronald R. Fogleman, Chief of Staff, United States Air Force

- Core Competencies - Air and Space Superiority, Global Attack, Rapid Global Mobility, Precision Engagement, Information Superiority, Agile Combat Support

In keeping with our nature and focus as a global force capable of employment at the strategic, operational, and tactical levels of war -- and in view of the continued integration of capabilities in space -- we've combined air and space superiority into one core competency. This change reflects the transition to an air and space force and the need to control the entire vertical dimension -- the domain of air and space power.

Control over the air and space environment assures a fundamental benefit to American forces -- preventing adversaries from interfering with our operations and allowing our forces freedom of action. In short, air and space superiority provide freedom from attack, and freedom to attack.

Gaining control of the air -- over both friendly and enemy territory -- has been one of the constants of warfare in the last half of the 20th century and will continue to be so in the future. Simply put, air and space superiority is the key to winning wars with the fewest losses.

Accomplishing these tasks quickly and efficiently will allow us to gain air dominance -- the ability to completely dominate an adversary's airspace. Air dominance allows friendly forces to take away the enemy's sanctuaries and strike his forces wherever they may be . . . the ultimate in superiority.

A core competency we've added is one we elected to call Global Attack. There are two aspects to this core competency. The primary aspect of Global Attack is the ability of the Air Force to find and attack targets anywhere on the globe using the synergy generated by air and space assets to operate at the strategic level of war.

The other aspect of Global Attack is the expeditionary nature of our force. We have demonstrated this capability through a CONUS-based Air Expeditionary Force (AEF). As the United States continues to reduce fixed, overseas bases, the Air Force will use expeditionary forces to support the nation's priorities. These will consist of a rapidly deployable force tailored to the needs of the theater commander. Depending on the situation, that force can include both lethal and non-lethal elements. This expeditionary capability will be key to rapidly providing tailored air and space capabilities to the regional CINCs in the future.

Because our forces will need to move quickly and lightly, we reaffirmed Rapid Global Mobility as a core competency that will remain critical into the first quarter of the 21st century.

Rapid Global Mobility provides the ability to bring forces forward for combat operations, peacekeeping, or humanitarian efforts. As we have seen since the end of the Cold War, we can expect our mobility forces to be on call and in use every day . . . as far into the future as we can imagine.

We call the ability to apply selective force against specific targets to achieve decisive effects Precision Engagement. This Air Force capability is at the heart of the operational concept of Precision Engagement spelled out in Joint Vision 2010 and has a long legacy for airmen. Its origins date back to the 1930s at the Air Corps Tactical School, and it's a capability that has grown in reality from then until the present.

KELjd162
For many years our vision of what precision employment could accomplish outpaced our technological capabilities, but we have made great strides in this area. Today, and in the future, our forces will be more precise and more effective, at day or night, in good weather or bad, whether delivering food or lethal ordnance.

This ability will allow airpower, with its strategic perspective and ability to attack the enemy with precision, to sharpen the usually blunt instrument of military force for national leaders. In the 21st century, **Precision Engagement** will bring together the global awareness of objectives and priorities with the ability of air and space forces to apply overwhelming power.

To achieve success in the 21st century, we will rely more and more on our ability to use and protect our information technology. The core competency of **Information Superiority** is not the sole domain of the Air Force. Indeed, all of the services must develop their own capabilities in this area. But as a service, we have moved out to build impressive offensive and defensive information capabilities.

As the executive agent for Battle Management/Command and Control, the Air Force has the charter to be the integrators for the joint force. This ranges from providing the joint force commander of the 21st century with a picture of the entire battlespace — that includes air, space, and surface forces — to facilitating real-time control and execution of air and space missions.

Among the tools we will exploit are **Unmanned Aerial Vehicles (UAVs)** for surveillance and communications missions. In the future, we'll employ them for the suppression of enemy air defenses and see them evolve into attack vehicles.

Additionally, **Information Superiority** must include aggressive efforts at defending our increasingly information intensive capabilities from enemy attack.

Air and space power also rely on a myriad of combat support activities that occur on the ground. This vital part of what the Air Force provides the nation is highlighted by a core competency called **Agile Combat Support**. The concept of Focused Logistics in Joint Vision 2010 was derived from the pioneering work done in the Air Force with "Lean Logistics." Agile Combat Support reaches outside of pure logistics to include functions like security police, engineering, and other combat support functions.

We adopted this core competency at Corona with the view of making our forces more expeditionary in nature, so that we will continue to be the instrument of choice when the national leaders want to engage quickly and decisively, anywhere on the globe. We must never allow ourselves to get in the embarrassing position of having to rely on a contractor (or other less agile forces) to put combat forces in the field. Our force balance and force mix will be important.

These core competencies — Air and Space Superiority, Global Attack, Rapid Global Mobility, Precision Engagement, Information Superiority, and Agile Combat Support — provide one construct for thinking about air and space power. But they are not written in stone. They will change over time to reflect advances in technological capabilities, expertise, and varying political realities.

4. Explain the concepts of netwar and cyberwar and why the U.S. may or may not be able to conduct an information war.
   - Netwar
     - A societal-level ideational conflict waged in part through internetted modes of communication
     - Most likely to be a nation-against-nation strategic level conflict
       - May also involve non-state political actors (Greenpeace, Amnesty International)
- About ideas and epistemology - what is known and how is it known
- Waged largely through a society's communications systems
- Target is the human mind

Cyberwar
- Occurs at the operational level
- Also known as command and control warfare
- Designed to decapitate the enemy's command structure from its body of troops
- Successful cyberwar amplifies the enemy's "fog and friction" of the real battle

Prof Stein feels there are serious reasons to doubt the US' ability to prosecute information war successfully
- First Reason - US, as an open society, may be too vulnerable to engage in netwar with an adversary prepared to fight back
- Second reason - The political and legal issues surrounding infowar are murky
  - Questions on Congressional oversight, what criteria we would use to declare an information war, how would we prepare and implement a national strategy?
- Third Reason - prosecuting an effective information war may simply be beyond the competence of the executive agencies that would have to determine the substantive content to be communicated
- Final reason - the USA gov't may not have anyone with the philosophical sophistication to project an alternative discourse to replace the emotions, motives, reasoning and behavior grounded in the reality we hope to influence
7. How do the assumptions in the US Military Strategy fit with Kennedy’s views of the future in the “American Dilemma”?
   - Assumption is the US will continue a controlled draw-down of US military forces
   - Ties in with Kennedy’s views in that the US understands it can’t maintain the “Cold War” rate of spending on the military, in light of the present threats
8. Are there reasons to believe that the US should not assume the worldwide obligation called for in the U.S. Military Strategy?
   - As the resources of the US are limited, and will be come more-so under the controlled military draw down
     - As a result the US needs to prioritize its involvement’s based on the core national interests of physical security, economic prosperity, and value projection and using the three degrees of intensity - vital, important and humanitarian
     - Prioritization is especially necessary for the missions on the “periphery” in keeping with the realization that unrestricted humanitarian operations is not only counterproductive in terms of public support, but also “induces an insidious kind of muscle fatigue, consuming sinew in what appears to be a beneficial exercise”.
9. How is the Air Force structured to support the U.S. Military Strategy?
   - Global Reach - Long range bombers, land based ballistic missiles
   - Flexible - AEFs AF developed and demonstrated this rapidly deployable force tailored to meet the needs of the Joint Force Commander, both for lethal and non-lethal applications, and can launch and be ready to fight in less than three days
10. What changes in the Air Force mission, strategy or doctrine are necessary to meet the requirements of the U.S. Military Strategy?
    - Original Air Force operators wore wings
      - Future operators will be any military or civilian who is experienced in the employment and doctrine of air and space power
    - Air Force committed to outsourcing and privatization many functions now performed internally
    - Force will be smaller
    - Non-operational support functions will increasingly be performed by AF civilians or contractors
    - Most uniformed personnel will be operators, and a greater percentage will be from the reserve component
    - AF has decided to create a new Air and Space Basic Course - focused on the history, doctrine, strategy and operational aspects of air and space power
    - AF increasingly CONUS based
11. What problems are faced in distinguishing between a “virtual” and a “real” war?
    - When new simulation technologies are employed, the technique of combining live actors with computer-generated video graphics can easily produce a virtual news conference, summit meeting, or perhaps even a battle which exists in effects though not in fact
    - There is a very real possibility of truth being replaced with virtual reality - information which produces effects independent of it’s physical reality
    - What is being attacked in a strategic level new war are not only the emotions, or motives, or beliefs of the target population, but the very power of objective reasoning

KELjd165
LESSON 4 - QUESTIONS

1. What does Kennedy suggest to solve the American dilemma? The fundamental strategic objective of the U.S as it moves towards the 21st century ought to be to increase its per capita productivity for the sake of the long-term growth.

2. When in your personal experience have you found Kennedy's definition of American culture valid, and when not?

3. What are some of the examples Kennedy uses to support this relative decline theory?
   - National indebtedness of approx $4 Trillion
   - Consumer debt is approaching $4 Trillion
   - Corporate debt - early 1990s, approx 90% of after-tax income went to pay interest on their debt
   - since 1971, first time U.S recorded a deficit in over a century, consistently bought more than it sold
   - Long term erosion of US relative manufacturing position - out of 8 key manufacturing sectors, only chemicals and commercial aircraft were producing an export surplus by the 1980s
   - Decline in health care for large sectors of the populace even though the health care industry doubled its number of employees in the 1980s
   - Science and Mathematics standardized test indicate US ranks near the bottom ranked against Japan, South Korea, and every Western European country
   - Disintegration of the family

4. What does Jablonsky mean by his fox and hedgehog analogy?
   - Illustrates how the US strategists must maintain the "hedgehog view" to focus on the "one big thing" (i.e. the response to the danger of unbalanced power as the central organizing structure in an anarchical, self-help, state centric world) vice the "fox view" of focusing on "many things" (i.e. Strategic fads and fashionable theories that tend to overwhelm the cumulative understanding of history)

5. What are the two key objectives of the National Military Strategy and how are they to be met.
   - First objective is to thwart aggression through credible deterrence and robust warfighting capabilities
     - The key to those capabilities is to have forces of sufficient size and capabilities, in concert with regional allies, to defeat potential enemies in major conflicts that may occur nearly simultaneously in two different regions
     - Equally important is to hedge against the unknown, to provide a hedge against the emergence of a hostile coalition or a more powerful of resurgent adversary.
   - The Second principle objective is to promote stability through regional cooperation and constructive interaction
     - The major component of stability promotion is something called peacetime engagement, "a broad range of non-combat activities undertaken by our Armed Forces" - Activities range from nation and security assistance to peacekeeping and humanitarian operations

6. Who are the principal A, B and C competitors with the U.S?
   - C Competitors - Militarily ineffectual nations with complex or complicated security problems: ethnic civil war (Yugoslavia), insurgency (Peru), terrorism (Egypt), civil disorder (Somalia), or infiltration (narcotic flows)
   - B Competitors - Mid-level developing states with modernized conventional forces (much like Iraq in 1990), with the possibility of Model T nuclear, chemical and biological (NBC) forces
   - A Competitors - Peer competitors, or major regional competitors with which the US may have to deal
     - Over time B competitors may graduate to the A level by a combination of training, doctrine, and the availability world-wide of advanced military technologies, to include weapons of mass destruction.
AIR WAR COLLEGE
Lesson 11

The Persian Gulf War and Air Power Strategy

1. Describe the Overall Strategy of the Iraqis in the Gulf War

Defensive Posture
- After invading Kuwait on August 2, 1990, Iraq's strategy was one of a defensive posture.
- Static defense: by hiding its tanks and artillery pieces in revetments completely camouflaged and facing south to defend against the coalition forces. It's tanks were spread out and dug in up to their turrets, sandbagged and surrounded by berms...thus trading mobility for a supposed survivability.(217)
- Iraq hoped to engage the coalition forces in a ground war, boggling them down in their killing fields...extensive land mines, barbed wire, trenches filled with burning oil and then subjecting them to withering fire from their superior artillery thus imposing overwhelming casualties on Allied ground forces.
- In addition Iraq had a highly sophisticated IADS of SAMs, AAA, radars, interceptor aircrafts and the C3 nodes connecting these in Baghdad(185) and the KTO(228).
- Also had Mig-29's and Mirage's in hardened shelters.
- Naval assets included Exocet and Silkworm anti-ship missiles and thousands of sea-based mines.
- Destroy Coherstiveness of the Coalition
- Scud attacks against Israel...to draw them into the war and cause the Arabs in the coalition not to fight.
- Threat of CW on coalition troops.
- Ballistic missile attacks on civilian centers.

Wait out Air Campaign
- Aircrafts were later dispersed at airfields in hardened shelters or placed on public roads, civilian neighborhoods, or near historical structures or sought sanctuary in neighboring Iran for a possible later counterattack.

Limited Offensive
- Iraq’s excruction into Ali-Kafji was an attempt to inflict heavy casualties on the coalition troops and to start the war on their terms but the utter defeat of Iraq’s III Corps only demonstrated their inability to execute a synchronized offense.
- The Scuds were inaccurate and were considered by the CINC more of a political threat than a military one.

Hold On To Kuwait
- Saddam Hussein's willingness to hold on to Kuwait at all costs and despite the untold suffering of his people indicated that surrender would be tantamount to military defeat...both equally humiliating.

2. Analyze the Allied Strategy in the Gulf War using Crowl's Questions.

What It's All About
- President Bush had 4 objectives
  1. Force unconditional Iraqi withdrawal from Kuwait.
  2. Reestablish the legitimate Kuwaiti government.
  3. Protect American lives.
  4. Ensure regional stability and security.(179)

By the above objectives the following national interests would be served
- Defy aggression
- Defend much of world's supply of oil
- Liberate Kuwait
- Strip Saddam Hussein of his offensive military capability
- Set back his determined pursuit of nuclear weapons
- Lay a foundation for peaceful progress in the region(164)

Is the national military strategy tailored to meet the national objectives?
- The 4-pronged military strategy of the Coalition was tailored to meet the stated objectives
  I Strategic Air Campaign
  II Suppression of enemy ground based air defenses in the KTO
  III Preparation of the battlefield
  IV Ground campaign to liberate Kuwait.

- The Coalition's strategy was to exploit Allied strength and take advantage of Iraqi weaknesses

Allied Strengths
- Well trained air crews
- Advanced technology...stealth...cruise missiles...PGM's...FLIR/LANTIRN(night vision)...GPS...Patriots
- Superior C2

Iraqi Weaknesses
- Rigid C2 network
- Static defensive orientation(179)
Military strategy was clearly subordinate to national objectives as demonstrated in the ending of the war where political considerations caused the CICS to call for an end to hostilities when those objectives were already met.

What are the limits of Military Power?

1. Air power alone could not have brought the war to a swift and decisive conclusion. A ground offensive would be needed to eject Iraq from Kuwait and to degrade much of its military asset.
2. PGM's and strategic bombing limited to military targets excluding civilian historical and religious sites. Also bombing in Kuwait had to be selective (amphibious assault, if that option would have been chosen, would have destroyed much of the coastline of Kuwait in pre-assault bombardment).
3. The cohesion of the coalition was fragile and could fail to provide strategic advantage in the war, high casualty rate, or inhuman acts on our part against enemy civilians.
4. Another practical limit was our inability to track and destroy mobile Saudi sites and hardened shelters.
5. Other limits were a finite number of limited assets, bases from which to operate, weather, religious observations such as Ramadan and the morale of our ground forces.

What are the Alternatives?

- Continued sanctions would have been untenable.
- A sustained air campaign would have caused the Iraqis to have dispersed, dug in more deeply, in civilian areas and adopt a strategy of outlasting the bombing from the air.(171)
- Amphibious assault up the Shat-al-Arab may have worked but would still have needed large support to surround the enemy.
- Going straight up the Wadi al-Batin would have given up the element of surprise, be without a surrounding force and caused a lot of Allied casualties.
- Amphibious assault along the Kuwaiti coastline would have caused a lot of casualties and would not have been a surprise.

The CINC did consider a measured retreat into Saudi Arabia and counter-attacking if early on the Iraqis had continued across the border into Saudi Arabia.

How strong is the Home Front?

- President Bush's leadership got the American people and Congress behind him by moralizing the war and, at the same time, demonizing Hussein and also by clearly setting forth US objectives. The use of overwhelming force and the rapid progression of the war also served to galvanize the home front. The opposition movement did not gain momentum because President Bush made clear how insufferable it would have been for 60-75 percent of the world's oil to be in the hands of a despot. This, along with his strong decisive action ensured that this "aggression would not stand."

Does today's strategy overlook points of difference and exaggerate points of likeness between past and present?

- It probably was no accident that the foremost military figures of the war the CICS and the CINC were junior officers during the Vietnam war. Much of the philosophy behind the use of overwhelming force was intended to exercise the poltergeist of the Vietnam war because even with our heavy "tall to tooth" ratio 600,000 troops were probably not needed to eject Iraq from Kuwait.
- Saddam's troops had no sanctuary other than the sands of the open desert and no "surrogate" propped up as was the case in Vietnam.
- The leadership in Washington was careful not to micro-manage the war but allowed flexibility in the field, yet recognized the need for the Air Staff in the Pentagon (Checkmate) to formulate Instant Thunder. Also Washington's call for the end of the war might not have sat well with military purists but was seen as the right course of action under the then present circumstances.
- The open desert was different from the jungles of the Vietnam war and really lent itself to bombardment from the air and to classic tank battles. The only time General Clay's tanks were successfully bombed from the air was when he decided to move during daylight, but with night vision capability Saddam's tanks could be bombed both day and night.

3. Explain the Most Significant Allied Strategy Componenta.

- Coalition strategy was employed to bring about the four objectives set forth by President Bush and to play to the strength of the Coalition and the weakness of Iraq, i.e., a well trained fighting force, superior command and control and superior technology as against a rigid Iraqi C2 which did not allow any independence of action in the field thus curtailing flexibility and poorly led troops in a static immobile defense which was no match for the fast moving offense brought to bear by M1A1 tanks.
- Iraq's identified centers of gravity were:
  (1) NCA
  (2) NBC capability
  (3) RGFC
- Overall Allied strategy was to gain air superiority over Iraq and bomb strategic targets then concentrate on air supremacy over the KTO employing air interdiction destroying supply lines and storage facilities thus cutting off the deployed enemy troops, following which intense preparations of the battlefield would ensue, sequenced by a ground campaign after a 50% attrition of the enemy was achieved. This was effected by 2 main parts—Desert Shield and Desert Storm.
- Desert Shield was essentially a protective umbrella over Saudi Arabia and the GCC states while the Coalition built up its forces. During this time Air Staff was tasked to develop an air campaign strategy under Colonel John Warden. It was code-named Instant Thunder and identified 12 target sets and had 64 targets which were later broadened to 600 specific 300 of which were adopted(183). In part 2 Instant Thunder became Desert Storm which had 4 phases.
  - Phase I... strategic air campaign over Iraq to achieve air superiority in which targets were...C3 centers...electrical grids...oil refineries...CW storage plants...weaponry storage...railroads and bridges and IADS.
  - Phase II...focused on suppressing Iraqi ground based air defenses in the KTO to achieve air supremacy.
-Phase III... emphasized direct air attacks on enemy ground forces in the KTO including the RGFC... battlefield preparation.
-Phase IV... the ground campaign... offensive action to eject Iraqi forces from Kuwait... used deception cells and an amphibious feint to surprise the Iraqis with a "left hook" from the west with devastating ferocity to engage the RGFC, surround them and caused them to surrender.

4. Explain and Evaluate how closely Allied Air Operations Adhered to USAF basic Doctrine.

Military doctrine is what we believe to be the best way to conduct military affairs. Aerospace doctrine believes that both air and space should be exploited to gain access to the enemy anywhere on earth. Air doctrine further assumes that modern industrial societies were connected by a series of links... that these links could be clearly identified and attacked through their defense by a penetrating force, and that successful attack could bring about a collapse of the enemy's industrial effort and ultimately his will and capability to resist.(291) Air operations in the Gulf achieved

(1) Aerospace control
- air superiority
- air supremacy
- first use of space based assets
- GPS
- J-STARS(241)

(2) Application of Force
- rapid, not gradualistic
- resolute, best weapons for target regardless of service or nationality(189)
- independent strategic bombardment

(3) Support
- interdiction
- CAS
- breaching operations(223)

(4) Force multiplier(enhancement)
- GPS
- J-STARS
- FLIR/LANTIRN... SOF

In the Gulf we have seen air power orchestrated with maritime and land components to produce a tremendous synergistic effect which culminated in the defeat of Iraq and with a sole air commander in the JFACC demonstrated the essence of air doctrine... centralized planning but decentralized execution(232).

5. Summarize and Evaluate the Effectiveness of the Allied Strategy in the Gulf War using the Principles of War.

Objective
Clear objectives were set by the President see DLO #2

Offensive
The Coalition went on the offensive once the deadline for Iraqi withdrawal was passed and seized the initiative and with the aid of night vision equipped aircraft unleashed a relentless 24 hour around the clock barrage of strategic targets. They refused the temptation to begin the ground campaign prematurely(Khafji) but began at a time and place of their choosing(166).

Mass
The combined air, maritime and land forces were necessary to achieve the eviction of Iraq from Kuwait. The air campaign demonstrated the application of mass when many aircraft were made to attack a target in waves. The land forces exerted mass when VII Corps along with the flanking action of XVIII Corps to the left and II Marine division to the right aimed a full "first" in a brilliant "left hook" at the RGFC.

Maneuver
Again the amphibious feint and the deceptive left hook were examples of mobile maneuver which achieved devastating effect. The use of "tank plinking" and the theater developed ability to pierce hardened shelters were other examples of the maneuverability of Coalition aircrews when faced with difficult problems in theater.

Unity of Command
The Goldwater-Nichols Act strengthened the JCS and the one theater commander(CINC) along with the JFACC lending new meaning to Unity of Command. This enabled the forces to be more coordinated and synchronized and enhanced rather than diminished synergy.(173)

Economy of Force
The devastating effect of air power on enemy forces attriting the Regular forces by 50% and the RGFC by 25% enabled the Allied ground forces to expend less energy in destroying the remaining enemy forces. Also because of this there was less need for CAS in many of the battles in the ground war. One negative aspect of EoF was the disproportionate use of CAP's including B-52's in a largely inefficient mobile Scud hunt.

Security
At the outset the enemy's intelligence and surveillance were degraded by destruction of his C3 and SEAD. This enabled us to execute the left hook undetected, however the great mobility of the Scuds and the Iraqi ability to camouflage kept us from being successful in the Scud hunt.

Surprise
Deception on the part of the Coalition lent the element of surprise to the Allied offensive. By making the Iraqis accustomed to a flurry of activity at our airbases the increased activity at the start of the air campaign went undetected. Threat of an amphibious landing off the Kuwaiti coast and the feint towards the off-shore islands caused the enemy to be looking the wrong way at the start of the land war. Deception cells coincide with radio messages were left in northern Saudi Arabia as the VII Corps and the XVIII Airborne went hundreds of miles to the west for the famous left hook.

**Simplicity**

ATO's developed from an MAP were sent daily via CAMFS secured lines which gave instructions as to sorties, air lanes used and which killing boxes were involved. These orders were made simple because of detailed planning which helped to prevent air to air fratricide. One breakdown of this electronic-computerized system was in delivering the ATO's to carriers and some B-52 bases whose computers were not compatible with those in the Black Hole. They were carried by courier planes instead. This resulted in some aircraft aboard carriers not to be able to take part in CAP's in northern Iraq which would have freed up air force planes for other duty.

6. **Identify the Elements in the Iraqi Strategy which rendered it ineffective.**

1. Rigid Command and Control
2. Static defensive orientation
3. Lack of intelligence (HUMINT)
4. Poorly trained and poorly led soldiers
5. Inaccurate ballistic missiles (Scuds)
6. Mining of sea lanes could have been better...use of Exocet and Silkworm missiles
7. Should have taken Saudi bases and ports early on
8. Should have attacked Coalition troop formation with Scuds
9. Should have placed RGFC among frontline troops
10. Could have used air force more efficiently to defend IADS.
11. Should have used threatened terrorist attacks against GCC States and Europe.
8. **Surprise.** *Strike the enemy at a time or place and in a manner for which is unprepared.*
   - B-52 strikes on staging areas FAC.

9. **Simplicity.** *Prepare clear, uncomplicated plans and clear concise orders to ensure thorough understanding.*
   - Interdiction/tactics development met the simplicity standards.

6. **By what means did we try to address the shortfalls and problems in the interdiction effort over Vietnam?**
   - *Interdiction* or attacks against the lines, means and sources of supply.

   **Tactical Improvements to support the interdiction effort:**
   a. Defoliation tactics were used to deny the enemy the protection of the jungle canopy.
   b. Forward air controllers
      - continuous surveillance and reconnaissance
      - directed/controlled air strikes
   c. B-52 - area bombing of widely deployed troops
   d. Helicopters - airborne delivery of men and equipment when and where need to thwart a guerrilla attack - also used for evacuation.
   e. Tactical air - rapid response for attack and maintenance of air superiority.
   f. Airlift - rapid resupply/airdrop.

7. **Why did the rolling thunder campaign fail to achieve any tangible results?**
   - *Analyze the effort with CrowlÔs questions.*

   **CrowlÔs Questions**

   **Q1. What is it about?** - The escalation of Vietnam conflict into North Vietnam.

   **Q2. Is the national military strategy tailored to meet the national political objectives?**
   - The political objective was to:
     2. Stop/reduce the flow of men and supplies to the south.
     3. Boost the morale of the South Vietnamese.

   - The proposed national military strategy was considered too aggressive by the politicians and was modified by the Johnson Administration. This gradual application of air power failed to change North VietnamÔs course of action, had limited impact on the supply movement south and was successful in raising the moral of South Vietnamese.  

   **Q3. What are the limits of military power?** - Air power was limited only in targets it was allowed to hit and where it was allowed to operate.

   **Q4. What are the alternatives?** - The military commitment to Vietnam had been made the addition of air power to strike the North Vietnam and support the army in the South only prevented potential defeat - a more aggressive application of air power is the only other choice to improve results.

   **Q5. How strong is the home front?** - The home front supported Rolling Thunder in the beginning but as it dragged on it became more unpopular.

   **Q6. Does todayÔs strategy overlook points of difference and exaggerate points of likeness between past and present?** - The massive bombing attacks on Korea lead to a truce. This was overlooked by President Johnson

8. **How would you evaluate the effectiveness of Linebacker operations in the termination of the war?**
   - Linebacker I significantly impacted North VietnamÔs ability to prosecute the war.
   - Linebacker II had even more restrictions removed and its goal was to strike at the Heart of North Vietnam and convince them a political settlement was the only way - that was the outcome - so it was successful.