

Patterns of Conflict

John R. Boyd

Edited by Chet Richards and Chuck Spinney

Produced and designed by Ginger Richards

For information on this edition, please
see the last page.

December 1986, as revised.
Latest edit: May 13, 2026

Outline

- Point of departure
- Historical snapshots
- Categories of conflict
- Synthesis
- Application
- Wrap-up
- Epilogue
- Sources

Focus and direction

Mission

- To make manifest the nature of **moral-mental-physical conflict**
- To discern a **pattern for successful operations**
- To help **generalize tactics and strategy**
- To find a basis for **grand strategy**

Intent

- To unveil the character of conflict, survival, and conquest

Point of departure

Air-to-air

Generalization

- Need fighter that can both lose energy and gain energy more quickly while out-turning an adversary.
- In other words, suggests a fighter that can pick and choose engagement opportunities—yet has **fast transient** (“buttonhook”) characteristics that can be used to either force an overshoot by an attacker or stay inside a hard turning defender.

Idea expansion

- Idea of fast transients suggests that, in order to win, we should operate at a **faster tempo or rhythm** than our adversaries—or, better yet, get inside adversary's **observation-orientation-decision-action time cycle or loop**.
- Why? Such activity will make us appear **ambiguous** (unpredictable) thereby generate **confusion** and **disorder** among our adversaries—since our adversaries will be **unable** to generate mental images or pictures that agree with the **menacing** as well as **faster** transient rhythm or patterns they are competing against.

Examples

- Blitzkrieg vs. Maginot Line mentality (1940)
- F-86 vs. MiG-15 (1951-53)
- Israeli raid (1976)

New conception

Action

- Exploit operations and weapons that:
 - Generate a rapidly changing environment (quick/clear observations, orientation and decisions; fast tempo; fast transient maneuvers; quick kill)
 - Inhibit an adversary's capacity to adapt to such an environment (cloud or distort his observations, orientation, and decisions and impede his actions)

Idea

- Simultaneously compress own time and stretch out adversary time to generate a **favorable mismatch in time/ability** to shape and adapt to change

Goal

Collapse adversary's system into **confusion** and **disorder** causing him to over- and under-react to activity that appears simultaneously **menacing** as well as **ambiguous, chaotic, or misleading**.

A-to-A and A-to-G

Recipe for generating confusion and disorder

Observations

- Quick/clear scanning sensors
- Suppressed/distorted signatures

Activity

- **Fire**
 - Quick shoot fire control systems and high speed weapons
- **Movement**
 - High speed (supercruise)
 - Rapid energy gain and rapid energy loss coupled with high turn rates and low turn radii
 - High pitch rates/high roll rates/high yaw rates coupled with ease of control

Historical snapshots

Human nature

Goal

- Survive, survive on own terms, or improve our capacity for independent action.

The competition for limited resources to satisfy these desires may force one to:

- Diminish adversary's capacity for independent action, or deny him the opportunity to survive on his own terms, or make it impossible for him to survive at all.

Implication

- Life is conflict, survival, and conquest.

Comment

In addressing any questions about conflict, survival, and conquest one is naturally led to the

Theory of evolution by natural selection
and
the conduct of war

since both treat conflict, survival, and conquest in a very fundamental way. In this regard, many sources (a few on natural selection and many on war) are reviewed; many points of view are exposed.

Impression

- In examining these many points of view, one is bombarded with the notion that:
 - It is advantageous to possess a **variety** of responses that can be applied **rapidly** to gain sustenance, avoid danger, and diminish adversary's capacity for independent action.
 - The simpler organisms—those that make-up man as well as man working with other men in a higher level context—must cooperate or, better yet, **harmonize** their activities in their endeavors to survive as an organic synthesis.
 - To shape and adapt to change, one cannot be passive; instead one must take the **initiative**.
- Put more simply and directly: The above comments leave one with the impression that **variety/rapidity/harmony/initiative** (and their interaction) seem to be key qualities that permit one to shape and adapt to an ever-changing environment.
- With this impression in mind, together with our notion of getting inside an adversary's O-O-D-A loop, we will proceed in our historical investigation.

Historical pattern

Sun Tzu, *The Art of War*, c. 400 B.C.

Theme

- Harmony and trust
- Justice and well being
- Inscrutability and enigma
- Deception and subversion
- Rapidity and fluidity
- Dispersion and concentration
- Surprise and shock

Desired outcome

- Subdue enemy without fighting
- Avoid protracted war

Strategy

- Probe enemy's organization and dispositions to unmask his strengths, weaknesses, patterns of movement and intentions.
- "Shape" enemy's perception of world to manipulate his plans and actions.
- Attack enemy's plans as best policy. Next best disrupt his alliances. Next best attack his army. Attack cities only when there is no alternative.
- Employ *cheng* and *ch'i* maneuvers to quickly and unexpectedly hurl strength against weaknesses.

Historical pattern

Early commanders

- Alexander
- Hannibal
- Belisarius
- Genghis Khan
- Tamerlane

Action

Cheng and *ch'i**

Impression

- Early commanders seem consistent with ideas of Sun Tzu
- Western commanders more directly concerned with winning the battle
- Eastern commanders closer to Sun Tzu in attempting to shatter adversary prior to battle

* *Cheng/ch'i* maneuver schemes were employed by early commanders to expose adversary vulnerabilities and weaknesses (a la *cheng*) for exploitation and decisive stroke (via *ch'i*).

Historical pattern

Keeping in mind the ideas of Sun Tzu and our comments about early commanders, let's take a look at an early tactical theme and some battle (grand tactical) situations to gain a feel for the different ways that the *cheng/ch'i* game has been (and can be) played.

Historical pattern

Tactical theme (from about 300 B.C. to 1400 A.D.)

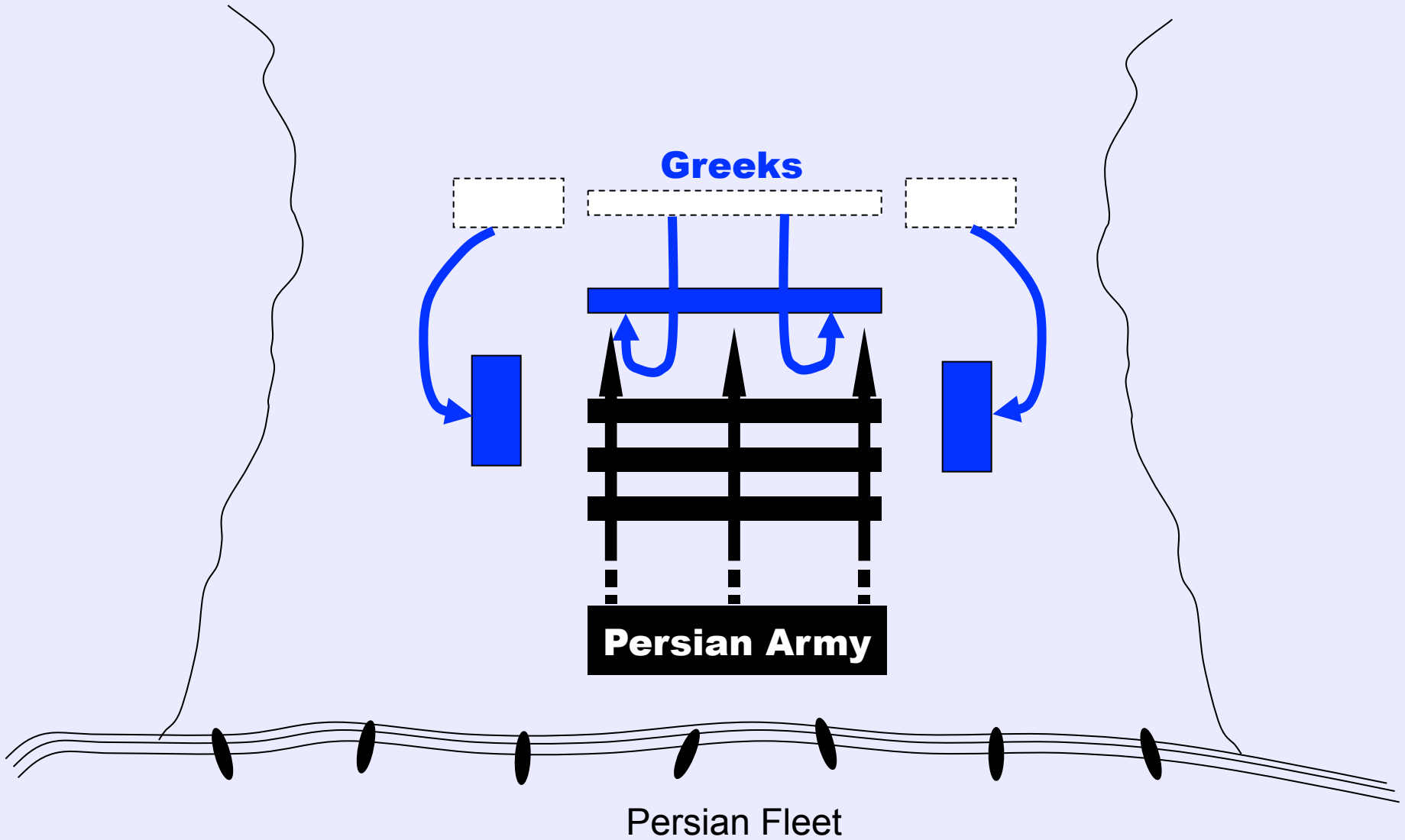
- Light troops (equipped with bows, javelins, light swords, etc.) perform reconnaissance, screening, and swirling hit-and-run actions to:
 - Unmask enemy dispositions and activities
 - Cloud/distort own dispositions and activities
 - Confuse, disorder enemy operations
- Heavy troops (equipped with lances, bows, swords, etc.) protected by armor and shields:
 - Charge and smash thinned-out/scattered or disordered/bunched-up enemy formations generated by interaction with light troops; or
 - Menace enemy formations to hold them in tight, or rigid, arrays thereby make them vulnerable to missiles of swirling light troops.
- Light and heavy troops in appropriate combination pursue, envelop, and mop up isolated remnants of enemy host.

Idea

- Employ **maneuver** action by light troops with **thrust** action of heavy troops to confuse, break up, and smash enemy formations.

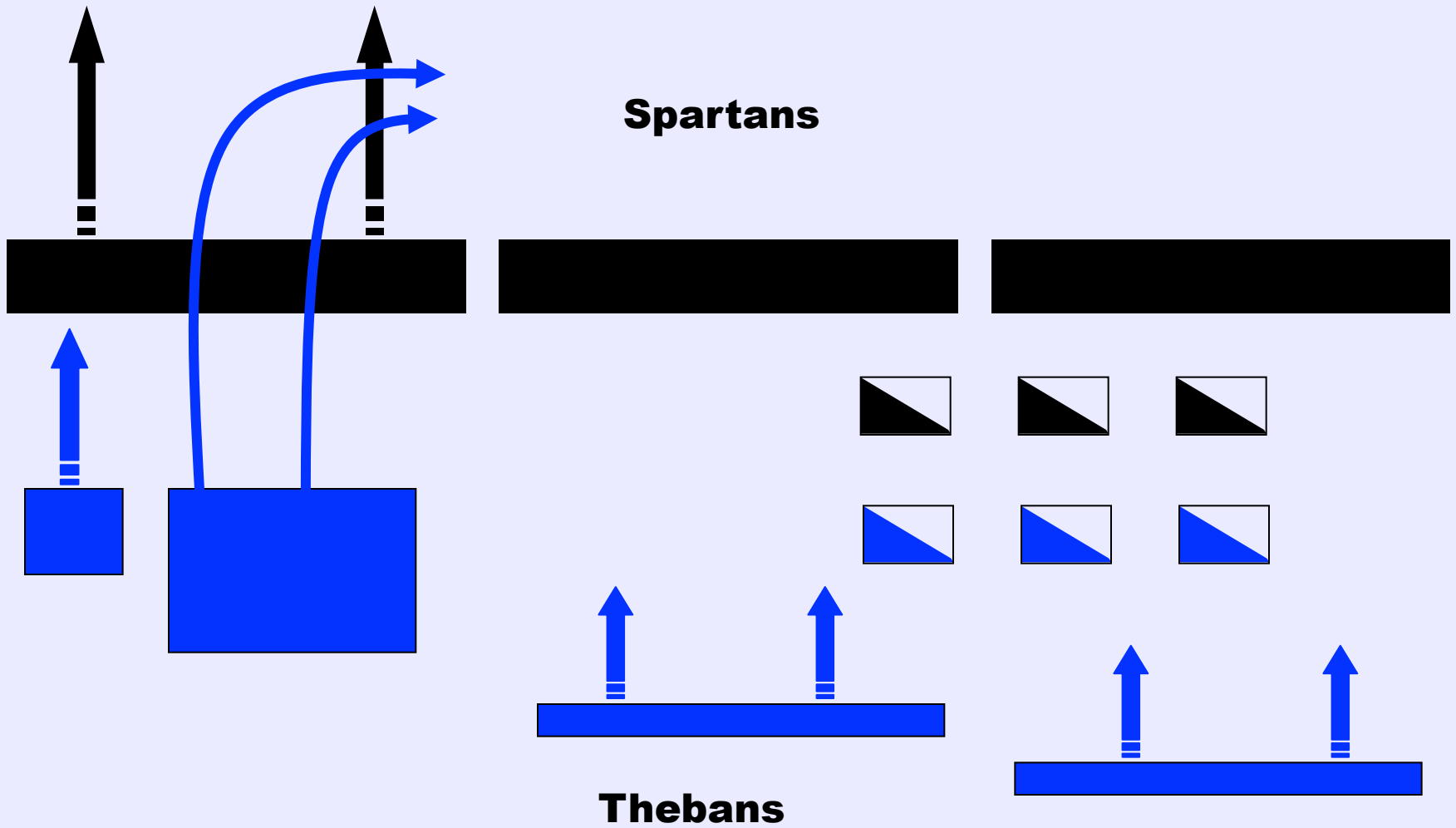
Battle of Marathon

September 12, 490 B.C.



Battle of Leuctra

~July 6, 371 B.C.

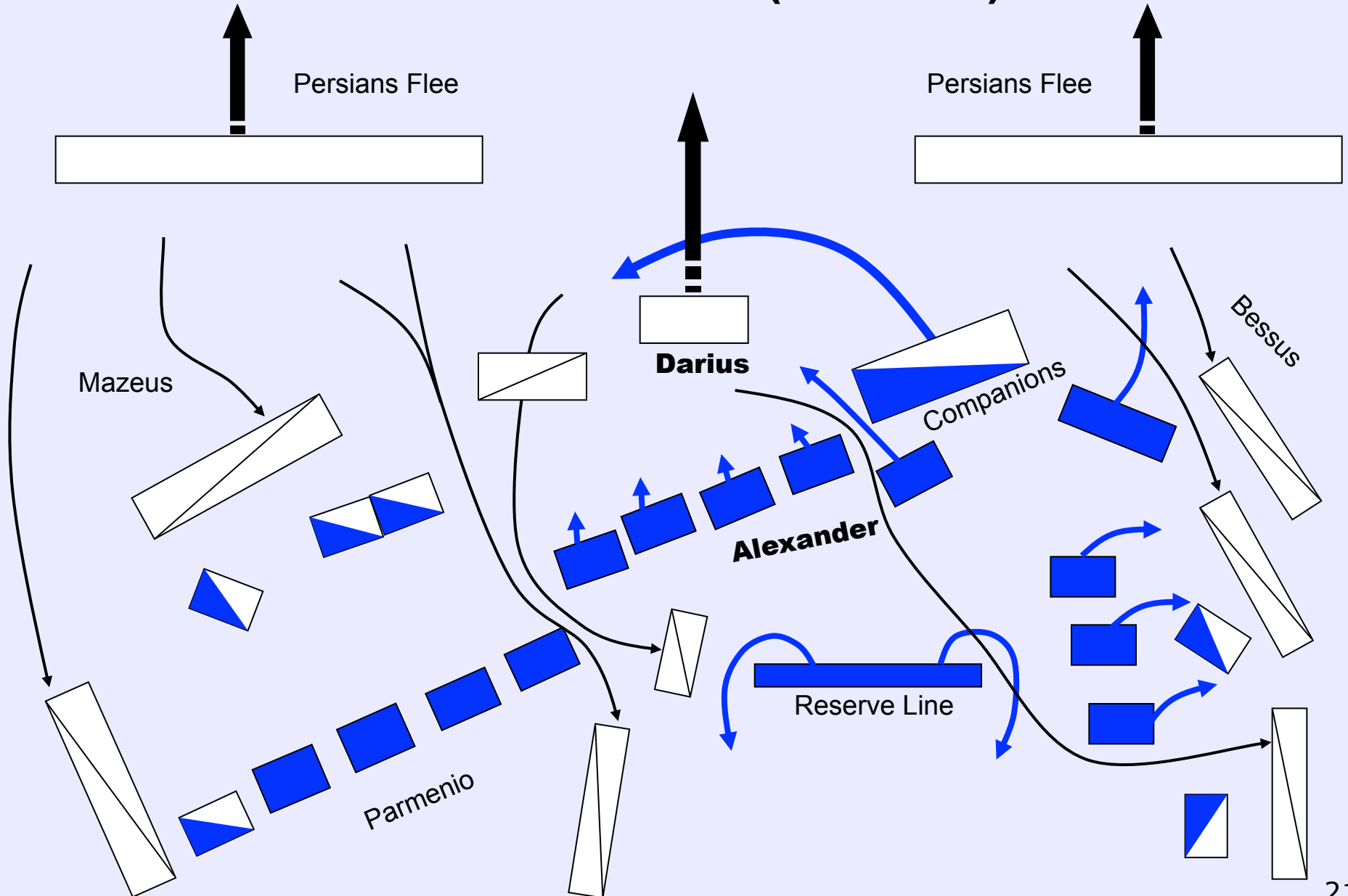


V. YE. Savkin –
The Basic Principles of Operational Art and Tactics –
(1972) pages 7 and 203

Battle of Leuctra (371 B.C.)

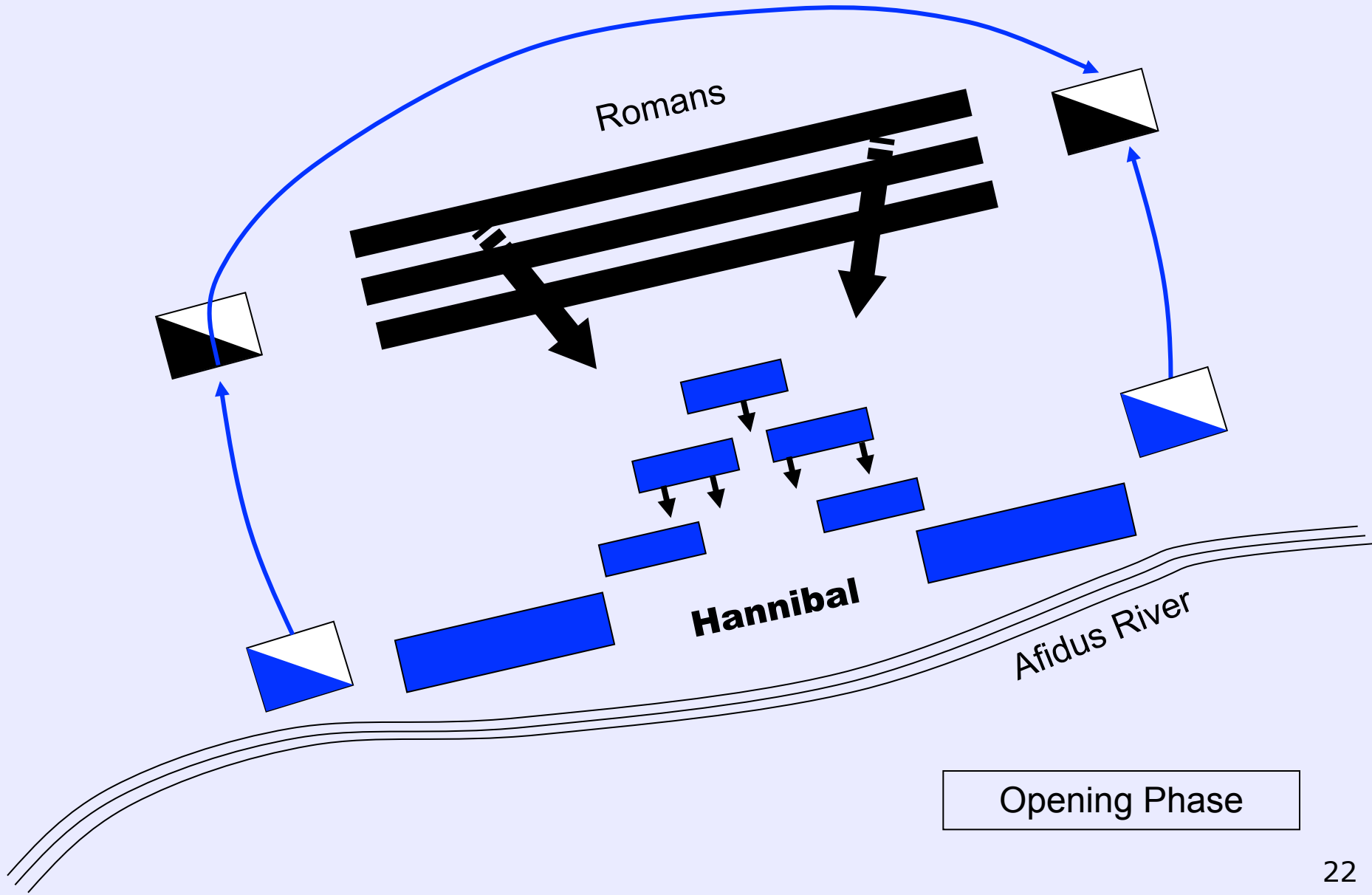
At this battle Frederick Engels (according to Savkin) credited Epaminondas for having first discovered and employed an **unequal or uneven distribution** of forces across a front as basis to concentrate forces for the main attack at the decisive point.

Battle of Arbela (Phase II)



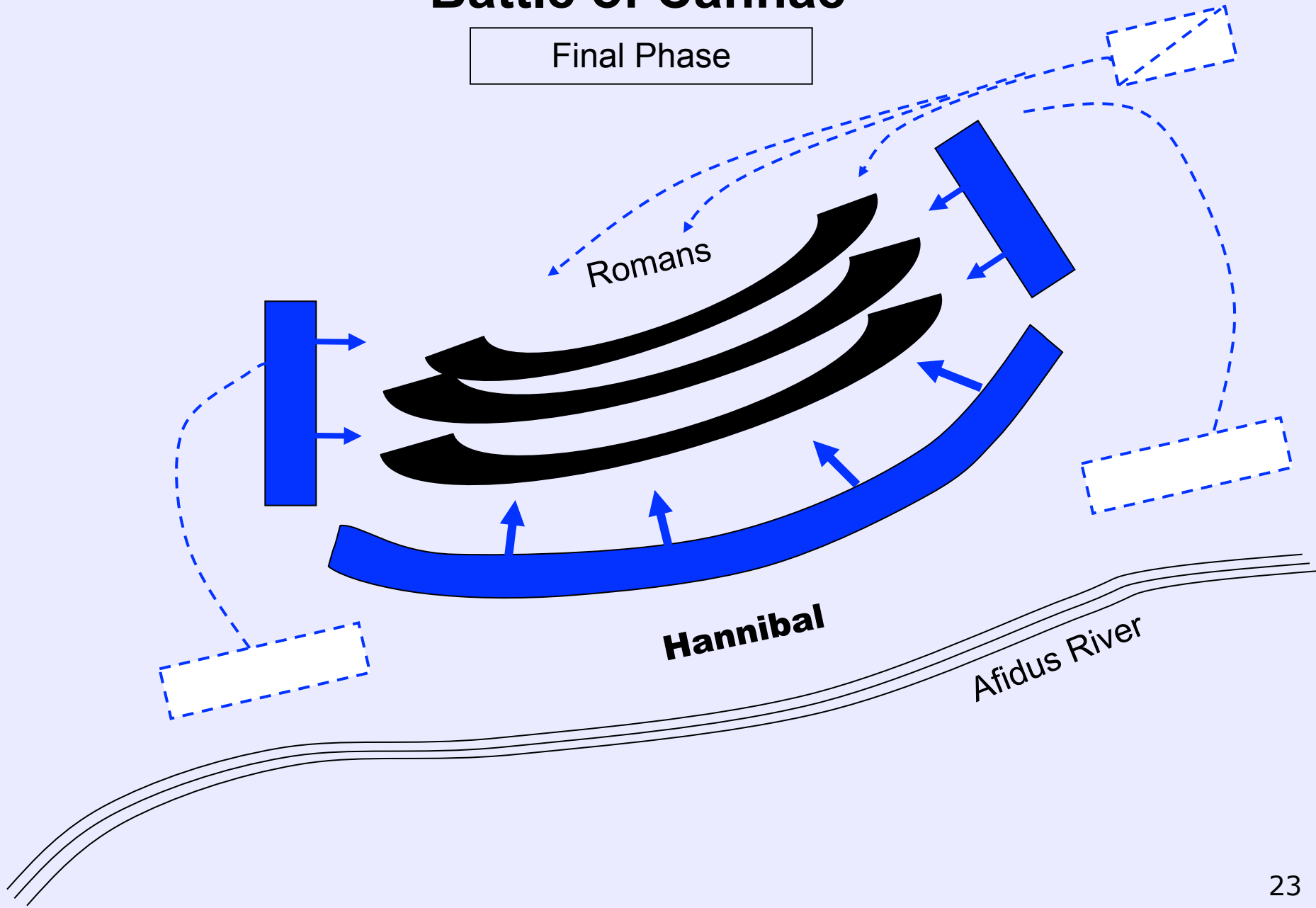
Battle of Cannae

August 3, 216 B.C.



Battle of Cannae

Final Phase



Impression

- Battles of Marathon, Leuctra, Arbela, and Cannae emphasize an unequal distribution as basis for local superiority and decisive leverage to collapse adversary resistance.

On the other hand,

- The discussion (so far) provides little insight on how these battle arrangements and follow-on maneuvers play upon moral factors such as doubt, fear, anxiety, etc.

Historical pattern

Genghis Khan and the Mongols

Key asymmetries

- Superior mobility
- Superior communications
- Superior intelligence
- Superior leadership

Aim

Conquest, as basis to create, preserve, and expand Mongol nation

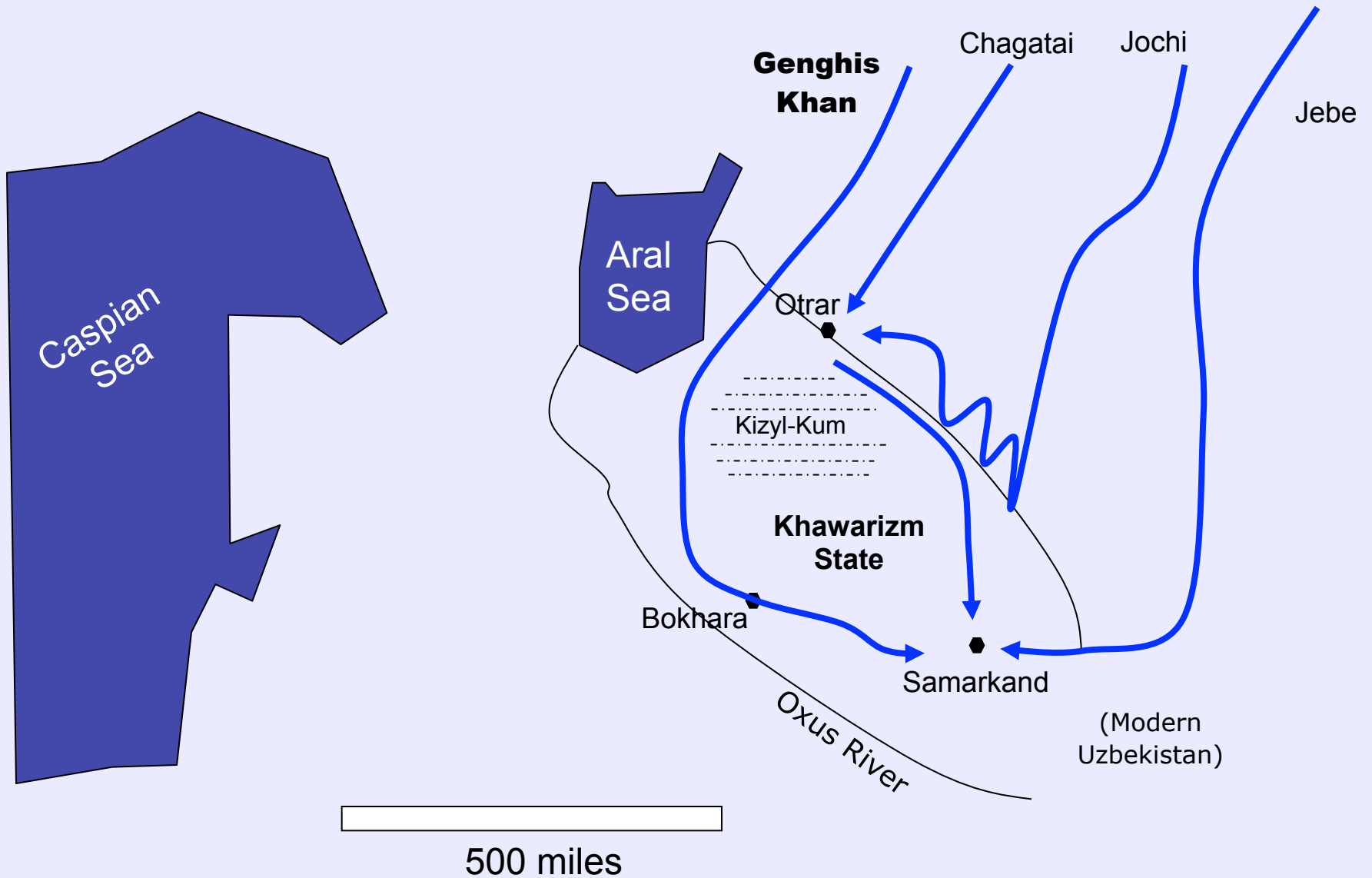
Theme

- Widely separated strategic maneuvers, with appropriate stratagems, baited retreats, hard-hitting tactical thrusts, and swirling envelopments to uncover and exploit adversary vulnerabilities and weaknesses

in conjunction with

- Clever and calculated use of propaganda and terror to play upon adversary's doubts, fears, and superstitions in order to undermine his resolve and destroy his will to resist.

Mongol strategic maneuver (1219-1220)



? Raises nagging question ?

Even though outnumbered, why were Mongols able to maneuver in widely scattered arrays without being defeated separately or in detail?

Historical pattern

Genghis Khan and the Mongols

Message

- By exploiting superior leadership, intelligence, communications, and mobility as well as by playing upon adversary's fears and doubts via propaganda and terror, Mongols operated inside adversary observation-orientation-decision-action loops.

Result

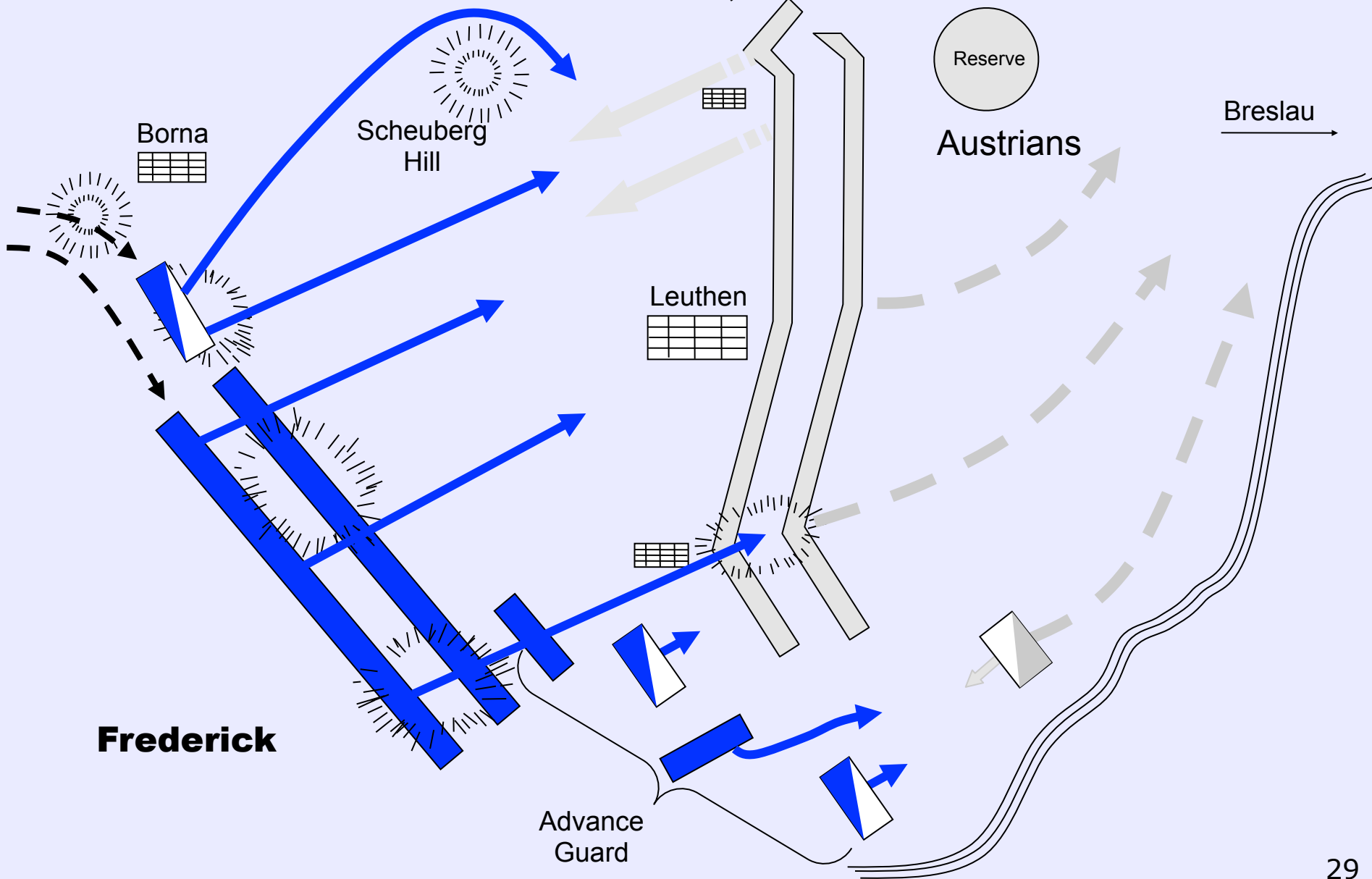
- Outnumbered Mongols created impressions of terrifying strength—by seeming to come out of nowhere yet be everywhere.

Hence,

- Subversive propaganda, clever stratagems, fast breaking maneuvers, and calculated terror not only created vulnerabilities and weaknesses but also played upon moral factors that drain away resolve, produce panic, and bring about collapse.

Battle of Leuthen

December 5, 1757



Historical pattern

18th century theoreticians

- Saxe
- Bourcet
- Guibert
- Du Teil

Theme

- Plan with several branches
- Mobility/fluidity of force
- Cohesion
- Dispersion and concentration
- Operate on a line to threaten alternative objectives
- Concentrate **direct** artillery fire on key points to be forced

Action

Napoleon was deeply influenced by the ideas of the above men. In early campaigns (as a general) he applied these ideas of **ambiguity**, **deception**, and **rapid/easy** movement to **surprise** and successively defeat fractions of superior forces. In later campaigns (as emperor) he relied increasingly on massed direct artillery fire, dense infantry columns, and heavy cavalry going against regions of strong resistance—at an eventually crippling cost in casualties.

American colonists and Spanish and Russian guerrillas, **in unexpected ways**, used **environmental background** (terrain, weather, darkness, etc.) and **mobility/fluidity** as basis for **dispersion** and **concentration** to harass, confuse, and contribute toward the defeat of the British and of the French under Napoleon.

Historical pattern

18th century theoreticians

- Saxe
- Bourcet
- Guibert
- Du Teil

Theme

- Plan with several branches
- Mobility/fluidity of force
- Cohesion
- Dispersion and concentration
- Operate on a line to threaten alternative objectives
- Concentrate **direct** artillery fire on key points to be forced

Action

Napoleon was deeply influenced by the ideas of the above men. In early campaigns (as a general) he exploited these ideas of **variety** and **rapidity** with **harmony** for ambiguity, deception, and rapid/easy movement in order to surprise and successively defeat fractions of superior forces. In later campaigns (as emperor) he exchanged **variety** and **harmony** for **rigid uniformity** via massed direct artillery fire, dense infantry columns, and heavy cavalry going against regions of strong resistance—that resulted in an ever higher and crippling cost in casualties.

American colonists and Spanish and Russian guerrillas exploited **variety** and **rapidity** associated with environmental background (terrain, weather, darkness, etc.) and mobility/fluidity of small bands with **harmony** of common cause against tyranny/injustice as basis to harass, confuse, and contribute toward the defeat of the British and of the French under Napoleon.

Impression

The ideas of Sun Tzu, Saxe, Bourcet, and Guibert seem to be at home with either

regular or **guerrilla** warfare.

Historical pattern

Napoleon's art of war

Revolutionary army gifts to Napoleon

- Moral and physical energy of citizen-soldiers and new leaders generated by the revolution and magnified by successes against invading allied armies
- Subdivision of army into smaller self-contained but mutually supporting units (divisions)
- Ability to travel light and live off countryside without extensive baggage, many supply wagons, and slow-moving resupply efforts
- Rapid march associated with 120 instead of the standard 70 steps per minute
- Discontinued adherence to 1791 Drill Regulations pertaining to the well regulated and stereotype use of column and line formations for movement and fighting

Beneficial asymmetry

- Mobility/fluidity of force dramatically better than that possessed by potential adversaries.

? Raises question ?

How did Napoleon exploit this superior mobility/fluidity of force?

Historical pattern

Napoleon's art of war

General features

- **Plan and resolution:**

Evolve plan with appropriate variations, each of which correspond to probable or possible actions. Employ intelligence/recce units (spies, agents, cavalry, etc.) in predetermined directions to eliminate or confirm hypotheses concerning enemy actions thereby **reduce uncertainty** and **simplify** own plans as well as uncover adversary plans and intentions.

- **Security:**

Generate misinformation, devise stratagems, and alter composition of major formations to **confuse** and **baffle** enemy agents, spies, etc. Employ screens of cavalry, infantry, or both and make use of natural features such as terrain, weather, and darkness to **mask** dispositions and **cloak** movements against enemy observation.

- **Strategic dispersion and tactical concentration:**

Expand then contract intervals between force components in an **irregular** and **rapid** fashion to cloud/distort strategic penetration maneuvers, yet **quickly** focus tactical effort for a convergent blow at the decisive point.

- **Vigorous offensive action:**

Seize initiative at the outset by attacking enemy with an **ever-shifting kaleidoscope** of (strategic) moves and diversions in order to upset his actions and unsettle his plans, thereby psychologically unbalance him and keep initiative throughout.

Strategic theme

- Use unified (or single) line of operations as basis for mutual support between separated adjacent and follow-on units.
- Menace (and try to seize) adversary communications to isolate his forces from outside support or reinforcement and force him to fight under unfavorable circumstances by the following actions:
 - Employ fraction of force to hold or divert adversary attention—by feints, demonstrations, pinning maneuvers, etc.
 - Exploit “exterior maneuvers” against exposed flanks or “interior maneuvers” thru a weak front to place (bulk of) forces in adversary’s flank and rear.
- Set up supporting “centers (bases) of operation” and alternative lines of communication and keep (at least some) safe and open as basis to maintain freedom of maneuver.

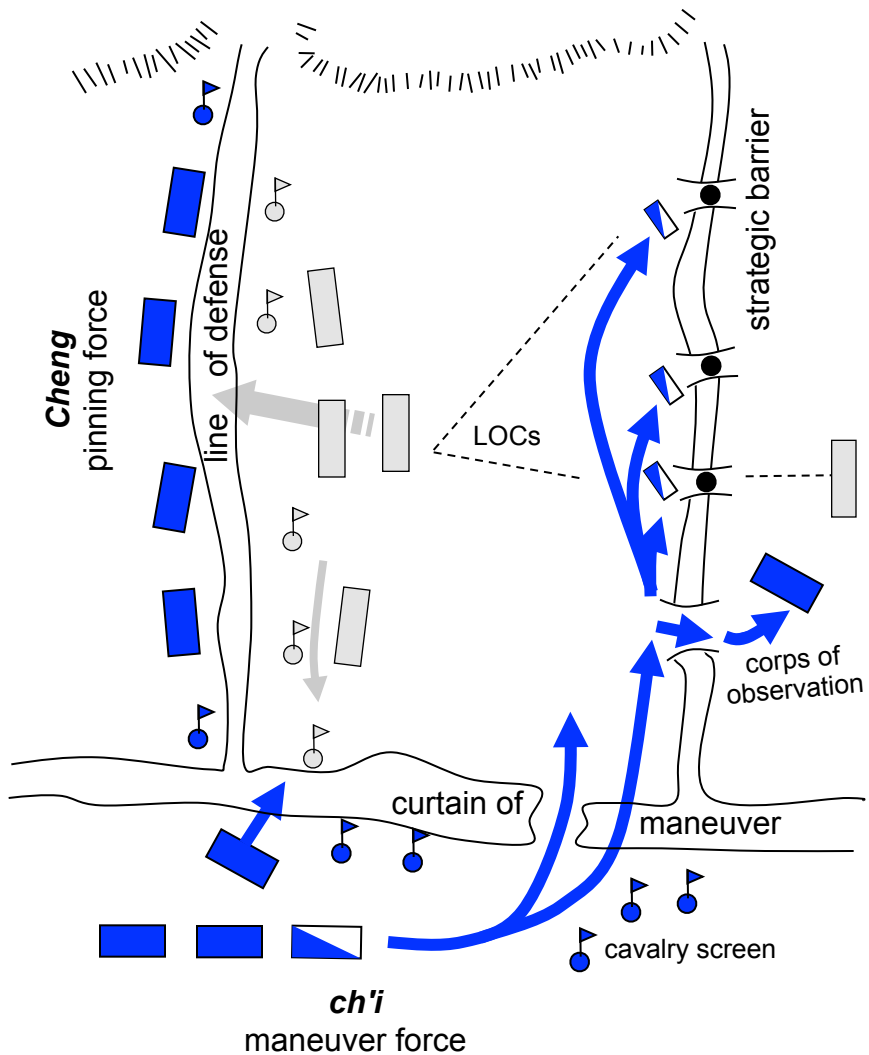
Aim

Destroy enemy army

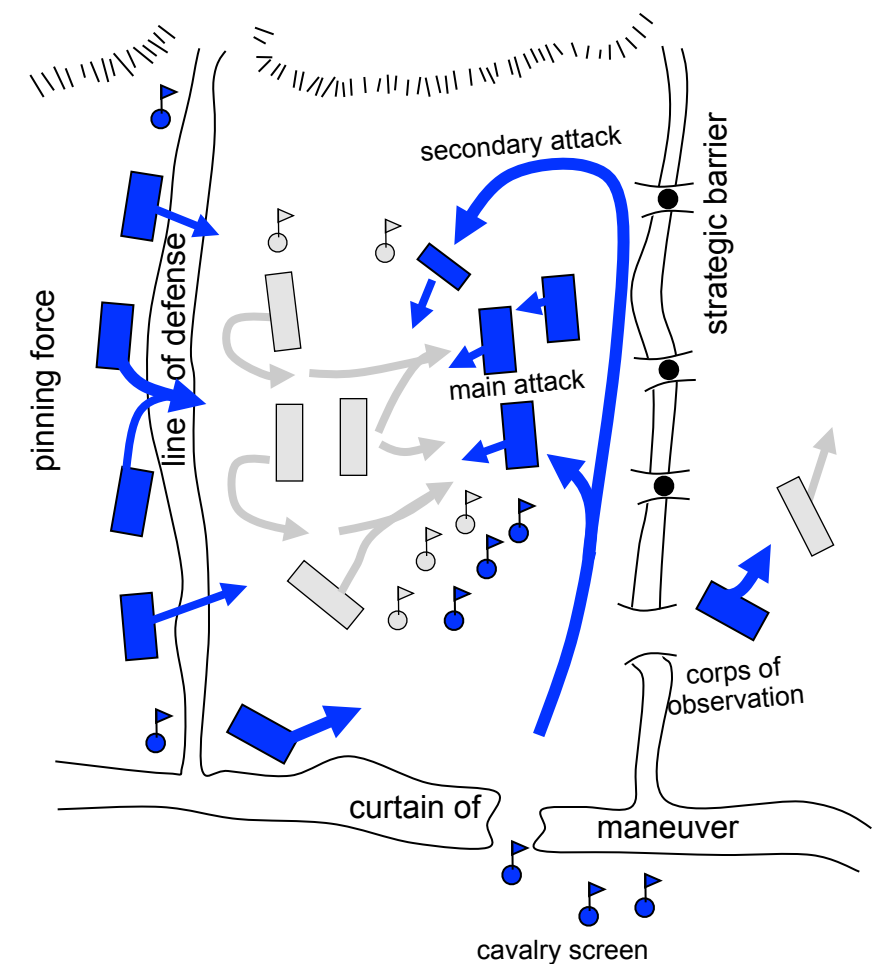
Strategy of envelopment

(idealized schematic)

I. The Envelopment March



II. The Reversed Front Battle

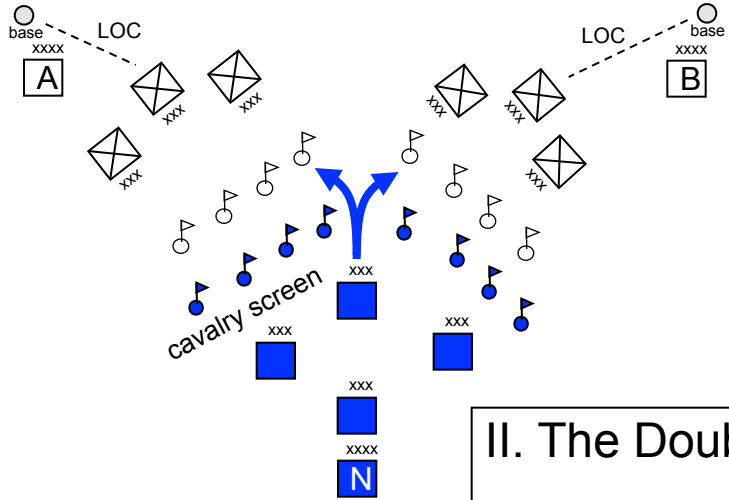


Source: David G. Chandler, *Waterloo: The Hundred Days*, 1980.

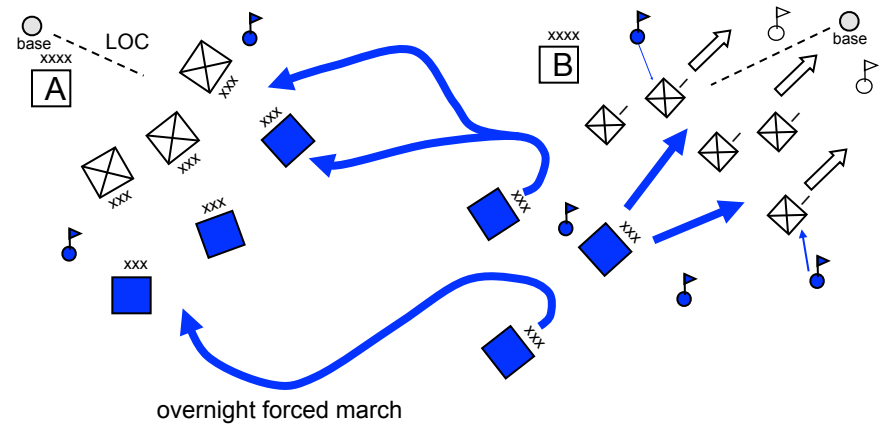
The strategy of central position

(idealized schematic)

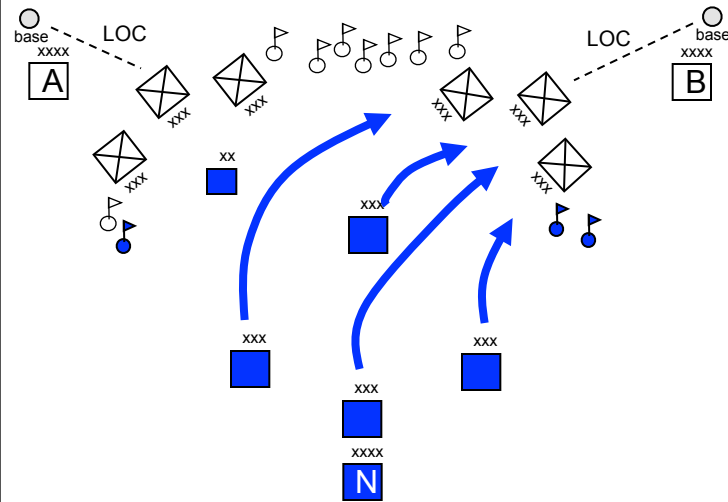
I. Advance to Contact



III. The Coup de Grace



II. The Double Battle



Source: David G. Chandler,
Waterloo: The Hundred Days, 1980.

Historical pattern

Napoleon's art of war

Early tactic

“The action was opened by a cloud of sharpshooters, some mounted, some on foot, who were sent forward **to carry out a general rather than a minutely-regulated mission**; they proceeded to harass the enemy, escaping from his superior numbers by their mobility, from the effect of his cannon by their dispersal. They were constantly relieved to ensure that the fire did not slacken, and they also received considerable reinforcement to increase their over-all effect ... **Once the chink in foe's armour had been revealed** ... the horse artillery would gallop up and open fire with canister at close range. The attacking force would meantime be moving up in the indicated direction, the infantry advancing in column, the cavalry in regiments or squadrons, ready to make its presence felt anywhere or everywhere as required. Then, when the hail of enemy bullets or cannon balls began to slacken ... The soldiers would begin to run forward, those in the front ranks crossing their bayonets, as the drums beat the charge; the sky would ring a thousand battle-cries constantly repeated: “*En avant. En avant. Vive la Republique.*”

Later tactics

“At the outset, a **heavy bombardment** would be loosed against the enemy formations, causing fearful losses if they failed to seek shelter, and generally lowering their power of resistance. Under cover of this fire, swarms of *voltigeurs* would advance to within musketry range and add a disconcerting ‘**nuisance**’ element by sniping at officers and the like. This preliminary phase would be followed by a series of **heavy cavalry** and **infantry** attacks. **The secret of these was careful timing and coordination.** The first cavalry charges were designed to defeat the hostile cavalry and compel the enemy infantry to form squares”, thereby reduce fire in any one direction and enable the columns to get to close grips before the enemy could resume his linear formation. The infantry (deployed or not) and accompanying horse artillery would then blaze a gap in the enemy formation and finally the cavalry would sweep forward, again, to exploit the breakthrough.

Essential point

Early tactics, without apparent design, operate in a fluid, adaptable manner to uncover, expand and exploit adversary vulnerabilities and weaknesses, while later tactics emphasize massed firepower and stereotyped formations working formally together to smash adversary strength.

Which unveils

The Napoleonic spirit

Strategic “fog” followed by stereotyped and ruinous tactical assaults.

Historical pattern

Carl von Clausewitz, *On War*, 1832

Character/nature of war

- An act of policy to use violence to impose one's will upon another
- Duel or act of human interaction directed against an animate object that reacts
- Uncertainty of information acts as an impediment to vigorous activity.
- Psychological/moral forces and effects (danger, intelligence, emotional factors ...) either impede or stimulate activity.
- Friction (interaction of many factors, including those above) impedes activity.
- Genius (harmonious balance of mind/temperament that permit one to overcome friction and excel at the complex activity of war) changes the nature and magnifies the scope of operations.

Strategy

- Exhaust enemy by influencing him to increase his expenditure of effort.
- Seek out those centers of gravity upon which all power/movement depend and, if possible, trace them back to a single one.
- Compress all effort, against those centers, into the fewest possible actions.
- Subordinate all minor, or secondary, actions as much as possible.
- Move with the utmost speed.
- Seek the major battle (with superiority of number and conditions) that will promise a decisive victory.

Aim

“Render enemy powerless”—
with emphasis on “the
destruction of his armed forces”

Historical pattern

Carl von Clausewitz, *On War*, 1832

Critique

- Clausewitz overemphasized decisive battle and underemphasized strategic maneuver.
- Clausewitz emphasized method and routine at the tactical level.

? Raises question ?

What does all this mean?

Why?

- Clausewitz was concerned with trying to overcome, or reduce, friction/uncertainty. He failed to address the idea of magnifying adversary's friction/uncertainty.
- Clausewitz was concerned with trying to exhaust adversary by influencing him to increase his expenditure of effort. He failed to address, or develop, the idea of trying to paralyze adversary by denying him the opportunity to expend effort.
- Clausewitz incorrectly stated: "A center of gravity is always found where the mass is concentrated most densely"—then argued that this is the place where the blows must be aimed and where the decision should be reached. He failed to develop idea of generating many non-cooperative centers of gravity by striking at those vulnerable, yet critical, tendons, connections, and activities that permit a larger system to exist.

Historical pattern

Carl von Clausewitz, *On War*, 1832

Message

- Clausewitz **did not** see that many non-cooperative, or conflicting, centers of gravity paralyze adversary by denying him the opportunity to operate in a directed fashion, hence they impede vigorous activity and magnify friction.

Likely result

- Operations end in a “bloodbath”—via the well regulated stereotyped tactics and unimaginative battles of attrition suggested by Clausewitz.

Historical pattern

Jomini, 1861

Secret of success

... the narratives of Frederick the Great commenced to initiate me in the secret which had caused him to gain the miraculous victory of Leuthen. I perceived that this secret consisted in the very simple maneuver of carrying the bulk of his forces upon a single wing of the hostile army ... I found again, afterwards, the same cause in the first successes of Napoleon in Italy, which gave me the idea that by applying, through strategy, to the whole chess-table of a war this same principle which Frederick had applied to battles, we should have the key to all the science of war.

Historical pattern

Jomini, *The Art of War*, 1836

Key idea and supporting mechanism

- Generalize oblique order associated with Battles at Leuctra and Leuthen
- Divide theater and its subordinate components (zones, fronts, positions, etc.) into three subdivisions—a center and two wings—as basis to apply the Leuctra/Leuthen concept in strategic and grand tactical maneuvers.
- Set up base(s) of operations and (alternative) lines of communication for freedom to shape and shift flow/direction of operations as basis to apply Leuctra/Leuthen strategic and grand tactical maneuvers.

Aim

To make evident a “secret” for success in war

Strategy/grand tactics

- By free and rapid movements carry bulk of the forces (successively) against fractions of the enemy.
- Strike in the most decisive direction—that is to say, against the center or one wing or the center and one wing simultaneously.
- If possible, seize adversary’s communications (without losing one’s own) and force him to fight on a reverse front by using bulk of forces to hit his flank and take him in the rear—while using detachments, as needed, to block the arrival of reinforcements as well as draw his attention elsewhere.
- If the enemy’s forces are too much extended, pierce his center to divide and crush his fractions separately.
- To outflank and turn (envelop) a wing, hit enemy in the flank and also contain him at the front.
- An attack may be made simultaneously upon both extremities but not when the attacking force is equal or inferior (numerically) to the enemy.

Historical pattern

Jomini *The Art of War* 1836

Critique

- Preoccupation with form of operations, spatial arrangement of bases, formal orders of battle, and tactical formations.
- Lack of appreciation for the use of loose, irregular swarms of guerrillas and skirmishers to mask own dispositions, activities, and intentions as well as confuse and disorder enemy operations.

Likely result

- Operations become stereotyped—**unless** one can appreciate Jomini's ideas outside their formal underpinnings.

Historical pattern

Napoleon, Clausewitz, Jomini

Key point

Napoleon, Clausewitz, and Jomini **did not** appreciate importance of loose, irregular **tactical** arrangements and activities to mask or distort own presence and intentions as well as confuse and disorder adversary operations.

? Why ?

Major flaw

Napoleon, Clausewitz, and Jomini viewed the conduct of war and related operations in essentially one direction—from the top down—emphasizing adaptability at the top and regularity at the bottom.

Emil Schalk

Summary of The Art of War, 1862

“There are three great maxims common to the whole science of war; they are:

1st—Concentrate your force, and act with the whole of it on one part only of the enemy’s force.

2nd—Act against the weakest part of your enemy—his center, if he is dispersed; his flank or rear, if concentrated. Act against his communications without endangering your own.

3rd—Whatever you do, as soon as you have made your plan, and taken the decision to act upon it, act with the utmost speed, so that you may obtain your object before the enemy suspects what you are about.”

Caution

While these maxims by Schalk portray, in a general way, **physical** maneuvers that can be used to realize one’s purpose in war at the strategic level, they do not address the non-adaptability and predictability (via the drill regulation mind-set) that permeated 19th century “maneuvers” at the tactical level.

Impact of 19th century technology on war

Key ingredients

- Railroad/telegraph
- Quick fire artillery
- Machine gun
- Repeating rifle
- Barbed wire
- Trenches

Early trends

- Emphasis toward massed firepower and large armies supported by rail logistics
- Increased emphasis on a holding defense and flanking or wide turning maneuvers into adversary rear to gain a decision
- Continued use of frontal assaults by large stereotyped infantry formations (e.g. regiments, battalions), supported by artillery barrages, against regions of strong resistance

Result

Huge armies and massed firepower and other vast needs supported through a narrow fixed logistics network, together with tactical assaults by large stereotyped formations, suppressed **ambiguity**, **deception**, and **mobility** hence **surprise** of any operation.

Technology and the art of war

- The legacy of Napoleon, Clausewitz, and Jomini's tactical regularity and the continued use of large stereotyped formations for tactical assault, together with the mobilization of large armies and massing of enormous supplies through a narrow logistics network, "telegraphed" any punch, hence minimized the possibility of exploiting **ambiguity**, **deception**, and **mobility** to generate **surprise** for a decisive edge.
- In this sense, technology was being used as a **crude club** that generated frightful and debilitating casualties on all sides during the:
 - American Civil War (1861-65)
 - Austro-Prussian War (1866)
 - Franco-Prussian War (1870)
 - Boer War (1899-1902)
 - Russo-Japanese War (1904-05)
 - World War I (1914-18)

Point

- Evolution of tactics did not keep pace with increased weapons lethality developed and produced by 19th century technology.

? Raises question ?

- Why were the 19th century and early 20th century commanders unable to evolve better tactics to avoid over a half century of debilitating casualties?

Impact of 19th century capitalism on insurrection/revolution (with a Marxian flavor)

Comment

- A look back reveals that we have been speaking of conflict **between** social systems, rather than **within** social systems. With the explosive expansion of capitalism in the 19th century we begin to see the rise of much turmoil and attendant conflict due to opposing tendencies contained within capitalism itself.

Trend

- Without going into explicit detail we find (according to many investigators, including Karl Marx) that the interaction of competition, technology, specialization (division of labor), concentration of production in large scale enterprises, and the taking and plowing back of profits into this interaction produce opposing tendencies and periodic **crises** that leave in their wake more and more workers competing for jobs in fewer and fewer, but larger, firms that increasingly emphasize (percentage-wise) the use of more machines and less labor.

Result

- Low paid wage earners exhibit discontent and hatred for a system that permits others to live in comfort or luxury while they must live a life of toil, subject to strict and frequently harsh factory discipline.
- Witnessing these unfolding circumstances, disillusioned intellectuals, bankrupt owners, and others take the side of the workers, as an **enlightened vanguard**, to mold them into a powerful opposition.

Raises question

- How should such an unpleasant situation be corrected?

Impact of 19th century capitalism on insurrection/revolution (with a Marxian flavor)

Message

- According to Marx/Engels and their followers, the **only** way out is via revolution and dictatorship of the proletariat (workers) to smash the capitalistic system and replace it with one that **does not** exploit and oppress masses for the benefit of a ruling elite or class.

Necessary conditions for success

- **Crisis** generated by discontent/misery of masses and vacillation by authorities who indicate unwillingness or inability to come to grips with existing instability.
- **Vanguard**, or disciplined hard core, that offers leadership, provides a way out, and has support of masses.

Why

- **Crises** represent height of confusion/disorder due to many opposing tendencies (centers of gravity) that magnify friction, hence paralyze efforts by authorities to dominate such surges of turmoil. In this sense, **crises** are periods of vulnerability/weakness that beg to be exploited.
- **Vanguards** represent disciplined moral/mental/physical bodies focused to shape and guide masses as well as participate in action to exploit and expand confusion/disorder of crises that shake adversary's will to respond in a directed way.

Key insight

- **Crises** and **vanguards** are the golden keys that permit us to penetrate to the core of insurrection/revolution and, as we shall see later, modern guerrilla warfare.

Capitalism, technology and the conduct of war

- The creation of crises and vanguards, via 19th century capitalism, makes evident the foundations upon which to conduct insurrection/revolution in order to destroy a society from **within**.

On the other hand

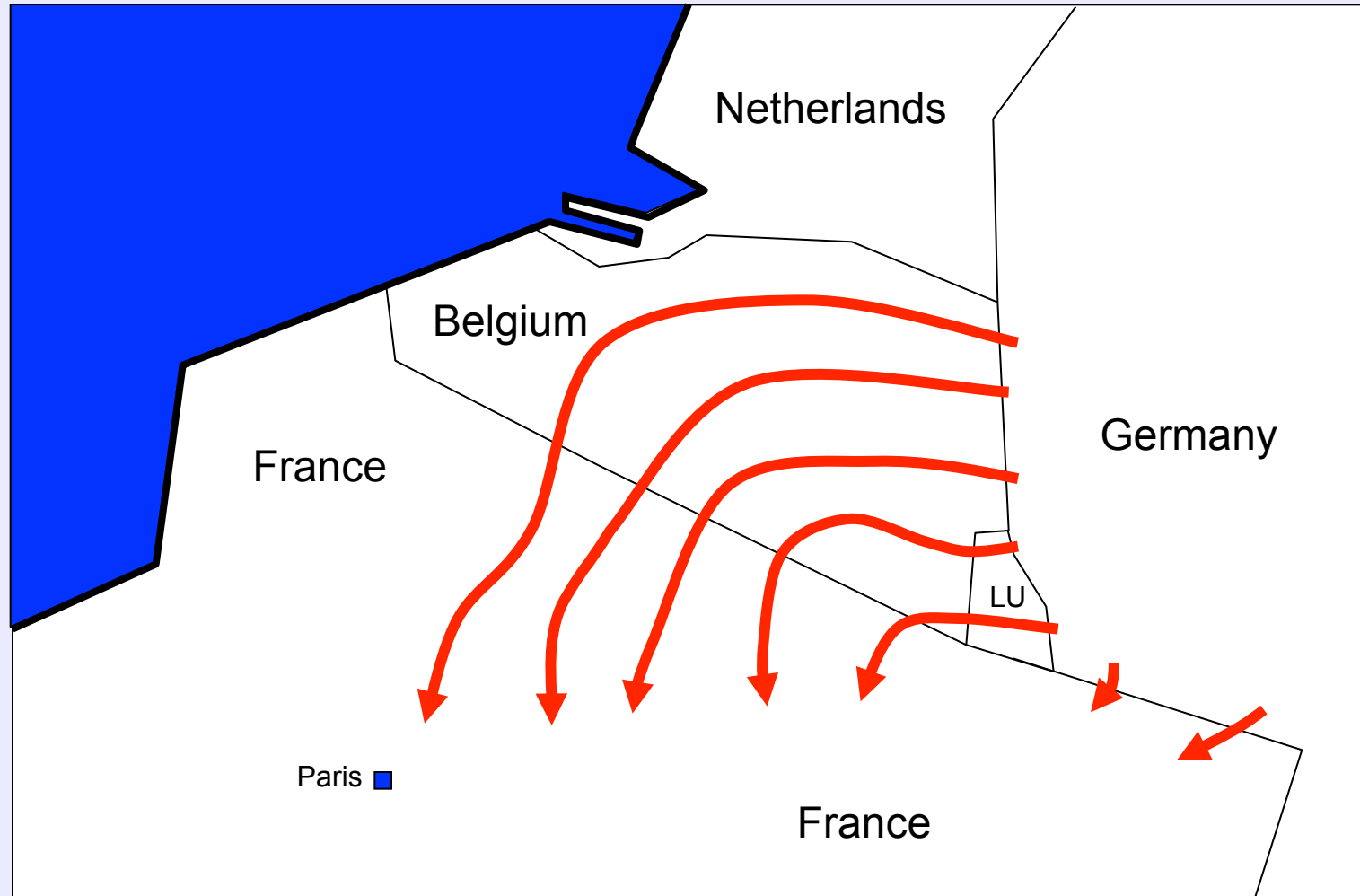
- It is not yet clear how these notions change or fit into the way we exploit technology and conduct war against societies from **within** as well as from **without**. To gain such an appreciation we must look at the period containing World War I, World War II, and their aftermath.

World War I

- Plans and execution
- Stagnation
- Finale

Schlieffen strategic maneuver

August 4 – September 8, 1914



World War I

Action

- Offensives conducted on wide frontages—emphasizing few, rather than many harmonious yet independent thrusts.
- Evenness of advance maintained to protect flanks and provide artillery support as advance makes headway.
- Reserves thrown in whenever attack held up—against regions or points of strong resistance.

Reaction

- Defense organized into depth of successive belts of fortified terrain.
- Massed artillery and machine-gun fire designed to arrest and pin down attacker.
- Counter-attack to win back lost ground.

Result

Stagnation and **enormous attrition** since advances made **generally as expected along paths of hardened resistance** because of dependence upon railroads and choice of tactics of trying to reduce strong points by massed firepower and infantry.

World War I

A way out

Idea	Authors
<ul style="list-style-type: none"><li data-bbox="324 539 799 582">• Infiltration tactics	<ul style="list-style-type: none"><li data-bbox="942 539 1537 589">• Capt. Andre Laffargue<li data-bbox="942 629 1418 672">• Gen. von Hutier?<li data-bbox="942 715 1402 758">• Gen. Ludendorff
<ul style="list-style-type: none"><li data-bbox="324 911 768 953">• Guerrilla tactics	<ul style="list-style-type: none"><li data-bbox="942 896 1354 939">• T.E. Lawrence<li data-bbox="942 982 1611 1025">• Paul von Lettow-Vorbeck

World War I

Infiltration tactics

Action

- Brief but intense artillery bombardment, which includes gas and smoke shell, to disrupt/suppress defenses and obscure the assault.
- *Stosstruppen* (small teams or squads of thrust troops equipped with light machine guns, flame throwers, etc.) thrust forward close behind rolling artillery barrage, without any “effort to maintain a uniform rate of advance or align formations”. Instead, as many tiny, irregular swarms spaced in breadth and echeloned in depth, they seep or flow into any gaps or weaknesses they can find in order to drive deep into adversary rear.
- *Kampfgruppen* (small battle groups consisting of infantry, machine gunners, mortar teams, artillery observers and field engineers) follow up to cave in exposed flanks and mop up isolated centers of resistance from flank and rear.
- Reserves and stronger follow-on echelons move through newly created breaches to maintain momentum and exploit success, as well as attack flanks and rear to widen penetration and consolidate gains against counter attack.

Idea

- Hurl strength (echeloned in great depth), via an irruption of many thrusts, thru weaknesses along (many) paths of least resistance to gain the opportunity for breakthrough and envelopment.

World War I

Infiltration tactics

Note

- Such classic descriptions, often repeated, create in listeners' or readers' minds vivid images of the infiltration technique.

Critique

- Unfortunately this depiction does not address how and why infiltration fire and movement schemes work.

World War I

Infiltration tactics

Key points

- Fire at all levels by artillery, mortars, and machine guns is exploited to hold adversary attention and pin him down, hence—
- Fire together with gas and smoke (as well as fog and mist) represent an immediate and ominous threat to capture adversary attention, force heads down, and dramatically obscure view, thereby cloak infiltrators' movements.
- Dispersed and irregular character of moving swarms (as opposed to well defined line-abreast formations) permit infiltrators to blend against irregular and changing terrain features as they push forward.
- Taken together, the captured attention, the obscured view, and the indistinct character of moving dispersed/irregular swarms deny adversary the opportunity to picture what is taking place.

Result

- Infiltration teams appear to suddenly loom up out of nowhere to blow thru, around, and behind disoriented defenders.

World War I infiltration tactics

Essence

- Cloud/distort signature and improve mobility to avoid fire yet focus effort to penetrate, shatter, envelop, and mop up disconnected or isolated debris of adversary system.

Intent

- Exploit tactical dispersion in a focused way to gain tactical success and expand it into a grand tactical success.

Implication

- Small units exploiting tactical dispersion in a focused way—rather than large formations abiding by the “Principle of Concentration”—penetrate adversary to generate many non-cooperative (or isolated) centers of gravity as basis to magnify friction, paralyze effort, and bring about adversary collapse.

? Natural question ?

Are infiltration tactics a rejection of the Napoleonic methods—or are they application of these methods under a different guise?

Response

Infiltration fire and movement schemes can be viewed as Napoleon's multi-thrust strategic penetration maneuvers being transformed into multi-thrust tactical penetration maneuvers down to the lowest operational/organizational level—the squad.

Point

Until the rise of the **infiltration** tactics (and the use of tanks by the allies) in the latter part of WWI, neither the 19th century nor the 20th century commanders were able to evolve effective tactical **penetration** maneuvers that could offset the massive increase in weapons lethality developed during this same period.

Why

The aristocratic tradition, the top-down command and control system, the slavish addiction to the “Principle of Concentration”, and the drill regulation mindset, all taken together, reveal an “obsession for control” by high-level superiors over low-level subordinates that restricts any imagination, initiative, and adaptability needed by a system to evolve the indistinct-irregular-mobile tactics that could counter the increase in weapons lethality.

World War I infiltration tactics

Result

- Immediate success at platoon/company/battalion level coupled with ultimate failure at corps/army level.

Why

- Ludendorff violated his own concept by his tendency to use strategic reserves to reinforce against **hardened resistance**—hence, at the strategic level, he seduced himself into **supporting failure not success**.
- Exhaustion of combat teams leading the assault.
- Logistics too inflexible to support rapid/fluid penetration and deeper exploitation of breakthrough.
- Communications too immobile to allow command to quickly identify and reinforce successful advances.
- Elastic zone defense, when used, (as developed by the **Germans** and practiced by **Pétain**) that emphasizes artillery and flank attacks against penetrations when they stretch beyond their own artillery support.

World War I

Guerrilla Warfare

(a la T.E. Lawrence)

Action

- Gain support of population. Must “arrange the minds” of friend, foe and neutral alike. Must “**get inside their minds**”.
- Must “be an idea or thing invulnerable, without front or back, drifting about like a gas” (**inconspicuousness and fluidity-of action**). Must be an “attack-in-depth”.
- Tactics “should be tip-and-run, not pushes but strokes” with “use of the smallest force in the quickest time at the farthest place”.
- Should be a war of detachment (avoiding contact and presenting a threat everywhere) using **mobility/fluidity-of-action** and **environmental background** (vast unknown desert) as basis for “never affording a target” and “never on the defensive except by accident and in error”.

Idea

- Disintegrate existing regime’s ability to govern.

Impression

- Infiltration tactics a la Ludendorff seem to be similar in nature to irregular or guerrilla tactics a la Lawrence.
- Why? Both stress clouded/distorted signatures, mobility and cohesion of small units as basis to insert an amorphous yet focused effort into or thru adversary weaknesses.

Major advances between World War I and II

Soviet revolutionary strategy

- Lenin, and after him Stalin, exploited the idea of **crises** and **vanguards**—that arise out of Marxian contradictions within capitalism—to lay out Soviet revolutionary strategy.
- Result:
 - A scheme that emphasizes moral/psychological factors as basis to destroy a regime from within.

Lightning war (Blitzkrieg)

- Infiltration tactics of 1918 were mated with:
 - Tank
 - Motorized artillery
 - Tactical aircraft
 - Motor transport
 - Better communications } by {
 - J.F.C. Fuller
 - Heinz Guderian
- Result:
 - **Blitzkrieg**, to generate a breakthrough by piercing a region with multiple narrow thrusts using armor, motorized infantry, and follow-up infantry divisions supported by tactical aircraft.

Guerrilla war

- Mao Tse-Tung synthesized Sun Tzu's ideas, classic guerrilla strategy and tactics, and Napoleonic style mobile operations under an umbrella of Soviet revolutionary ideas to create a powerful way for waging modern (guerrilla) war.
- Result:
 - Modern guerrilla warfare has become an overall political, economic, social, and military framework for “total war”.

Soviet revolutionary strategy

(a la Lenin/Stalin)

Tasks

- Employ agitation and propaganda in order to exploit opposing tendencies, internal tensions, etc. Object is to bring about a **crises, to make revolution ripe** as well as convince masses that there is a way out. This is accomplished when the **vanguard** is able to:
 - Fan discontent/misery of working class and masses and focus it as hatred toward existing system.
 - Cause vacillation/indecision among authorities so that they cannot come to grips with existing instability.
 - “Confuse other elements in society so that they don’t know exactly what is happening or where the movement is going.”
 - Convince “proletariat class they have a function—the function of promoting revolution in order to secure the promised ideal society.”
- Concentrate “the main forces of the revolution at the enemy’s most vulnerable spot at the decisive moment, **when the revolution has already become ripe**, when the offensive is going full steam ahead, when insurrection is knocking at the door, and when bringing the reserves up to the **vanguard** is the decisive condition of success.” To quote Lenin paraphrasing Marx and Engels:
 - “Never play with insurrection, but, when beginning it, firmly realize that you must go to the end.”
 - “Concentrate a great superiority of forces at the decisive point, at the decisive moment, otherwise the enemy, who has the advantage of better preparation and organization, will destroy the insurgents.”
 - “Once the insurrection has begun, you must act with the greatest determination, and by all means, without fail, take the offensive. The defensive is the death of an armed rising.”
 - “You must try to take the enemy by surprise and seize the moment when his forces are scattered.”
 - “You must strive for daily successes, even if small (one might say hourly, if it is the case of one town), and at all costs retain the ‘moral ascendancy.’”

Soviet revolutionary strategy

(a la Lenin/Stalin)

Tasks

- Select “the moment for the decisive blow, the moment for starting the insurrection, so timed as to coincide with the moment when the **crisis** has reached its climax, when the **vanguard** is prepared to fight to the end, the reserves are prepared to support the **vanguard**, and maximum consternation reigns in the ranks of the enemy.” According to Lenin the decisive moment has arrived when:
 - “All the class forces hostile to us have become sufficiently entangled, are sufficiently at loggerheads, have sufficiently weakened themselves in a struggle which is beyond their strength;”
 - “All the vacillating, wavering, unstable, intermediate elements—the petty bourgeoisie, the petty-bourgeois democrats as distinct from the bourgeoisie—have sufficiently exposed themselves in the eyes of the people, have sufficiently disgraced themselves through their practical bankruptcy;”
 - “Among the proletariat, a mass sentiment in favor of supporting the most determined, supremely bold, revolutionary action against the bourgeoisie has arisen and has begun to grow vigorously. Then revolution is indeed ripe. Then, indeed, if we have correctly gauged all the conditions indicated above ... and if we have chosen the moment rightly, our victory is assured.”
- Pursue “the course adopted, no matter what difficulties and complications are encountered on the road towards the goal. This is necessary in order that the **vanguard** not lose sight of the main goal of the struggle and the masses not stray from the road while marching towards that goal and striving to rally around the **vanguard**.”
- Maneuver “the reserves with a view to effecting a proper retreat when the enemy is strong ... when, with the given relation of forces, retreat becomes the only way to escape a blow against the **vanguard** and retain the **vanguard’s** reserves. The object of this strategy is to gain time, to disrupt the enemy, and to accumulate forces in order later to assume the offensive.”

Goal

- Destroy capitalism as well as its offspring imperialism and replace it with a dictatorship of the proletariat.

Blitzkrieg and guerrilla strategy

Infiltration and isolation

- Blitz and guerrillas infiltrate a nation or regime at all levels to soften and shatter the moral fiber of the political, economic, and social structure. Simultaneously, via diplomatic, psychological, and various sub-rosa or other activities, they strip away potential allies thereby isolate intended victim(s) for forthcoming blows. To carry out this program, a la Sun Tzu, blitz, and guerrillas:
 - Probe and test adversary, and any allies that may rally to his side, in order to unmask strengths, weaknesses, maneuvers, and intentions.
 - Exploit critical differences of opinion, internal contradictions, frictions, obsessions, etc., in order to foment mistrust, sow discord and shape both adversary's and allies' perception of the world, thereby:
 - Create atmosphere of “mental confusion, contradiction of feeling, indecisiveness, panic” ...
 - Manipulate or undermine adversary's plans and actions.
 - Make it difficult, if not impossible, for allies to aid adversary during his time of trial.

Purpose

- Force capitulation when combined with external political, economic, and military pressures
- or
- Weaken foe to minimize his resistance against military blows that will follow.

Blitzkrieg

Action

- Intelligence (signal, photo, agent ...), reconnaissance (air and ground), and patrol actions probe and test adversary before and during combat operations to uncover as well as shape changing patterns of strengths, weaknesses, moves, and intentions.
- Adversary patterns, and associated changes, are weighed against friendly situation to expose attractive, or appropriate, alternatives that exploit adversary vulnerabilities and weaknesses, hence help shape mission commitment and influence command intent.
- Mission assigned. *Schwerpunkt* (focus of main effort) established before and shifted during combat operations to bypass adversary strength and strike at weakness. *Nebenpunkte* (other related or supporting efforts) employed to tie up, focus, or drain away adversary attention and strength (elsewhere).
- Special seizure/disruption teams infiltrate (by air or other means) enemy rear areas where, with agents already in place, they seize bridges and road crossings, sever communications, incapacitate or blow up power stations, seize or blow up fuel dumps, ... as well as sow confusion/disorder via false messages and fake orders.
- Indirect and direct air firepower efforts together with (any needed) sudden/brief preliminary artillery fires are focused in appropriate areas to impede (or channel) adversary movement, disrupt communications, suppress forward defensive fires, obscure the advance, and divert attention.
- Armored reconnaissance or stormtrooper teams, leading armored columns, advance rapidly from least expected regions and infiltrate adversary front to find paths of least resistance.
- Armored assault teams of tanks, infantry, anti-tank guns, and combat engineers as well as other specialists, together with close artillery and air support, quickly open breaches (via frontal/flank fire and movement combinations) into adversary rear along paths of least resistance uncovered by armored reconnaissance or stormtroopers.
- When breakthrough occurs, relatively independent mobile/armored teams led by armored recce with air support (recce, fire, and airlift when necessary), blow through to penetrate at high speed deep into adversary interior. Object is to cut lines of communication, disrupt movement, paralyze command and envelop adversary forces and resources.
- Motorized or foot infantry further back supported by artillery and armor pour in to collapse isolated pockets of resistance, widen the breaches and secure the encirclement of captured terrain against possible counter-attack.

Idea

- Conquer an entire region in the quickest possible time by gaining **initial surprise** and exploiting the **fast tempo/fluidity-of-action** of armored teams, with air support, as basis to repeatedly penetrate, splinter, envelop, and roll-up/wipe-out disconnected remnants of adversary organism in order to confuse, disorder, and finally shatter his will or capacity to resist.

Impression

Reflection upon discussion so far reveals that Blitzkrieg generates many non-cooperative centers of gravity, as well as undermines or seizes those that adversary depends upon, in order to impede vigorous activity and magnify friction, thereby paralyze adversary by denying him the opportunity to operate in a directed way.

? Raises nagging question ?

How do blitzers simultaneously sustain rapid pace and abruptly adapt to changing circumstances without losing cohesion or coherency of their overall effort?

Blitz operating philosophy

Key point

- Each level from simple to complex (platoon to theater) has its own observation-orientation-decision-action time cycle that increases as we try to control more levels and details of command at the higher levels. Put simply, as the number of events we must consider increases, the longer it takes to observe-orient-decide-act.

Idea

- This brings out the idea that faster tempo, or rhythm, at lower levels should work within the slower rhythm but larger pattern at higher levels so that overall system does not lose its cohesion or coherency.

Raises question

- How do blitzers harmonize these differing tempos/rhythms so that they can exploit the faster rhythm/smaller pattern (of the lower-level units) yet maintain the coherency of the rhythm/pattern for the larger effort?

Response

- Give lower-level commanders wide freedom, **within an overall mind-time-space scheme**, to shape/direct their own activities so that they can exploit faster tempo/rhythm at tactical levels yet be in harmony with the larger pattern/slower rhythm associated with the more general aim and larger effort at the strategic level.

Shaping agents

- Shape overall scheme by using **mission** concept or sense of mission to fix responsibility and shape commitment at all levels and through all parts of the organism. Likewise, use **Schwerpunkt** concept through all levels to link differing rhythms/patterns so that each part or level of the organic whole can operate at its own natural rhythm—without pulling organism apart—instead of the slower pace associated with a rigid centralized control.

? Raises questions ?

- What does an overall mind-time-space scheme imply or presuppose?
- How do mission and *Schwerpunkt* concepts give shape to this overall scheme?

Overall mind-time-space scheme

Message

- According to General Gunther Blumentritt, such a scheme presupposes a common outlook based upon “a body of professional officers who have received exactly the same training during the **long** years of peace and with the same tactical education, the same way of thinking, identical speech, hence a body of officers to whom all tactical conceptions were fully clear.”
- Furthermore, a la General Blumentritt, it presupposes “an officers training institution which allows the subordinate a **very great** measure of freedom of action and freedom in the **manner** of executing orders and which primarily calls for independent daring, initiative and sense of responsibility.”

Point

- Without a common outlook, superiors cannot give subordinates freedom of action and maintain coherency of ongoing action.

Implication

- A common outlook possessed by “a body of officers” represents a unifying theme that can be used to simultaneously encourage subordinate initiative yet realize superior intent.

? **Raises question** ?

Very nice, but how do the German concepts of mission and *Schwerpunkt* give shape to this scheme?

Mission

Message

- The German concept of mission can be thought of as a contract, hence an agreement, between superior and subordinate. The subordinate agrees to make his actions serve his superior's intent in terms of **what** is to be accomplished, while the superior agrees to give his subordinate wide freedom to exercise his imagination and initiative in terms of **how** intent is to be realized.
- As part of this concept, the subordinate is given the right to challenge or question the feasibility of mission if he feels his superior's ideas on what can be achieved are not in accord with the existing situation or if he feels his superior has not given him adequate resources to carry it out. Likewise, the superior has every right to expect his subordinate to carry out the mission contract when agreement is reached on what can be achieved consistent with the existing situation and resources provided.

Limitation

- While this concept of mission gives form and expression to what is expected between an individual superior and subordinate, it does not suggest ways to coordinate or harmonize activities among many superiors and subordinates as a collective group.

? Raises question ?

With this limitation in mind how does *Schwerpunkt* play into or add to this concept?

Schwerpunkt

(Focus of main effort)

Message

- *Schwerpunkt* acts as a center or axis or harmonizing agent that is used to help shape commitment and convey or carry out intent at all levels from theater to platoon, hence an image around which:
 - Maneuver of all arms and supporting elements are focused to exploit opportunities and maintain tempo of operations,
 - and
 - Initiative of many subordinates is harmonized with superior intent.
- In this sense *Schwerpunkt* can be thought of as:
 - A focusing agent that naturally produces an unequal distribution of effort as a basis to generate superiority in some sectors by thinning-out others,
 - as well as
 - A medium to realize superior intent without impeding initiative of many subordinates, hence a medium through which subordinate initiative is implicitly connected to superior intent.

Implication

- *Schwerpunkt* represents a **unifying concept** that provides a way to rapidly shape focus and direction of effort as well as harmonize support activities with combat operations, thereby permit a true decentralization of tactical command within centralized strategic guidance—without losing cohesion of overall effort.
 - or put another way
- *Schwerpunkt* represents a **unifying medium** that provides a directed way to tie initiative of many subordinate actions with superior intent as a basis to diminish friction and compress time in order to generate a favorable mismatch in time/ability to shape and adapt to unfolding circumstances.

German operational philosophy

Impression

- The German operational philosophy, based upon a common outlook and freedom of action and realized through their concepts of mission and *Schwerpunkt*, emphasized **implicit over explicit** communication.

Which suggests

- The secret of the German command and control system lies in what's **unstated or not communicated to one another**—to exploit lower-level initiative yet realize higher-level intent, thereby diminish friction and reduce time, hence gain both quickness and security.

Result

- The Germans were able to repeatedly operate inside their adversary's observation-orientation-decision-action loops.

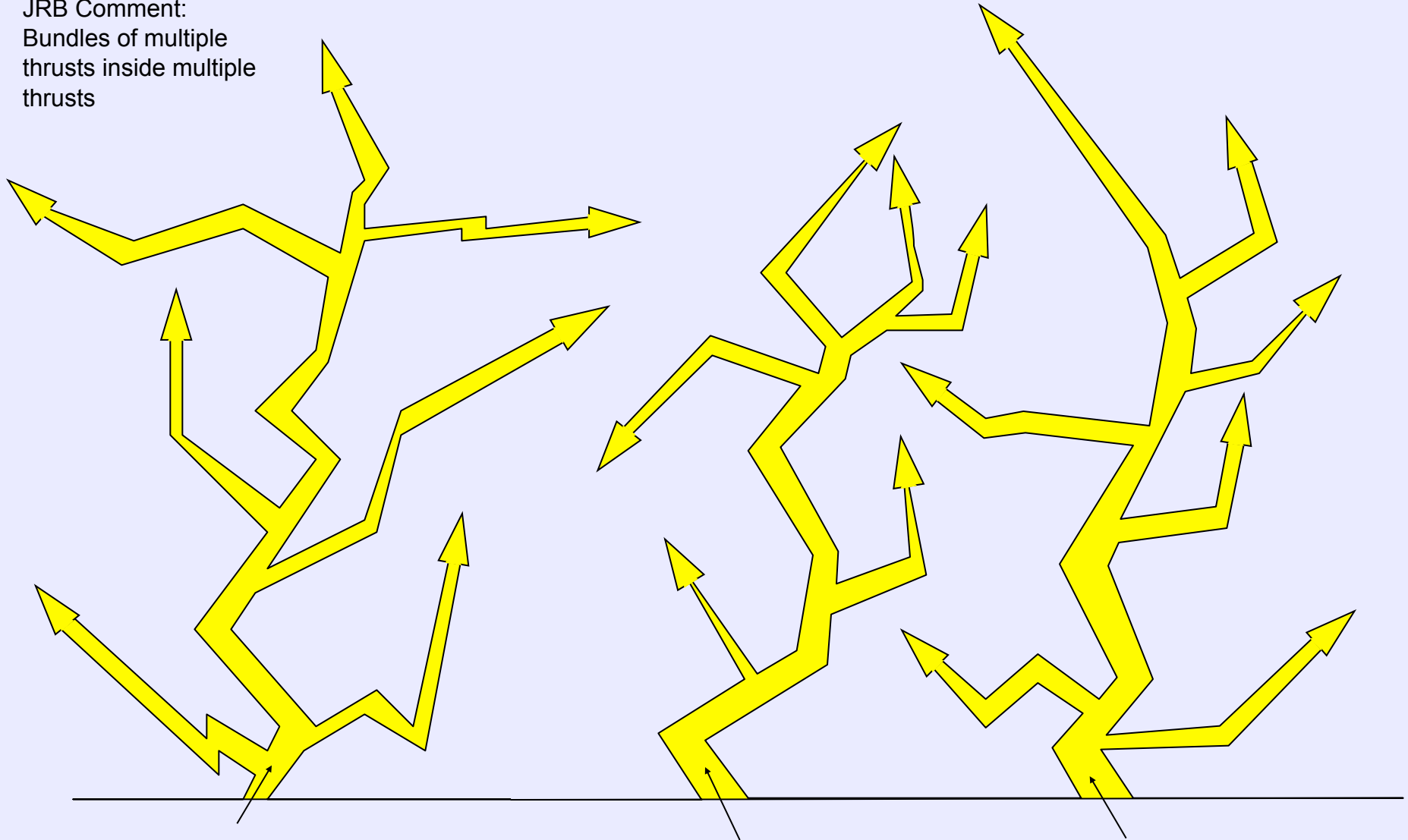
Or as stated by General Blumentritt,

- “The entire operational and tactical leadership method hinged upon ... **rapid**, concise assessment of situations ... **quick** decision and **quick** execution, on the principle: ‘each minute ahead of the enemy is an advantage.’”

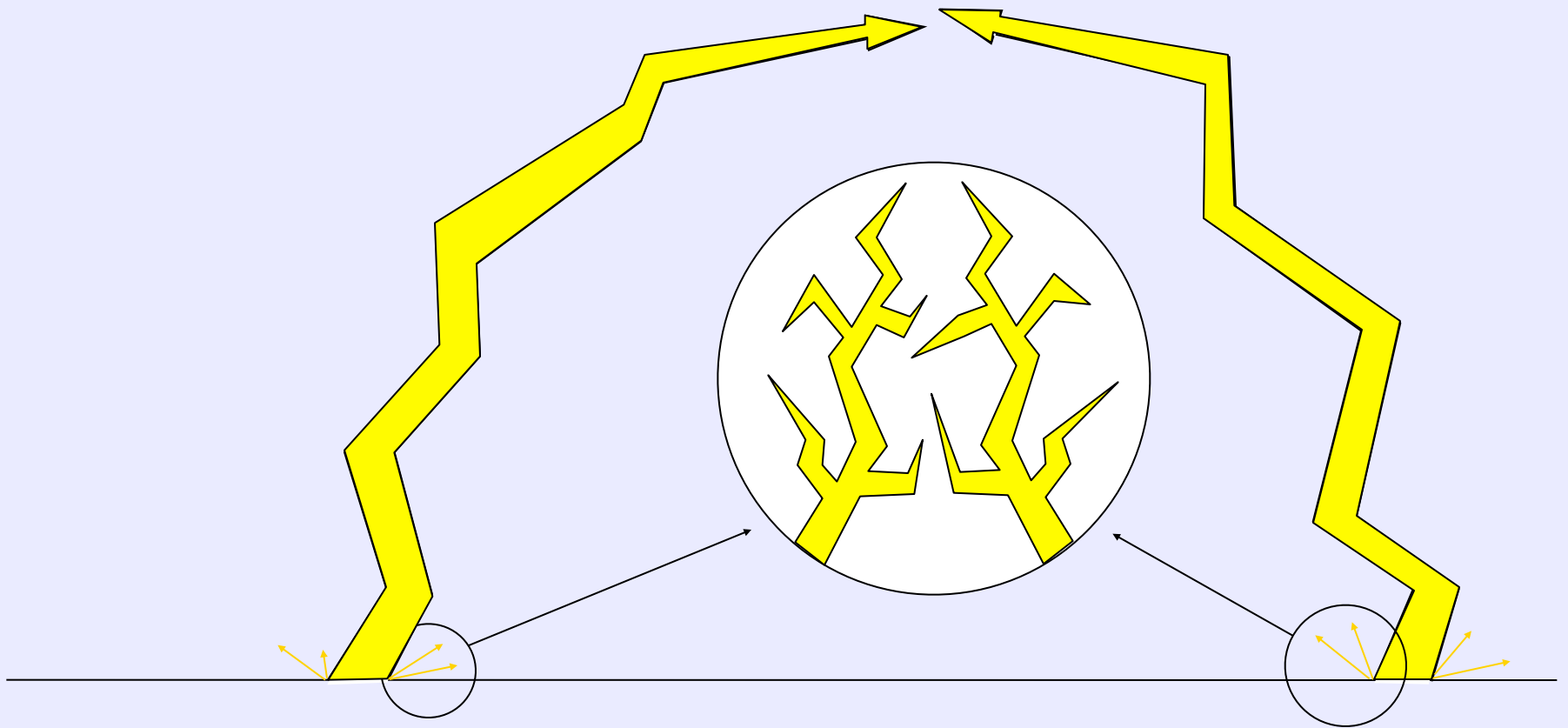
Impression of the Blitzkrieg penetration

Thrust and roll out/roll up tactics

JRB Comment:
Bundles of multiple
thrusts inside multiple
thrusts



Impression of the pincer envelopment



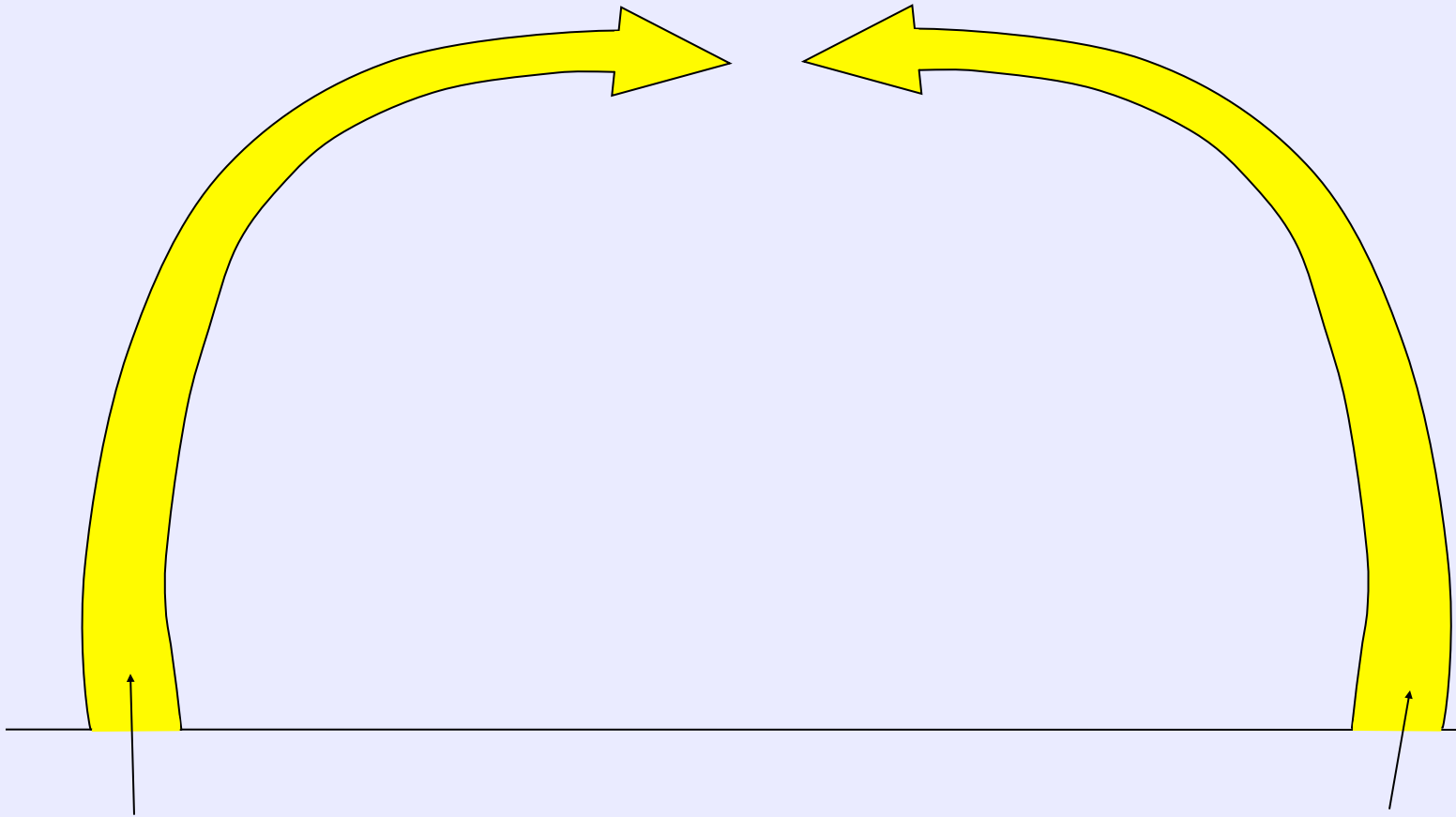
Impression of the envelopment



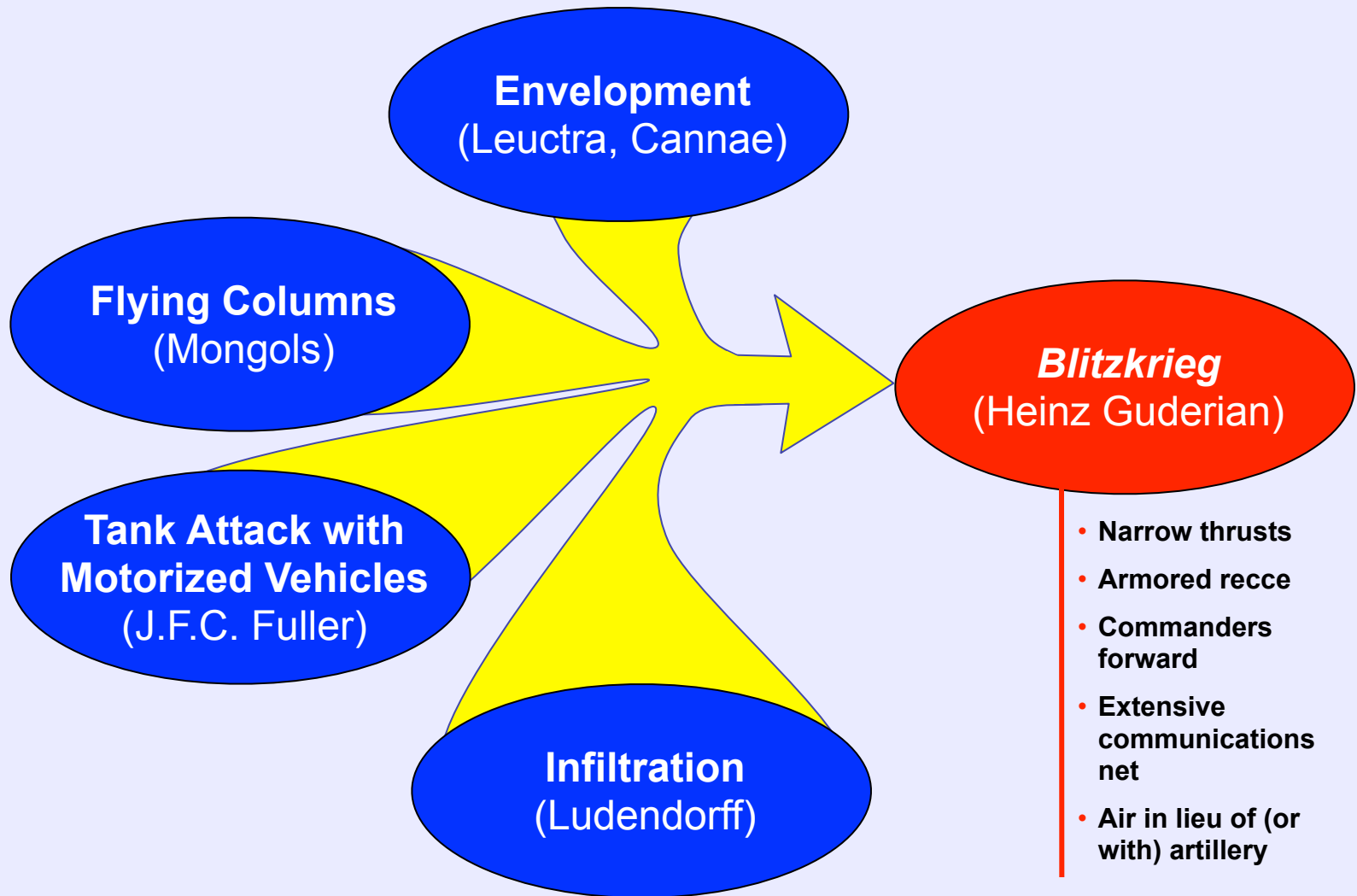
JRB comment: "Even if the situation is the same, do it differently." – Gen Hermann Balck

Typical impression of Blitzkrieg envelopment

JRB comment: typical, but incorrect. Should be multiple thrusts, instead of a steamroller.



Creation of the Blitzkrieg



? Natural question ?

Why employ multiple thrusts, bundles of multiple thrusts, or bundles of thrusts inside bundles of thrusts?

Response

- Present **many** (fast breaking) **simultaneous** and **sequential** happenings to generate confusion and disorder—thereby stretch out time for adversary to respond in a directed fashion.
- **Multiply opportunities** to **uncover**, **create**, and **penetrate** gaps, exposed flanks, and vulnerable rears.
- **Create** and **multiply opportunities** to splinter organism and envelop disconnected remnants, thereby dismember adversary thru the tactical, grand tactical, and strategic levels.

Which lead to:

Essence of Blitzkrieg

Employ a *Nebenpunkte/Schwerpunkt* maneuver philosophy to **generate ambiguity, realize deception, exploit superior mobility**, and **focus violence** as basis to **quickly**:

- **Create many opportunities** to **penetrate** weaknesses in the form of any moral or mental inadequacies as well as any gaps or exposed flanks that open into adversary's vulnerable rear and interior, hence
- **Create** and **exploit opportunities** to repeatedly **penetrate** adversary organism at all levels (tactical, grand tactical, and strategic) and in many ways in order to splinter, envelop, and roll up/wipe out isolated remnants, thereby generate confusion and disorder, hence
- **Create** and **exploit opportunities** to disrupt his system for communication, command, and support, as well as undermine or seize those connections or centers that he depends upon, thus shake his will or capacity to decisively commit his back-up echelons, operational reserves, and/or strategic reserves, thereby magnify adversary's confusion and disorder and convince him to give up.

Intent

Create grand tactical success then exploit and expand it into strategic success for a decisive victory.

Implication

Blitzers, by being able to **infiltrate** or **penetrate** or **get inside** adversary's system, generate many moral-mental-physical non-cooperative (or isolated) centers of gravity, as well as undermine or seize those centers of gravity adversary depends upon, in order to magnify friction, produce paralysis, and bring about adversary collapse.

World War II

Blitzkrieg

Key to success

- Emphasis on a common outlook and freedom of action that are exploited by mission and *Schwerpunkt* concepts to fix responsibilities as well as to rapidly shape, focus, and shift operations and support at all levels.
- Flexible command—based on a common outlook and freedom of action that are exploited by mission and *Schwerpunkt*—that encourages lower-level combat leaders (forward) to exploit opportunities generated by rapid action within a broad loosely woven scheme laid down from central command.
- Intelligence, reconnaissance (air and ground) and stratagem emphasized before and during combat operations to unmask and shape patterns of adversary strengths, weaknesses, moves, and intentions.
- Broad use of *Schwerpunkt* concept coupled with fast tempo/fluidity-of-action of armored teams and air support permit blitzers to repeatedly reshape strength and rapidly shift it against, or through, weaknesses thereby generate doubt and uncertainty that magnify into panic and chaos.
- Superior mobile communications to maintain cohesion of overall effort and to enable higher command levels to allocate reserves and support and to reshape as well as shift focus of main effort.
- Essential and only essential logistics tail (using airlift when appropriate and necessary) to support high-speed movement and rapid shift among routes of advance.

Blitzkrieg results

Successful	
Poland	1939
France	1940
Balkans	1941
Russia	1941
North Africa	1941-42
Russia	Summer 1942
Russia	Feb-Mar 1943
Advance thru France	1944
Manchuria	1945
Middle East	1967
Czechoslovakia	1968
Middle East	1973

Unsuccessful	
Russia	Winter 1941-42
Russia	Fall-Winter 1942-43
North Africa	1942
Russia	Summer 1943
Ardennes	Winter 1944-45

Modern guerrilla campaign

Action

- Capitalize on discontent and mistrust generated by corruption (real or imagined), exploitation, oppression, incompetence, and unwanted presence of existing regime to evolve a common cause or unifying theme as basis to organize and maintain mass popular support through a militant political program.
- Set up administrative and military organization, sanctuary, and communications network under the control of the guerrilla political leadership without arousing regime's intelligence and security apparatus. Build up a shadow government, with "parallel hierarchies", in localities and regions that can be made ripe for insurrection/revolution by infiltrating cadres (vanguards) who can not only subvert existing authority but also convert leaders and people to guerrilla cause and organizational way.
- Exploit subversion of government and conversion of people to guerrilla cause to create an alien atmosphere of security and intelligence in order to "blind" regime to guerrilla plans, operations, and organization yet make "visible" regime's strengths, weaknesses, moves, and intentions.
- Shape propaganda, foment civil disorders (such as rallies, demonstrations, strikes, and riots), use selected terrorism, perform sabotage, and exploit resulting misinformation to expand mistrust and sow discord thereby magnify the appearance of corruption, incompetence, etc., and the inability of regime to govern.
- Employ tiny cohesive bands for surprise hit-and-run raids against lines of communication to gain arms and supplies as well as disrupt government communications, coordination, and movement. Retreat and melt into environment when faced by superior police and armed forces.
- Disperse or scatter tiny guerrilla bands to arouse the people (and gain recruits) as well as harass, wear out, and spread out government forces while larger bands, or mobile formations, concentrate to wipe out his dispersed, isolated, and relatively weak fractions by sudden ambush or sneak attack.
- Play upon the grievances and obsessions of people (via propaganda, re-education, and selected successes) as well as encourage government to indiscriminately take harsh reprisal measures against them in order to connect the government with expanding climate of mistrust, discord, and moral disintegration. Simultaneously, show (by contrast) that guerrillas exhibit moral authority, offer competence, and provide desired benefits in order to further erode government influence, gain more recruits, multiply base areas, and increase political infrastructure, hence expand guerrilla influence/control over population and countryside.
- Demonstrate disintegration of regime by striking *cheng/ch'i* fashion, with small fluid bands and ever-larger mobile formations, to split up, envelop, and annihilate fractions of major enemy forces.

Idea

- Defeat existing regime politically by showing they have **neither the moral right nor demonstrated ability** to govern and militarily by continuously using **stealth/fast-tempo/fluidity-of-action and cohesion** of small bands and larger units in cooperation with political "agitprop" (agitation/propaganda) teams as basis to harass, confuse and ultimately destroy the will or capacity to resist.

Modern guerrilla campaign

Essence

- Capitalize on corruption, injustice, incompetence, etc., (or their appearances) as basis to generate atmosphere of mistrust and discord in order to sever moral bonds that bind people to existing regime.

Simultaneously,

- Share existing burdens with people and work with them to root out and punish corruption, remove injustice, eliminate grievances, etc., as basis to form moral bonds between people and guerrillas in order to bind people to guerrilla philosophy and ideals.

Intent

- Shape and exploit **crises** environment that permits guerrilla **vanguards** or cadres to pump up guerrilla resolve, attract the uncommitted, and drain away adversary resolve as foundation to replace existing regime with guerrilla regime.

Implication

- Guerrillas, by being able to **penetrate** the very essence of their adversary's moral-mental-physical being, generate many moral-mental-physical non-cooperative (or isolated) centers of gravity, as well as subvert or seize those centers of gravity that adversary regime must depend upon, in order to magnify friction, produce paralysis, and bring about collapse.

Yet,

- Guerrillas shape or influence moral-mental-physical atmosphere so that potential adversaries, as well as the uncommitted, are drawn toward guerrilla philosophy and are empathetic toward guerrilla success.

Looking back

Now, if we look at the ingredients that make-up **modern guerrilla campaigns** as well as refer back to our discussion about **Soviet revolutionary strategy** and the **impact of 19th century capitalism on insurrection/revolution**, we gain some insight into the strategic philosophy that underlies today's guerrilla efforts.

Modern guerrilla campaign

Underlying strategic philosophy

- Guerrilla **vanguards** employ a variety of means to play upon regime's internal frictions, obsessions, etc., as well as stimulate discontent/mistrust of people. In this way, vanguards sow discord that in turn magnifies regime's internal frictions, obsessions, etc., thereby paralyzes its ability to come to grips with **crises** that further fan atmosphere of mistrust and discord that feeds crises—hence pushes them out of control.

Simultaneously,

- Guerrilla vanguards share burden as well as help people cope with turmoil—that vanguards keep fanning and enmesh people into—in order to demonstrate ability to deal with surging crises as well as shape image that only guerrillas offer a way-out of existing unpleasant circumstances.

Insight

Insurrection/revolution becomes ripe when many perceive an **illegitimate inequality**—that is, when the people see themselves as being exploited and oppressed for the undeserved enrichment and betterment of an elite few. This means that the guerrillas not only need an illegitimate inequality but they also need support of the people; otherwise, insurrection/revolution is impossible.

? Raises question ?

In the deepest possible sense what does it mean to have support of the people?

Message

- Guerrillas must establish implicit connections or bonds with people and countryside.

In other words

- Guerrillas must be able to blend into the emotional-cultural-intellectual environment of people until they become one with the people.

In this sense

- People feelings and thoughts must be guerrilla feeling and thoughts while guerrilla feelings and thoughts become people feelings and thoughts; people aspirations must be guerrilla aspirations while guerrilla aspirations become people aspirations; people goals must be guerrilla goals while guerrilla goals become people goals.

Result

- Guerrillas become indistinguishable from people while government is isolated from people.

Modern guerrilla campaign

Key to success

- Ability to continuously demonstrate government weakness, erode government influence, and cause government to alienate itself from people.
- Support of people (both psychological and physical) for intelligence, recruits, shelter, transportation, refuge, food, money, and medical aid.
- Access to (more or less permanent) safe sanctuaries or base areas and/or fluid bases that can be shifted from place to place, away from enemy forces—in order to rest, recuperate, repair materiel, etc., as well as indoctrinate, train, and equip recruits.
- Use of stealth/fast-tempo/fluidity-of-action coupled with cohesion of guerrilla bands as basis for:
 - **dispersion**, to arouse people, to avoid adversary strength, and to force government to thin out, or disperse, its strength;
 - **concentration**, to hit and wipe out isolated fractions;
 - **shifting of effort** (in these as well as other activities), in order to gain and keep initiative.

Guerrilla results

Successful	
American colonies	1775-1781
Spain	1808-1814
Russia	1812
German East Africa	1914-1918
Arabia	1916-1918
China	1927-1949
Russia	1941-1945
Yugoslavia	1941-1945
Indochina	1945-1954
Algeria	1954-1962
Cuba	1956-1959
South Vietnam	1958-1975

Unsuccessful	
Philippines	1899-1902
South Africa	1900-1902
Greece	1944-1949
Philippines*	1946-1954
Malaya*	1948-1960

* Regime exercised particular care not to inflict casualties and to protect population.

Blitz/guerrilla theme

Essence

- **Avoid battles**—instead penetrate adversary to **subvert, disrupt, or seize** those connections, centers, and activities that provide **cohesion** (e.g., psychological/moral bonds, communications, lines of communication, command and supply centers ...)
- Exploit ambiguity, deception, superior mobility, and sudden violence to generate initial **surprise** and **shock** followed by **surprise** and **shock** again, again, again ...
- Roll up/wipe out the isolated units or remnants created by the subversion, surprise, shock, disruption, and seizure.

Intent

- Exploit subversion, surprise, shock, disruption, and seizure to generate **confusion, disorder, panic, etc.**, thereby **shatter cohesion, paralyze effort, and bring about adversary collapse.**

Disrupt the connections and centers that provide cohesion

Israeli example (a la Gen. Y. Yadin - 1949)

To exploit the principles of war for our purpose and base ourselves upon (the) strategic indirect approach, so as to determine the issue of the fighting even before fighting has begun, it is necessary to achieve the three following aims:

- a. to cut the enemy's lines of communications, thus paralyzing his physical build-up;
- b. to seal him off from his lines of retreat, thus undermining the enemy's will and destroying his morale;
- c. to hit his centers of administration and disrupt his communications, thus severing the link between his brain and limbs.

[Editors' note: From a 1949 essay by General Yigael Yadin, Chief of the General Staff of the Israeli Forces, entitled "A Strategical Analysis of Last Year's Battles." It was originally published in the *Israeli Forces Journal* (Sep 1949). A condensed translation appears in Appendix 2 of B. H. Liddel Hart's *Strategy*, 2nd Ed., Meridian (Penguin) 1991, p. 387.]

? **Key question** ?

Why have blitz and guerrilla tactics been so extraordinarily successful?

Message

- Blitz and guerrillas, by being able to operate in a **directed**, yet **more indistinct**, **more irregular**, and **quicker manner** than their adversaries, can:
 - Repeatedly concentrate or disperse more inconspicuously and/or more quickly from or to lower levels of distinction (organizational, operational, and environmental) without losing internal harmony, as well as,
 - Repeatedly and unexpectedly **infiltrate** or **penetrate** adversaries' vulnerabilities and weaknesses in order to splinter, isolate or envelop, and overwhelm disconnected remnants of adversary organism.

Or put another way,

- Blitz and guerrillas, by operating in a directed, yet more indistinct, more irregular, and quicker manner, **operate inside** their adversaries' observation-orientation-decision-action loops or **get inside** their mind-time-space as basis to **penetrate** the moral-mental-physical being of their adversaries in order to pull them apart and bring about their collapse.

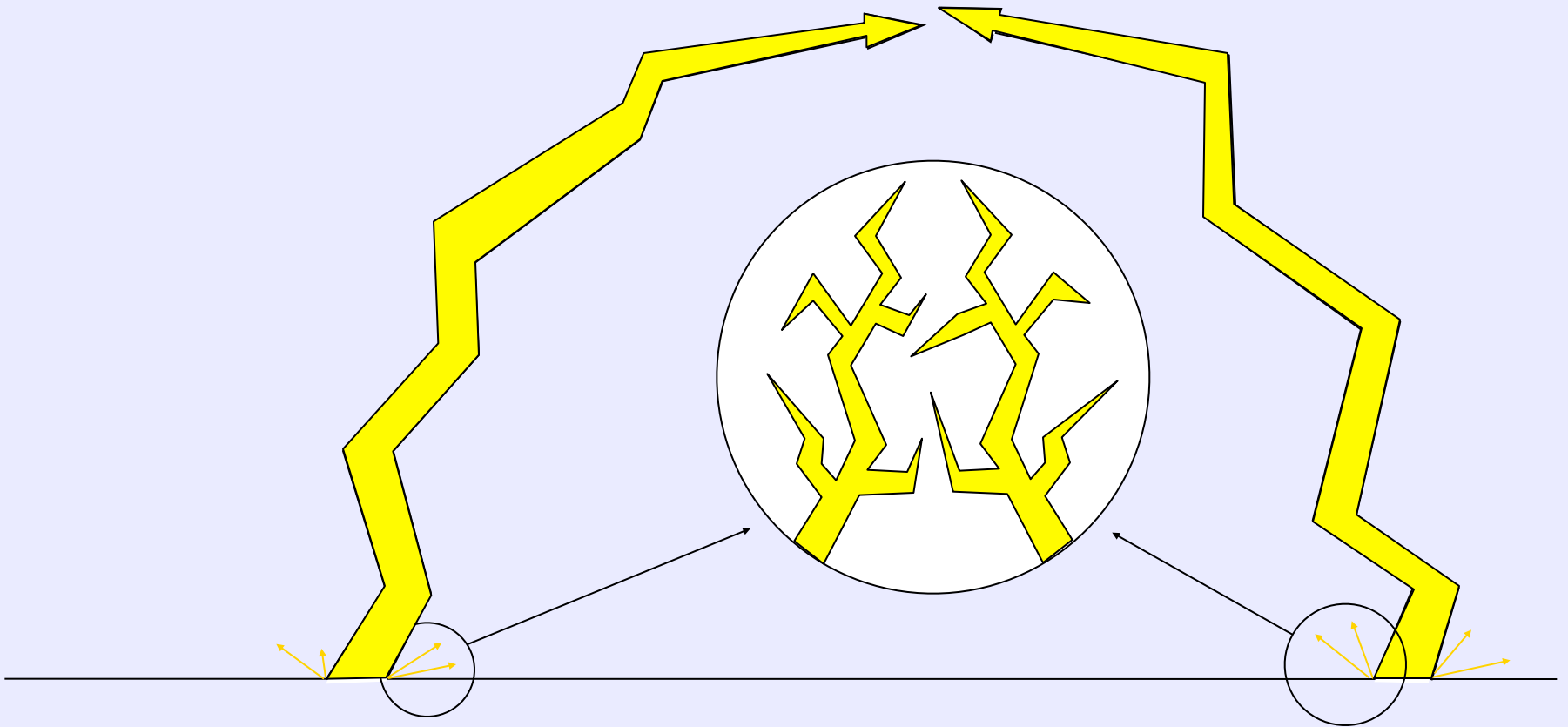
Underlying idea

- Such amorphous, lethal, and unpredictable activity by blitz and guerrillas make them appear awesome and unstoppable, which altogether produce uncertainty, doubt, mistrust, confusion, disorder, fear, panic ... and ultimately collapse—a notion implied by Sun Tzu around 400 B.C. and more recently by J.F.C. Fuller after observing the impact of Ludendorff's infiltration tactics in 1918.

? Natural questions ?

- How can we defend against or counter the blitz?
- How can we defend against or counter the guerrilla movement?

“Where are the weaknesses of the blitz?”



Key point

Difficult to sustain fast tempo **and** maintain cohesion of blitz effort when forced to repeatedly and rapidly shift concentration of strength against weakness.

Counter-blitz

(Variation of German experiences during WWII)

Posture

- Emphasize intelligence, reconnaissance (air and ground) and set up screen of forward outposts and patrols to report on adversary activity and warn of any impending or actual incursions.
- Deploy, disperse, and frequently redeploy/redisperse reconnaissance and mobile antitank/infantry/armored teams together with artillery in region behind screen so that they can mask dispositions as well as move inconspicuously/quickly to focus and shift local main efforts against adversary thrusts.
- Place armored teams, as mobile reserve, in echelon behind recce, anti-tank/infantry/armor and artillery so that they can easily focus effort and quickly move in to decapitate any local breakthrough—or push off for a blitz counterstroke.

Action

- Employ air and fast moving mobile/armored reconnaissance teams to determine direction/strength of thrusts and to continuously harass by repeated delaying actions and hit-and-run attacks in order to slow momentum and erode cohesion of blitz attack.
- Inconspicuously move in with high-speed mobile anti-tank/infantry/armored teams together with air and artillery support to strengthen favorable sectors. Hit adversary thrusts and resupply efforts with ambushes and with repeated sudden/sharp flank and rear counter-thrusts to channel as well as drain-away momentum and break up cohesion of blitz thrusts.
- Concentrate swift armored combat forces (held in reserve) and use with air to rapidly drive a shallow and/or deep flank counterstroke in order to swing in behind and roll-up blitz offensive in detail (counterstroke launched while adversary is moving forward).

Idea

- Smash blitz offensive by **inconspicuously** using **fast-tempo/fluidity-of-action and cohesion** of counter-blitz combat teams as basis for **shifting of forces** and **quick focus of air and ground effort** to throttle momentum, shatter cohesion, and envelop blitz in order to destroy adversary's capacity to resist.

Blitz and counter-blitz

Main features and emphasis

- Intelligence and recce action
- Infiltration/penetration and isolation
- Ambiguity, deception, speed, and violence to generate surprise and shock
- Mission/*Schwerpunkt* philosophy
- Acceptance of “gaps” and (related) “risks” in support of mission/*Schwerpunkt* philosophy
- Echelon-in-depth (offense and defense)
- Reserves reconstituted and accumulated (at all levels) to support or generate success
- Posture of positions, alternative positions, dummy positions and roving positions to mask maneuvers and intentions

Guerrilla/counter-guerrilla campaigns

Key points

- Guerrilla **vanguards** need cause and support of people that is dependent upon regime's unwillingness/inability to come to grips with **crises** of its own making.

Or more simply,

- Crises and vanguards represent the marriage of instability and initiative that create and expand guerrilla effort.

Hence,

- The thought occurs that in order to dry up a guerrilla upsurge, one should strike at those root causes or illegitimate inequalities that generate and exacerbate crises as well as provide a favorable climate for vanguards to form or operate in.

Counter-guerrilla campaign

Action

- Undermine guerrilla cause and destroy their cohesion by demonstrating integrity and competence of government to represent and serve needs of people—rather than exploit and impoverish them for the benefit of a greedy elite.*
- Take political initiative to root out and visibly punish corruption. Select new leaders with recognized competence as well as popular appeal. Ensure that they deliver justice, eliminate grievances, and connect government with grass roots.*
- Infiltrate guerrilla movement as well as employ population for intelligence about guerrilla plans, operations, and organization.
- Seal off guerrilla regions from outside world by diplomatic, psychological, and various other activities that strip away potential allies as well as by disrupting or straddling communications that connect these regions with outside world.
- Deploy administrative talent, police, and counter-guerrilla teams into affected localities and regions to inhibit guerrilla communication, coordination and movement; minimize guerrilla contact with local inhabitants; isolate their ruling cadres; and destroy their infrastructure.
- Exploit presence of above teams to build up local government as well as recruit militia for local and regional security in order to protect people from the persuasion and coercion efforts of the guerrilla cadres and their fighting units.
- Use special teams in a complementary effort to penetrate guerrilla-controlled regions. Employ (guerrillas' own) tactics of reconnaissance, infiltration, surprise hit-and-run, and sudden ambush to keep roving bands off-balance, make base areas untenable, and disrupt communication with outside world.
- Expand these complementary security/penetration efforts into affected region after affected region in order to undermine, collapse, and replace guerrilla influence with government influence and control.
- Visibly link these efforts with local political/economic/social reform in order to connect central government with hopes and needs of people, thereby gain their support and confirm government legitimacy.

Idea

- Break guerrillas' moral-mental-physical hold over the population, destroy their cohesion, and bring about their collapse via political initiative that demonstrates **moral legitimacy** and **vitality** of government and by relentless military operations that emphasize **stealth/fast-tempo/fluidity-of-action** and **cohesion** of overall effort.

* If you cannot realize such a political program, you might consider changing sides!

Note

We have indicated again and again the importance of popular support for guerrilla or counter-guerrilla success. Why?

Insight

Without support of people the guerrillas (or counter-guerrillas) have neither a vast hidden intelligence network nor an invisible security apparatus that permits them to “see” into adversary operations yet “blinds” adversary to their own operations.

Categories of conflict

Categories of conflict

- Now looking back and reflecting upon the panorama of military history, we can imagine three kinds of human conflict:
 - **Attrition warfare**—as practiced by the Emperor Napoleon, by all sides during the 19th century and during World War I, by the Allies during World War II, and by present-day nuclear planners.
 - **Maneuver conflict**—as practiced by the Mongols, General Bonaparte, Confederate General Stonewall Jackson, Union General Ulysses S. Grant, Hitler’s generals (in particular Manstein, Guderian, Balck, Rommel) and the Americans under Generals Patton and MacArthur.
 - **Moral conflict**—as practiced by the Mongols, most guerrilla leaders, a very few counter-guerrillas (such as Magsaysay) and certain others from Sun Tzu to the present.
- With these comments in mind let’s look into the essentials of each.

Attrition observations

- Firepower, as a destructive force, is king.
- Protection (trenches, armor, dispersion, etc.) is used to weaken or dilute effects of enemy firepower.
- Mobility is used to bring firepower to bear or to evade enemy fire.
- Measures of success are (now) “body count” and targets destroyed.
- “Seize and hold terrain objectives” replaces Napoleon’s dictum: Destroy enemy army.

Essence of attrition warfare

Create and exploit

- **Destructive force:**

Weapons (mechanical, chemical, biological, nuclear, etc.) that kill, maim, and/or otherwise generate widespread destruction.

- **Protection:**

Ability to minimize the concentrated and explosive expression of destructive force by taking **cover** behind natural or manmade obstacles, by **dispersion** of people and resources, and by being **obscure** using camouflage, smoke, etc., together with cover and dispersion.

- **Mobility:**

Speed or rapidity to focus destructive force or move away from adversary's destructive focus.

Payoff

- Frightful and debilitating attrition via widespread destruction as basis to:
 - Break enemy's will to resist
 - Seize and hold terrain objectives

Aim

Compel enemy to surrender
and sue for peace

Observations regarding maneuver

- Ambiguity, deception, novelty, mobility, and violence (or threat thereof) are used to generate surprise and shock.
- Fire and movement are used in combination, like *cheng/ch'i* or *Nebenpunkte/Schwerpunkt*, to tie up, divert, or drain away adversary attention and strength in order to expose as well as menace and exploit vulnerabilities or weaknesses elsewhere.
- Indications of success tend to be qualitative and are related to the widespread onset of confusion and disorder, frequent envelopments, high prisoner counts, or **any other phenomenon that suggests inability to adapt to change.**

Essence of maneuver conflict

Create, exploit, and magnify

- **Ambiguity**
Alternative or competing impressions of events as they may or may not be.
- **Deception**
An impression of events as they are not.
- **Novelty**
Impressions associated with events/ideas that are unfamiliar or have not been experienced before.
- **Fast transient maneuvers**
Irregular and rapid/abrupt shift from one maneuver event/state to another.
- **Effort (*cheng/ch'i* or *Nebenpunkte/Schwerpunkt*)**
An expenditure of energy or an irruption of violence—focused into, or thru, features that permit an organic whole to exist.

Payoff

- **Disorientation**
Mismatch between events one (seemingly) observes or anticipates and events (or efforts) he must react or adapt to.
- **Surprise**
Disorientation generated by **perceiving** extreme change (of events or efforts) over a short period of time.
- **Shock**
Paralyzing state of disorientation generated by extreme or violent change (of events or efforts) over a short period of time.
- **Disruption**
State of being split apart, broken up, or torn asunder.

Aim

Generate many non-cooperative centers of gravity, as well as disorient or disrupt those that adversary depends upon, in order to magnify friction, shatter cohesion, produce paralysis, and bring about his collapse.

Note

Surprise and shock can also be represented as an overload beyond one's immediate ability to respond or adapt. In this context, we may view the “essence of maneuver conflict” a bit differently—

Essence of maneuver conflict

Create, exploit, and magnify

- **Ambiguity:**
Alternative or competing impressions of events as they may or may not be.
- **Deception:**
An impression of events as they are not.
- **Novelty:**
Impressions associated with events/ideas that are unfamiliar or have not been experienced before.
- **Fast transient maneuvers:**
Irregular and rapid/abrupt shift from one maneuver event/state to another.
- **Effort (*cheng/ch'i* or *Nebenpunkte/Schwerpunkt*):**
An expenditure of energy or an irruption of violence—focused into, or thru, features that permit an organic whole to exist.

Payoff

- **Disorientation:**
Mismatch between events one observes or imagines and events (or efforts) he must react or adapt to.
- **Disruption:**
State of being split-apart, broken-up, or torn asunder.
- **Overload:**
A welter of threatening events/efforts beyond one's mental or physical capacity to adapt or endure.

Aim

Generate many non-cooperative centers of gravity, as well as disorient, disrupt, or overload those that adversary depends upon, in order to magnify friction, shatter cohesion, produce paralysis, and bring about his collapse;

or equivalently,

Uncover, create, and exploit many vulnerabilities and weaknesses, hence many opportunities to pull adversary apart and isolate remnants for mop-up or absorption.

Observations related to moral conflict

Gen. Hermann Balck

Theme

- No fixed recipes for organization, communications, tactics, leadership, etc.
- Wide freedom for subordinates to exercise imagination and initiative—yet harmonize within intent of superior commanders.
- Heavy reliance upon **moral** (human values) instead of material superiority as basis for cohesion and ultimate success.
- Commanders must create a bond and breadth of experience based upon **trust—not mistrust**—for cohesion.

How is this atmosphere achieved?

- **By example**, leaders (at all levels) must demonstrate requisite **physical energy**, **mental agility**, and **moral authority** to inspire subordinates to enthusiastically cooperate and take initiative within superior's intent.

What is the price?

- Courage to share danger and discomfort at the front;
- Willingness to support and promote (unconventional or difficult) subordinates who accept danger, demonstrate initiative, take risks, and come up with new ways toward mission accomplishment;
- Dedication and resolve to face up to and master uncomfortable circumstances that fly in the face of the traditional solution.

Benefit

- Internal simplicity that permits rapid adaptability.

Observations related to moral conflict

Cyril Falls, *The Art of War from The Age of Napoleon to The Present Day*, 1961

Page 124

In the First World War 'cellar life' had been a feature of the adversities of Paris, which actually came under the fire of specially built long-range guns in 1918, as well as aircraft bombing. **In the East End of London air raids cause a tendency to panic in the latter part of 1917, and, whether there was a raid or not, some 300,000 people crowded each night into the underground railway stations and slept on the platforms ... There was little organized civil defence beyond the reduction of lights.**

Page 161

The Germans, who were far ahead of any rival in the science of lighter-than-air construction, refused to accept the general belief that the future lay entirely with the heavier-than-air. Their Zeppelins ... were employed chiefly in night attacks on England. **On one occasion a single airship did a million pounds worth of damage in a raid, but on the whole their success was mainly moral and measured in terms of absenteeism in factories and sensational drops in production of warlike material.**

Page 165

Early in the war the German Armies owed much in their victories in Poland, Belgium, and France to their dive-bombers. These aircraft acted in close support to the armour and infantry ... They often put hostile artillery out of action, but generally by driving the detachments from their guns. **The successes were won for the most part by moral rather than material effect. To troops unused to them, especially the French division of low categories, they proved extremely unsettling.**

Observations related to moral conflict

Insights regarding Falls' statements and Balck's ideas

- From Falls' comments we note (with slight alteration) the following words and phrases: “panic ... moral ... absenteeism ... sensational drops in production ... dive bombers' success were for the most part moral ... to troops unused to them ... they proved extremely unsettling.” A quick glance shows that all these words and phrases are directly related to one another.
- Going even further we can say: Falls' comments on pages 124, 161, and 165 suggest that **moral effects** are related to the **menace** posed by the Zeppelins and dive bombers, and the **uncertainty** associated with not knowing what to expect or how to deal with this menace. Put simply: **Moral effects** are related to **menace** and **uncertainty**.
- For a first cut this suggests that **moral strength** represents mental capacity to overcome **menace** and **uncertainty**.
- On the other hand, this first cut seems to leave out something that humans either need or must overcome for **collective moral strength**. Fortunately we have some clues:
 - First: Remember that guerrilla commanders (see Modern Guerrilla Campaign) stress use of propaganda, civil disorders, selected terrorism, etc., as basis to generate **mistrust** and discord.
 - Second: Balck emphasizes the importance of **trust**—**not mistrust**—for cohesion.
- Now, recognizing that both Balck and guerrilla commanders work in a hostile environment (of menace and uncertainty) that naturally breeds mistrust, it is clear that moral effects must include this factor.
- This suggest **moral strength** represents mental capacity to overcome **menace**, **uncertainty**, and **mistrust**.

Observations related to moral conflict

- Now by using moral strength as a point of departure—and by feeding in those unsettling or threatening experiences (a la Clausewitz) that either bring out fear, anxiety, and alienation, or their more noble counterweights: courage, confidence, and esprit—we can evolve the following related notions:
 - **Moral strength:** Mental capacity to overcome menace, uncertainty, and mistrust.
 - **Moral victory:** Triumph of courage, confidence, and esprit (de corps) over fear, anxiety, and alienation when confronted by menace, uncertainty, and mistrust.
 - **Moral defeat:** Triumph of fear, anxiety, and alienation over courage, confidence, and esprit when confronted by menace, uncertainty, and mistrust.
 - **Moral values:** Human values that permit one to carry on in the face of menace, uncertainty, and mistrust.
 - **Moral authority:** Person or body that can give one the courage, confidence, and esprit to overcome menace, uncertainty, and mistrust.
- Finally, by stripping away and recombining essentials—from these notions as well as from the ideas and experiences of Clausewitz, Balck, and Falls—we can evolve the essence of moral conflict.

Essence of moral conflict

Create, exploit, and magnify

- **Menace:**
Impressions of danger to one's well being and survival.
- **Uncertainty:**
Impressions, or atmosphere, generated by events that appear ambiguous, erratic, contradictory, unfamiliar, chaotic, etc.
- **Mistrust:**
Atmosphere of doubt and suspicion that loosens human bonds among members of an organic whole or between organic wholes.

Idea

- Surface, **fear**, **anxiety**, and **alienation** in order to generate many non-cooperative centers of gravity, as well as subvert those that adversary depends upon, thereby magnify internal friction.

Aim

Destroy moral bonds that permit an organic whole to exist

Suspicion

- The essence of moral conflict, as presented, seems to be one-sided and emphasizes the negative or dark side of one's moral make-up.

? Raises question ?

- How do we bring out the positive side? In other words—if courage, confidence, and esprit represent the positive counterweights to fear, anxiety, and alienation—what are the positive counterweights to menace, uncertainty, and mistrust?

Insight

- In addressing this question we find that the counterweights to menace and uncertainty are not at all obvious unless we start with mistrust and work in reverse order. Proceeding in this way we note that:
 - The presence of mistrust implies that there is a rupture or loosening of the human bonds or connections that permit individuals to work as an organic whole in **harmony** with one another. This suggests that harmony itself represents an appropriate counterweight to mistrust.
 - In dealing with uncertainty, **adaptability** seems to be the right counterweight. Otherwise, how can one adjust to the unforeseen or unpredictable nature of uncertainty?

JRB comment: the counterweight to “uncertainty” cannot be “certainty.”
 - Finally, with respect to menace one cannot be passive. Instead, **initiative** is needed. Otherwise, menace may obliterate the benefits associated with harmony and adaptability. Intuitively, this suggests that initiative is the right counterweight here.
- Using these ideas, together with the previous ideas already uncovered, we can modify and enrich the essence of moral conflict as follows:

Essence of moral conflict

Negative factors

- **Menace:**
Impressions of danger to one's well being and survival
- **Uncertainty:**
Impressions, or atmosphere, generated by events that appear ambiguous, erratic, contradictory, unfamiliar, chaotic, etc.
- **Mistrust:**
Atmosphere of doubt and suspicion that loosens human bonds among members of an organic whole or between organic wholes

Counterweights

- **Initiative:**
Internal drive to think and take action without being urged
- **Adaptability:**
Power to adjust or change in order to cope with new or unforeseen circumstances
- **Harmony:**
Interaction of apparently disconnected events or entities in a connected way

Aim

Pump up friction via negative factors to breed fear, anxiety, and alienation in order to generate many non-cooperative centers of gravity, as well as subvert those that adversary depends upon, thereby sever moral bonds that permit adversary to exist as an organic whole.

Simultaneously,

Build up and play counterweights against negative factors to diminish internal friction, as well as surface courage, confidence, and esprit, thereby make possible the human interactions needed to create moral bonds that permit us, as an organic whole, to shape and adapt to change.

Synthesis

Pattern for successful operations

- Goal
- Plan
- Action
- Support
- Command

Pattern for successful operations

Goal

- Diminish adversary's freedom of action while improving our freedom of action, so that our adversary cannot cope—while we can cope—with events/efforts as they unfold.

Plan

- Probe and test adversary to unmask strengths, weaknesses, maneuvers, and intentions.
- Employ a variety of measures that interweave menace-uncertainty-mistrust with tangles of ambiguity-deception-novelty as basis to sever adversary's moral ties and disorient or twist his mental images, hence mask-distort-magnify our presence and activities.
- Select initiative (or response) that is least expected.
- Establish focus of main effort together with other (related) effort and pursue directions that permit many happenings, offer many branches, and threaten alternative objectives.
- Move along paths of least resistance (to reinforce and exploit success).
- Exploit, rather than disrupt or destroy, those differences, frictions, obsessions, etc., of adversary organism that interfere with his ability to cope with unfolding circumstances.
- Subvert, disorient, disrupt, overload, or seize adversary's vulnerable, yet critical, connections, centers, and activities that provide cohesion and permit coherent observation-orientation-decision-action in order to dismember organism and isolate remnants for absorption or mop-up.

Action

- Observe-orient-decide-act **more inconspicuously, more quickly**, and with **more irregularity** as basis to keep or gain initiative as well as shape and shift main effort to repeatedly and unexpectedly penetrate vulnerabilities and weaknesses exposed by that effort or other effort(s) that tie up, divert, or drain away adversary attention (and strength) elsewhere.

Support

- Superior mobile communications
- Only essential logistics



to maintain cohesion of overall effort and sustain appropriate pace of operations within available resources

Command

- Decentralize, in a tactical sense, to encourage lower-level commanders to shape, direct, and take the sudden/sharp actions necessary to quickly exploit opportunities as they present themselves.
- Centralize, in a strategic sense, to establish aims, match ambitions with means/talent, sketch flexible plans, allocate resources, and shape focus of overall effort.

Impressions

- **Plan** and **action** statements suggest that we are trying to:
 - Penetrate adversary system and mask own system against his penetration;
 - Create a variety of impressions of what is occurring and what is about to occur;
 - Generate mismatches between what seems to be and what is;
 - Push adversary beyond his ability to adapt.
- Intentions that make-up **plan** cannot happen without application of transients that make-up **action**.

First impression

- Note how these strategic and tactical ideas that we evolved from the **plan** and **action** statements fit in nicely with the following comments by Napoleon:
 - The art of land warfare is an art of genius, of inspiration ... A general never knows anything with certainty, never sees his enemy clearly, never knows positively where he is. When armies are face to face, the least accident in the ground, the smallest wood, may conceal part of the enemy army. The most experienced eye cannot be sure whether it sees the whole of the enemy's army or only three-fourths. It is by the mind's eye, by the integration of all reasoning, by a kind of inspiration, that the general sees, knows, and judges.
 - The first quality for a commander in chief is a cool head which receives a just impression of things; he should not allow himself to be confused by either good or bad news; the impressions which he receives successively or simultaneously in the course of a day should classify themselves in his mind in such a way as to occupy the place which they merit; because reason and judgment are the result of the comparison of various impressions taken into just consideration.
- Above comments by Napoleon reveal ever-present vulnerabilities and weaknesses that commanders and subordinates alike must accept.

Hence,

- If we turn these comments around and connect them with the tactical and strategic ideas presented thus far, we surface a modern notion of grand tactics.

Which becomes:

Grand tactics

- Operate inside adversary's observation-orientation-decision-action loops, or get inside his mind-time-space, to create a tangle of threatening and/or non-threatening events/efforts as well as repeatedly generate mismatches between those events/efforts adversary observes, or anticipates, and those he must react to, to survive;

thereby
- Enmesh adversary in an amorphous, menacing, and unpredictable world of uncertainty, doubt, mistrust, confusion, disorder, fear, panic, chaos ... and/or fold adversary back inside himself;

thereby
- Maneuver adversary beyond his moral-mental-physical capacity to adapt or endure so that he can neither divine our intentions nor focus his efforts to cope with the unfolding strategic design or related decisive strokes as they penetrate, splinter, isolate or envelop, and overwhelm him.

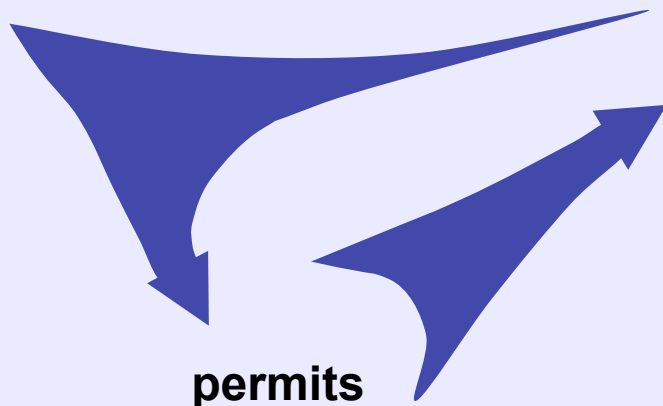
Second impression

Transients

- Observe, orient, decide and act more inconspicuously, more quickly, and with more irregularity ...

or put another way

- Operate inside adversary's observation-orientation-decision-action loops or get inside his mind-time-space.



**permits
one to**

Intentions

- Probe and test adversary to unmask strengths, weaknesses, maneuvers, and intentions.
- Employ a variety of measures that interweave menace-uncertainty-mistrust with tangles of ambiguity-deception-novelty as basis to **sever adversary's moral ties and disorient ...**
- Select initiative (or response) that is least expected.
- Establish focus of main effort together with other effort and pursue directions that permit many happenings, offer many branches, and threaten alternative objectives.
- Move along paths of least resistance (to reinforce and exploit success).
- Exploit, rather than disrupt or destroy, those differences, frictions, and obsessions of adversary organism that interfere with his ability to cope ...
- **Subvert, disorient, disrupt, overload, or seize** adversary's vulnerable, yet critical, connections, centers, and activities ... in order to dismember organism and isolate remnants for wrap-up or absorption.

• Generate uncertainty, confusion, disorder, panic, chaos ... to shatter cohesion, produce paralysis and bring about collapse.

- Become an extraordinary commander.

Which leads to:

Strategy

Penetrate adversary's moral-mental-physical being to dissolve his moral fiber, disorient his mental images, disrupt his operations, and overload his system—as well as subvert, shatter, seize, or otherwise subdue those moral-mental-physical bastions, connections, or activities that he depends upon—in order to destroy internal harmony, produce paralysis, and collapse adversary's will to resist.

Now altogether

Tactics

- Observe-orient-decide-act more inconspicuously, more quickly, and with more irregularity as basis to keep or gain initiative as well as shape and shift main effort to repeatedly and unexpectedly penetrate vulnerabilities and weaknesses exposed by that effort or other effort(s) that tie up, divert, or drain away adversary attention (and strength) elsewhere.

Grand tactics

- Operate inside adversary's observation-orientation-decision-action loops, or get inside his mind-time-space, to create tangles of threatening and/or non-threatening events/efforts as well as repeatedly generate mismatches between those events/efforts adversary observes, or imagines, and those he must react to, to survive;
thereby
- Enmesh adversary in an amorphous, menacing, and unpredictable world of uncertainty, doubt, mistrust, confusion, disorder, fear, panic, chaos ... and/or fold adversary back inside himself;
thereby
- Maneuver adversary beyond his moral-mental-physical capacity to adapt or endure so that he can neither divine our intentions nor focus his efforts to cope with the unfolding strategic design or related decisive strokes as they penetrate, splinter, isolate or envelop, and overwhelm him.

Strategy

- Penetrate adversary's moral-mental-physical being to dissolve his moral fiber, disorient his mental images, disrupt his operations, and overload his system, as well as subvert, shatter, seize, or otherwise subdue those moral-mental-physical bastions, connections, or activities that he depends upon, in order to destroy internal harmony, produce paralysis, and collapse adversary's will to resist.

Strategic aim

- Diminish adversary's capacity while improving our capacity to adapt as an organic whole so that our adversary cannot cope—while we can cope—with events/efforts as they unfold.

! An alternative portrait !

Now, after some introspection, it is not difficult to see that these tactical and strategic statements are very definitely destructive in nature. Keeping these words in mind, while working backwards thru this presentation, one is left with the impression that the destructive attrition-maneuver-moral ideas played-out in the “Categories of Conflict” aren’t much different than the tactical and strategic ideas that we have just discussed.

As a consequence, by stripping-down and recombining the ideas associated with both these conceptual streams, we can evolve an alternative portrait of ruin as follows:

Theme for disintegration and collapse

Synthesize

- **Lethal effort:**

Tie up, divert, or drain away adversary attention and strength as well as (or thereby) overload critical vulnerabilities and generate weaknesses.

- **Maneuver:**

Subvert, disorient, disrupt, overload, or seize those vulnerable yet critical connections, centers, and activities as basis to penetrate, splinter, and isolate remnants of adversary organism for mop-up or absorption.

- **Moral:**

Create an atmosphere of fear, anxiety, and alienation to sever human bonds that permit an organic whole to exist.

Idea

- Destroy adversary's moral-mental-physical harmony, produce paralysis, and collapse his will to resist.

Aim

Render adversary powerless by denying him the opportunity to cope with unfolding circumstances

Underlying insight

Unless one can **penetrate** adversary's moral-mental-physical being and sever those interacting bonds that permit him to exist as an organic whole—by being able to subvert, shatter, seize, or otherwise subdue those moral-mental-physical bastions, connections, or activities that he depends upon—one will find it exceedingly difficult, if not impossible, to collapse adversary's will to resist.

Which leads to

The name of the game

Morally-mentally-physically **isolate** adversary from allies or any outside support as well as isolate elements of adversary or adversaries from one another and overwhelm them by being able to penetrate and splinter their moral-mental-physical being at any and all levels.

? Raises question ?

How do we connect the tactical and strategic notions, or the theme for disintegration and collapse, with the national goal?

Via a sensible grand strategy that will:

- Support national goal;
- Pump up our resolve, drain away adversary resolve, and attract the uncommitted;
- End conflict on favorable terms;
- Ensure that conflict and peace terms do not provide seeds for (unfavorable) future conflict.

Grand strategy

Essence

- Shape pursuit of national goal so that we not only amplify our spirit and strength (while undermining and isolating our adversaries) but also influence the uncommitted or potential adversaries so that they are drawn toward our philosophy and are empathetic toward our success.

Basis

- An appreciation for the underlying self-interests, critical differences of opinion, internal contradictions, frictions, obsessions, etc., that we as well as the uncommitted and any potential or real adversaries must contend with.

Pattern

- **National goal**

Improve our fitness, as an organic whole, to shape and cope with an ever-changing environment.

- **Grand strategy**

Shape pursuit of national goal so that we not only amplify our spirit and strength (while undermining and isolating our adversaries) but also influence the uncommitted or potential adversaries so that they are drawn toward our philosophy and are empathetic toward our success.

- **Strategic aim**

Diminish adversary's capacity while improving our capacity to adapt as an organic whole so that our adversary cannot cope—while we can cope—with events/efforts as they unfold.

- **Strategy**

Penetrate adversary's moral-mental-physical being to dissolve his moral fiber, disorient his mental images, disrupt his operations, and overload his system, as well as subvert, shatter, seize, or otherwise subdue those moral-mental-physical bastions, connections, or activities that he depends upon, in order to destroy internal harmony, produce paralysis, and collapse adversary's will to resist.

- **Grand tactics**

Operate inside adversary's observation-orientation-decision-action loops, or get inside his mind-time-space, to create tangles of threatening and/or non-threatening events/efforts as well as repeatedly generate mismatches between those events/efforts adversary observes, or imagines, and those he must react to, to survive;

thereby

Enmesh adversary in an amorphous, menacing, and unpredictable world of uncertainty, doubt, mistrust, confusion, disorder, fear, panic, chaos ... and/or fold adversary back inside himself;

thereby

Maneuver adversary beyond his moral-mental-physical capacity to adapt or endure so that he can neither divine our intentions nor focus his efforts to cope with the unfolding strategic design or related decisive strokes as they penetrate, splinter, isolate or envelop, and overwhelm him.

- **Tactics**

Observe-orient-decide-act more inconspicuously, more quickly, and with more irregularity as basis to keep or gain initiative as well as shape and shift main effort to repeatedly and unexpectedly penetrate vulnerabilities and weaknesses exposed by that effort or other effort(s) that tie-up, divert, or drain away adversary attention (and strength) elsewhere.

Insight

On one hand, as shown on the previous chart, the national goal and grand strategy tend to be constructive in nature. On the other hand, the strategic aim, strategy, grand tactics, and tactics are destructive in nature and operate over a shorter time frame.

In this sense, the upper two and the latter four notions, as expressed, appear to be in disharmony with one another. Yet, application of these latter four strategic and tactical notions permit real leadership to avoid high attrition, avoid widespread destruction, and gain a quick victory. This, combined with shattered cohesion, paralysis, and rapid collapse demonstrated by the existing adversary regime, makes it appear corrupt, incompetent, and unfit to govern.

Under these circumstances, leaders and statesmen offering generous terms can form the basis for a viable peace. In this sense, the first two and the latter four notions can be in harmony with one another.

Further elaboration

Up to this point—by repeatedly adding, stripping away, and recombining many different, yet similar, ideas and thoughts—we have examined the nature of conflict, survival, and conquest in many different ways.

A review and further manipulation of the ideas and thoughts that make up these different ways suggest that for success over the long haul and under the most difficult conditions, one needs some unifying vision that can be used to attract the uncommitted as well as pump up friendly resolve and drive and drain away or subvert adversary resolve and drive. In other words, what is needed is a vision rooted in human nature so noble, so attractive that it not only attracts the uncommitted and magnifies the spirit and strength of its adherents, but also undermines the dedication and determination of any competitors or adversaries.

Moreover, such a unifying notion should be so compelling that it acts as a catalyst or beacon around which to evolve those qualities that permit a collective entity or organic whole to improve its stature in the scheme of things. Put another way, we are suggesting a need for a supra-orientation or center-of-gravity that permits leaders and other authorities to inspire their followers and members to enthusiastically take action toward confronting and conquering all obstacles that stand in the way.

Such a scheme can be portrayed as follows:

Theme for vitality and growth

Unifying vision

- A grand ideal, overarching theme, or noble philosophy that represents a coherent paradigm within which individuals as well as societies can shape and adapt to unfolding circumstances—yet offers a way to expose flaws of competing or adversary systems.

Aim

Improve fitness as an organic whole to shape and expand influence or power over the course of events in the world

Editors' note: In 1989, after he had quit issuing updates to *Patterns*, Boyd revised the original of this chart from insight, initiative, adaptability, and harmony to the version shown here.

Ingredients needed to pursue vision

- **Insight**
Ability to peer into and discern the inner nature or workings of things.
- **Orientation**
Common outlook to encourage initiative yet realize superior intent in pursuit of vision
- **Harmony**
Power to perceive or create interaction of apparently disconnected events or entities in a connected way
- **Agility**
Ability to shift from one orientation to another in order to cope with new or unforeseen circumstances
- **Initiative**
Internal drive to think and take action without being urged

Application

Counter-blitz

a la Sun Tzu

Counter-blitz a la Sun Tzu

Maneuver scheme

- Employ ***cheng/Nebenpunkte*** as basis to repeatedly and unexpectedly tie up, divert, stretch out, or drain away adversary attention and strength in order to expose vulnerabilities and weaknesses for decisive stroke(s) by ***ch'i/Schwerpunkt***.

Aim

- Blind side adversary regardless of circumstances.

Counter-blitz

a la Sun Tzu

Strategy

Shape adversary impression

Arrange elements of defense (in harmony with penchant for humans to generate mental patterns) as basis to guide adversaries to form or project patterns on the environment they are facing. In other words, emphasize certain features so that adversary intelligence, recce, patrols, and other observation activity generate mental pictures of what we seem to be doing.

In this sense, we cause adversary to project tempo or rhythm as well as a sense of form or gestalt upon the environment. Naturally, this raises the question: How do we want our posture to appear to an adversary—or put another way, what kind of mental picture do we want him to generate in his mind?

Counter-blitz

a la Sun Tzu

Strategy

How?

Set up positions echeloned in-depth (similar to German philosophy) with flexibility to quickly rotate or shift both front and flank maneuver schemes—yet convince adversary (with help from “shaping” and “disruption” agencies/activities—intelligence, electronic warfare, etc.) that he is facing, for example, an in-depth strongpoint/checkerboard or multiple belts of an in-depth linear or elastic defense. In this sense, we suggest three belts or bands behind the front as follows:

- Emphasize intelligence, reconnaissance (air and ground) and set up screen of forward outposts and patrols to report on adversary activity and warn of any impending or actual incursions.
- Deploy, disperse, and frequently redeploy/redisperse reconnaissance and mobile anti-tank/infantry/armored teams together with artillery in region behind screen so that they can mask dispositions, as well as move inconspicuously/quickly to focus and shift local main efforts against adversary thrusts.
- Place armored teams, as mobile reserve, in echelon behind recce, antitank/infantry/armor and artillery so that they can easily focus effort, and quickly move in to decapitate any local breakthrough—or push-off for a blitz counterstroke.

Counter-blitz

a la Sun Tzu

Strategy

Game

- Shift from such an ambiguous or misleading posture into a gauntlet defense with alternate channels, sectors, or zones by thinning out some sectors or zones in order to strengthen others.
- **Basic notion is to think in terms of channels, avenues and gauntlets** (instead of **just** belts, bands and fronts) so that ambush gauntlets will naturally evolve or be set up to deal with forward as well as lateral (roll-out) thrusts of adversary. In this way, ambush gauntlets can then be set up at any level from platoon to theater.

Counter-blitz

a la Sun Tzu

Tactics

Basic maneuver

- Use obstacles, delaying actions, hit-and-run attacks, and/or baited retreats in thinned-out sectors/zones together with “shaping” and “disruption” activities to disorient adversary as well as pile up or stretch out his maneuver. Combine this action with fire and movement into adversary flank and/or rear from strengthened adjacent sectors/zones to:
 - slow momentum and blow adversary away (during pile-up) or
 - channel momentum then decapitate and break up cohesion of thrust (during stretch-out).

Mental picture

- Think of obstacles, delay, hit-and-run, and baited retreats together with “shaping” and “disruption” activities as *cheng* or *Nebenpunkte* to create gaps, exposed flanks, and vulnerable rears by the pile-up/congestion or stretch-out of adversary maneuver.
- Think of *ch'i* or *Schwerpunkt* maneuver (fire and movement) hitting unexpectedly thru gaps into adversary flank/rear, or blind side, as a decisive stroke to pull enemy apart and roll up his isolated remnants.

Counter-blitz

a la Sun Tzu

Tactics

Action

- Employ air and fast moving mobile/armored recon teams, with mobile anti-tank teams, artillery, and “shaping”/“disruption” activities in support, as *Nebenpunkte* to determine direction/strength of thrusts and (by local front/flank combinations) to continuously harass with repeated delaying actions and hit-and-run attacks. Object is to:
 - disorient adversary;
 - provide information to senior commanders to help them decide which sectors to thin out and which to strengthen;
 - pile up or stretch out adversary maneuver to “shape” (or disrupt) tempo/rhythm and pattern of blitz attack as well as create gaps, exposed flanks, and vulnerable rears.
- Inconspicuously move in with high-speed mobile anti-tank/infantry/armored teams together with air and artillery support as *Schwerpunkt* to strengthen appropriate sectors that flank adversary thrusts. From here, exploit gaps, or any other vulnerabilities and weaknesses, to ambush adversary with fire together with sudden/sharp flank and rear counter-thrusts into his forward, roll-out, and resupply efforts moving throughout thinned-out sectors. Object is to work *Schwerpunkt* in harmony with *Nebenpunkte* in order to break up cohesion and roll up isolated remnants of blitz thrusts.

Counter-blitz

a la Sun Tzu

Grand maneuver

Mental picture

- Imagine the fluid *cheng/ch'i* or *Nebenpunkte/Schwerpunkt* counter-operations just discussed to be super *Nebenpunkte* operations that are used to tie up or drain away adversary strength. Idea is to set up and launch a blitz counter-stroke, or super *Schwerpunkt*, deep into adversary weakness while he (with his strength) is preoccupied in overcoming the challenge posed by the super *Nebenpunkte* operations.

Action

- Keep pressure on and continually force adversary to adapt to many abrupt and irregular changes generated by the ongoing super *Nebenpunkte* operations.
- When adversary is strung out, or disconnected, and vulnerable, unleash swift armored forces (held in reserve) together with air to hook in behind and roll up adversary blitz as well as push off for a blitz counteroffensive. Shift forces, as appropriate, from local *Nebenpunkte/Schwerpunkt* operations (as well as from other sectors) into this super *Schwerpunkt* to both generate and exploit a decisive success.

Counter-blitz

a la Sun Tzu

Caution

- Extensive use of many shallow, lower-level *Nebenpunkte/Schwerpunkt* actions across many sectors/zones drains away resources needed for fewer but decisive large scale *Nebenpunkte/Schwerpunkt* operations.
- Furthermore, experience has shown that when under active pressure, it is difficult to disengage forces committed to these local efforts and shift them to the larger operation.
- In this sense, these many shallow lower-level actions or maneuvers across a broad front tend to take on the character of **battle** or **attrition** warfare, while deep large scale (up to theater level) *Nebenpunkte/Schwerpunkt* operations take on the character of **strategic maneuver**.

Counter-blitz

a la Sun Tzu

Underlying idea

Pull adversary apart and bring about his collapse by causing him to generate or project mental images that agree neither with the faster tempo/rhythm nor with the hidden form of the transient maneuver patterns he must compete against.

Blitz/counter-blitz strategic design

or

Manstein Divined

Outline

- Background
- Strategic design

Background

- Battles of Leuctra and Leuthen
- Battle of Cannae
- Schlieffen strategic maneuver

Observation

Single envelopment schemes (a la Leuctra, Leuthen, or Schlieffen) take less force than double envelopment schemes (a la Marathon or Cannae) to achieve the same benefit.

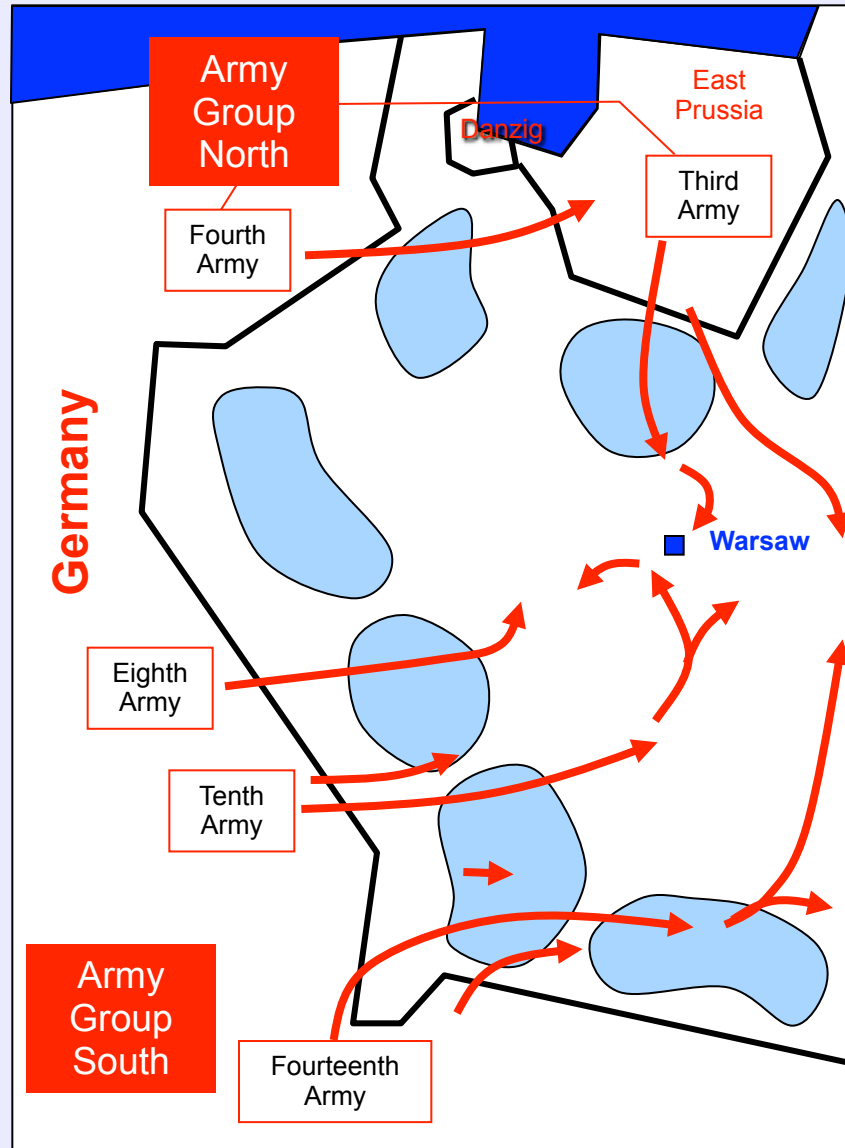
Strategic design

- Poland
- France
- Russia

Poland

September 1 – 19, 1939

Concentric Cannae
with Leuctra/
Leuthen undertone



Polish
Army Areas

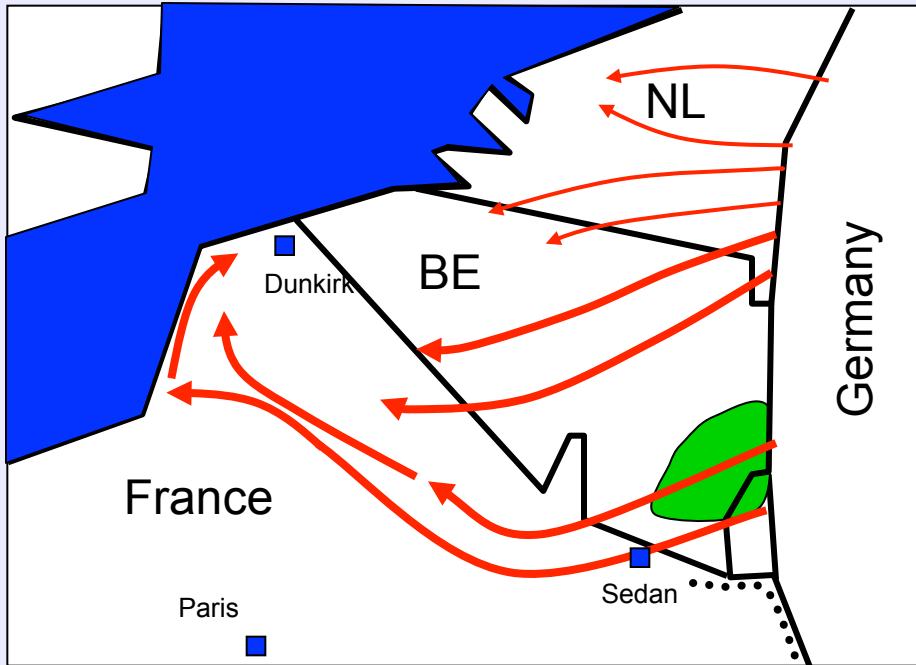
Poland (1939)

Key point

Germans had more forces than Poles.

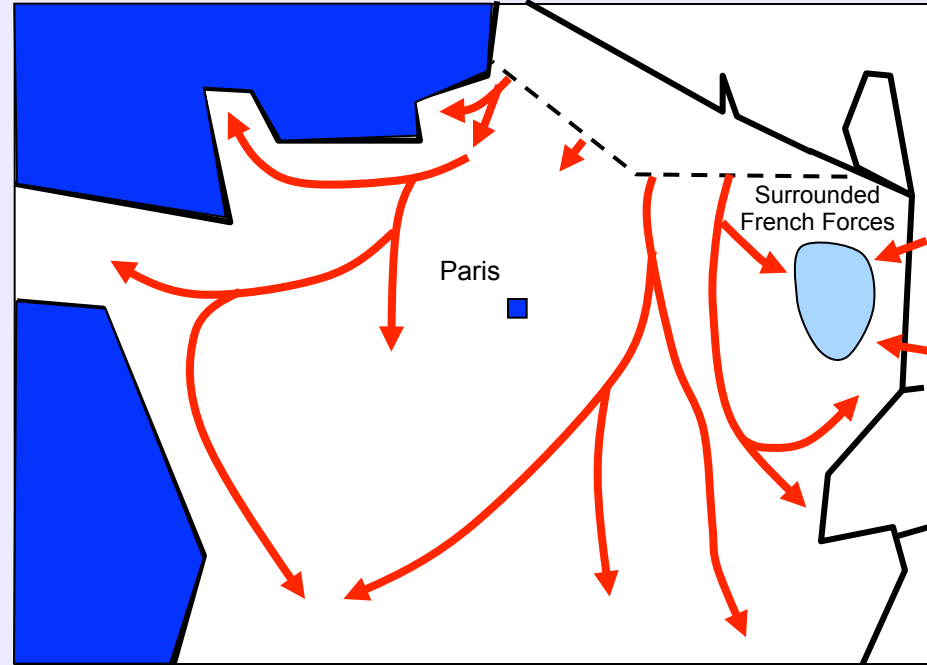
France

Phase I:
May 10 – June 2, 1940



Leuctra/Leuthen

Phase II:
June 5 – June 25, 1940



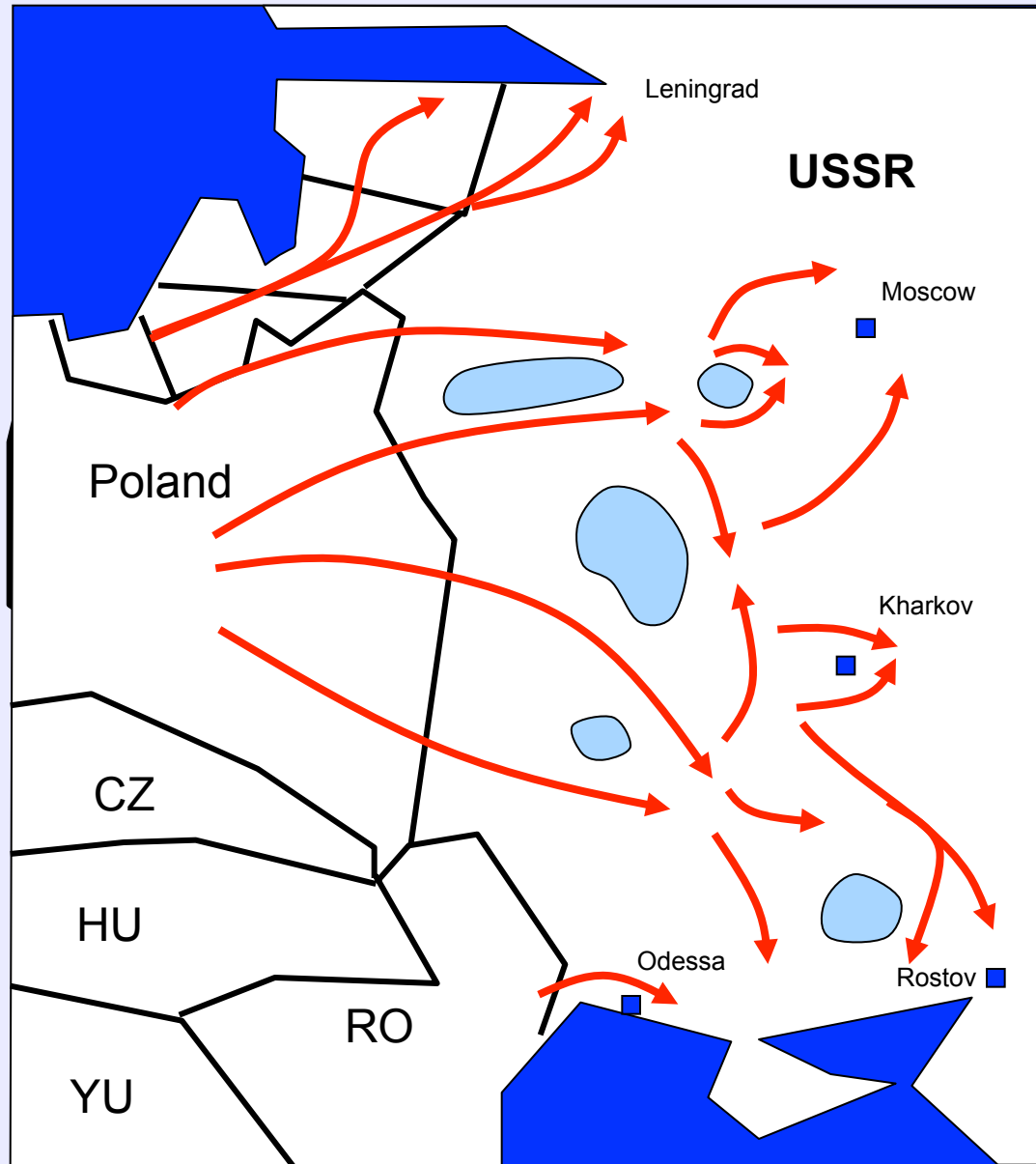
Eccentric Cannae with
Leuctra/Leuthen wings

France (1940)

Key points

- Germans had fewer forces than allies before Phase I.
- Germans had more forces than allies before Phase II.

Russia



June 22 –
December 5, 1941

Eccentric Cannae
with Two Leuctra/
Leuthen wings

Main
Russian
pockets

Russia (1941)

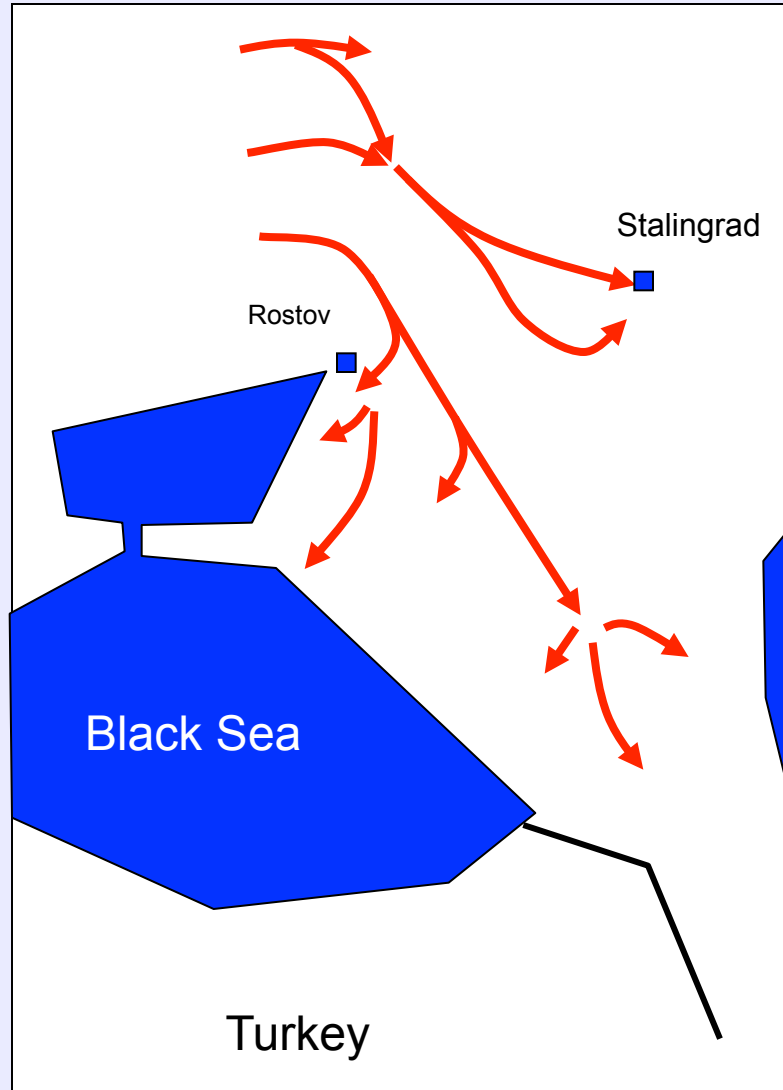
Key point

Germans had fewer forces than Russians.

Caucasus/Stalingrad

May 28 – November 18, 1942

Leuctra/Leuthen
followed by
eccentric ...



Blitz/counter-blitz strategic design

Leuctra/Leuthen/Schlieffen

- Manstein - France (Phase I) 1940
- ??????????????????????
- Manstein - Kerch Peninsula 1942
- OKW/OKH - Caucasus/Stalingrad counterstroke 1942
- Manstein - Donetsk counterstroke 1943
- Manstein proposal - counterstroke from Kharkov to Sea of Azov 1943
- Rundstedt/Rommel proposal - Normandy 1944
- Ardennes - 1944-45

Cannae—with Leuctra/Leuthen/Schlieffen undertone

- Poland - 1939
- France (Phase II) - 1940
- Russia - 1941
- Kursk - 1943

? Natural question ?

How come Germans did not attempt a Leuctra/Leuthen strategic maneuver against Russia in 1941?

B. H. Liddell Hart
The German Generals Talk
(1948, page 184)

Rundstedt

The 1941 operations in Russia should, in my opinion have had their main effort directed, not at first towards Moscow, but towards Leningrad. That would have linked up with the Finns. Then, in the next stage, should have come an attack on Moscow from the north, in co-operation with the advance of Field-Marshal von Bock's Army Group from the west.

Blitz/counter-blitz strategic design

Leuctra/Leuthen/Schlieffen

- Manstein - France (Phase I) 1940
- Rundstedt proposal - thrust to Leningrad followed by thrust (roll-up) to south and take Moscow - 1941
- Manstein - Kerch Peninsula 1942
- OKW/OKF - Caucasus/Stalingrad counterstroke 1942
- Manstein - Donetsk counterstroke 1943
- Manstein proposal - counterstroke from Kharkov to Sea of Azov 1943
- Rundstedt/Rommel proposal - Normandy 1944
- Ardennes - 1944-45

Cannae—with Leuctra/Leuthen/Schlieffen undertone

- Poland - 1939
- France (Phase II) - 1940
- Russia - 1941
- Kursk - 1943

Message

Only Manstein (and few others) knew how to synthesize and apply the experiences and ideas of **Napoleon**, **Clausewitz**, **Jomini**, **Moltke**, and **Schlieffen** in a strategic as well as a grand tactical sense.

Wrap-up

Wrap-up

Message

- He who is willing and able to take the **initiative** to exploit **variety**, **rapidity**, and **harmony**—as the basis to create as well as adapt to the more indistinct - more irregular - quicker changes of rhythm and pattern, yet shape the focus and direction of effort—survives and dominates.

or contrariwise

- He who is unwilling or unable to take the **initiative** to exploit **variety**, **rapidity**, and **harmony** ... goes under or survives to be dominated.

Wrap-up

Game

- Create tangles of threatening and/or non-threatening events/efforts as well as repeatedly generate mismatches between those events/efforts adversary observes or imagines (*cheng/Nebenpunkte*) and those he must react to (*ch'i/Schwerpunkt*)
as basis to
- Penetrate adversary organism to sever his moral bonds, disorient his mental images, disrupt his operations, and overload his system, as well as subvert, shatter, seize, or otherwise subdue those moral-mental-physical bastions, connections, or activities that he depends upon
thereby
- Pull adversary apart, produce paralysis, and collapse his will to resist.

How

- Get inside adversary observation-orientation-decision-action loops (at all levels) by being more subtle, more indistinct, more irregular, and quicker—yet appear to be otherwise.

Wrap-up

Implications

- In a **tactical sense**, these multi-dimensional interactions suggest a **spontaneous, synthetic/creative**, and **flowing** action/counteraction operation, rather than a **step-by-step, analytical/logical**, and **discrete** move/countermove game.
 - In accepting this idea we must admit that increased unit complexity (with magnified mental and physical task loadings) does not enhance the spontaneous synthetic/creative operation. Rather, it constrains the opportunity for these timely actions/counteractions.

Or put another way
 - Complexity (technical, organizational, operational, etc.) causes commanders and subordinates alike to be captured by their own internal dynamics or interactions—hence they cannot adapt to rapidly changing external (or even internal) circumstances.
- In a **strategic sense**, these interactions suggest we need a **variety** of possibilities as well as the **rapidity** to implement and shift among them. Why?
 - Ability to **simultaneously** and **sequentially** generate **many different** possibilities as well as **rapidly** implement and shift among them permits one to repeatedly generate mismatches between events/efforts adversary observes or imagines and those he must respond to (to survive).
 - Without a **variety** of possibilities, adversary is given the opportunity to read as well as adapt to events and efforts as they unfold.

Wrap-up

- Alternatively—by stripping away and recombining some of the comments associated with “Clausewitz”, “Grand Tactics”, “Message”, “Game”, “How”, and “Implications”—we can say:
 - **Variety/Rapidity** allow one to:
Magnify adversary friction hence stretch out his time to respond in a directed way.
 - **Harmony/Initiative** permit one to:
Diminish own friction hence compress own time to exploit variety/rapidity in a directed way.
 - Altogether **Variety/Rapidity/Harmony/Initiative** enable one to:
Operate inside adversary’s observation-orientation-decision-action loops to enmesh adversary in a world of uncertainty, doubt, mistrust, confusion, disorder, fear, panic, chaos, ... and/or fold adversary back inside himself so that he cannot cope with events/efforts as they unfold.
- Simultaneously—by repeatedly rolling thru O-O-D-A loops while appealing to and making use of the ideas embodied in “Grand Strategy” and “Theme for Vitality and Growth”—we can:
 - Evolve and exploit **Insight/Orientation//Harmony/Agility/Initiative** as basis to:
Shape or influence events so that we not only amplify our spirit and strength (while isolating our adversaries and undermining their resolve and drive) but also influence the uncommitted or potential adversaries so that they are drawn toward our philosophy and are empathetic toward our success.

Reflects Boyd’s 1989 revision to the Theme for Vitality and Growth, slide 144.

Wrap-up

—or summarizing in another, yet similar way—

We have in a nutshell:

The art of success

- Appear to be an unsolvable cryptogram while operating in a directed way to penetrate adversary vulnerabilities and weaknesses in order to isolate him from his allies, pull him apart, and collapse his will to resist.

Yet

- Shape or influence events so that we not only magnify our spirit and strength but also influence potential adversaries as well as the uncommitted so that they are drawn toward our philosophy and are empathetic toward our success.

Epilogue

Comment

- Reflection upon the previous discussion and reflection upon the various principles of war that are bandied about leave one unsettled about the real value associated with these principles.
- To illustrate, let's take a look at some of the principles of war (or military art).

Principles of war

USA	United Kingdom	Soviet Union	France
<ul style="list-style-type: none"> • Objective • Offensive • Mass • Economy of forces • Maneuver • Unity of command • Security • Surprise • Simplicity 	<ul style="list-style-type: none"> • Aim/goal • Coordination • Offensive • Freedom of action • Concentration • Economy of efforts • Surprise • Security • Morale • Control of rear 	<ul style="list-style-type: none"> • Mobility/tempo • Concentration of efforts • Surprise • Combat activeness • Preservation of combat effectiveness • Conformity of goal/plan to actual situation • Coordination/interworking 	<ul style="list-style-type: none"> • Concentration of efforts • Freedom of action • Economy of forces

Critique

- A list of principles does not reveal how individual principles interact nor the mechanism for doing so.
- Scientific laws and principles are the same for all countries and tend to change little over time. On the other hand, we note that the principles of war are different for different countries and change more dramatically over time. Furthermore, they do not make evident the importance of variety/rapidity/harmony/initiative as basis to shape and adapt to circumstances—a necessary requirement for success in the uncertain and ever-changing environment of conflict or war.
- This would suggest that the principles are not principles. Instead, they seem to be some kind of a (shifting) static checklist or laundry list of what should be adhered to.

JRB comment: USA, UK, and USSR principles also mix inputs (e.g., economy of forces/efforts) and outputs (surprise.)

Alternative possibility

- With this critique in mind, if we still feel we need some guidance, why not evolve statements that reflect the essence of conflict dynamics in a connected sense?

or put another way

- Why not collect appropriate bits and pieces and assemble them in a coherent way to present a more satisfying picture?

Appropriate bits and pieces

- Compress own time and stretch out adversary time.
- Generate unequal distributions as basis to focus moral-mental-physical effort for local superiority and decisive leverage.
- Diminish own friction (or entropy) and magnify adversary friction (or entropy).
- Operate inside adversary's observation-orientation-decision-action loops or get inside his mind-time-space.
- Penetrate adversary organism and bring about his collapse.
- Amplify our spirit and strength, drain-away adversaries', and attract the uncommitted.

Central theme

Evolve and exploit insight/initiative/adaptability/harmony together with a unifying vision, via a grand ideal or an overarching theme or a noble philosophy, as basis to:

- Shape or influence events so that we not only amplify our spirit and strength but also influence the uncommitted or potential adversaries so that they are drawn toward our philosophy and are empathetic toward our success,
yet be able to
- Operate inside adversary's observation-orientation-decision-action loops or get inside his mind-time-space as basis to:
- Penetrate adversary's moral-mental-physical being in order to isolate him from his allies, pull him apart, and collapse his will to resist.

Sources

Sources by author

- Adcock, F.E. "The Greek and Macedonian Art of War", 1957
- Alger, John I. "The Quest for Victory", 1982
- Asprey, Robert B. "Guerrilla Warfare" (Encyclopedia Britannica - EB), 1972
- Asprey, Robert B. "Tactics" (EB), 1972
- Asprey, Robert B. "War in the Shadows" (two volumes), 1975
- Atkinson, Alexander "Social Order and the General Theory of Strategy", 1981
- Axelrod, Robert "The Evolution of Cooperation", 1984
- Balck, William "The Development of Tactics", 1922
- Baldwin, Hanson W. "Tiger Jack", 1979
- Barnett, Correlli "Bonaparte". 1978
- Barron, John "KGB: The Secret Work of Soviet Secret Agents", 1974
- Bateson, Gregory "Mind and Nature", 1979
- Bayerlein, Fritz "With the Panzers in Russia 1941 & 43" (Marine Corps Gazette), December 1954
- Beaufre, Andre "An Introduction to Strategy", 1965
- Beaufre, Andre "Strategy of Action", 1967
- Becker, Ernest "The Structure of Evil", 1968
- Beesley, Patrick "Very Special Intelligence", 1977
- Beesley, Patrick "Room 40", 1982
- Betts, Richard K. "Surprise Attack", 1982

Bronowski, J. "A Sense of the Future", 1977

Brown, Anthony Cave "Bodyguard of Lies", 1975

Brownlow, Donald Grey "Panzer Baron", 1975

Brzezinski, Zbigniew "Game Plan", 1986

Callendar, H.L, and Andrews, D.H. "Heat, Entropy and Information" (EB), 1972

Calvocoressi, Peter "Top Secret Ultra", 1980

Campbell, Jeremy "Grammatical Man", 1982

Capra, Fritjof "The Tao of Physics", 1976

Carver, Michael "The Apostles of Mobility", 1979

Chambers, James "The Devil's Horsemen", 1979

Chaliand, Gerard (editor) "Guerrilla Strategies", 1982

Chandler, David G. "The Campaigns of Napoleon", 1966

Cincinnatus "Self-Destruction", 1981

Clausewitz, Carl von "Principles of War" (translated by Hans W. Gatske, 1942), 1812

Clausewitz, Carl von "War, Politics and Power" (translated by Edward M. Collins,, 1962)

Clausewitz, Carl von "On War" (translated by M. Howard and P. Paret, 1976), 1832

Cline, Ray S. "Secrets, Spies and Scholars", 1976

Clutterbuck, Richard "Guerrillas and Terrorists", 1977

Cole, K.C. "Sympathetic Vibrations", 1984

Colin, Jean "The Transformations of War", 1912

Conway, James "Mr. Secret Weapon" (Washington Post Magazine), 15 May 1982

Deichmann, D. Paul "German Air Force Operations in Support of the Army", 1962

Des Pres, Terrence "The Survivor", 1976

Despres, John; Dzirkals, Lilita; Whaley, Barton "Timely Lessons from History: The Manchurian Model for Soviet Strategy"

Doughty, Robert A. "The Evolution of U.S. Army Tactical Doctrine, 1946-76" (Leavenworth Papers #1), August 1979

Downing, David "The Devil's Virtuosos: German Generals at War 1940-45", 1977

Dupuy, T.N. "The Military Life of Genghis, Khan of Khans", 1969

Dupuy and Dupuy (R.E. and T.N.) "Encyclopedia of Military History", 1977

Dupuy, T.N. "A Genius for War", 1977

Durant, Will and Ariel "The Lessons of History", 1968

Dyson, Freeman "Disturbing the Universe", 1979

Dzirkals, Lilita F. "Lightning War in Manchuria: Soviet Military Analysis of the 1945 Far East Campaign", July 1975

Earle, Edward Mead et al "Makers of Modern Strategy", 1943

English, John A. "A Perspective on Infantry", 1981

Fall, Barnard B. "Street Without Joy", 1964

Fall, Barnard B. "Last Reflections on a War", 1967 1 Falls, Cyril "The Art of War from the Age of Napoleon to the Present Day", 1961

Farago, Ladislas "The Game of the Foxes", 1971

Ferguson, Marilyn "The Aquarian Conspiracy", 1980

Fitzgerald, Frances "Fire in the Lake", 1972

Freytag-Loringhoven, Hugo von "The Power of Personality in War", (translated by Army War College, 1938) , 1911

Fuller, J.F.C. "Grant and Lee", 1932/1957

Fuller, J.F.C. "The Conduct of War, 1789-1961", 1961

Gleick, James "Exploring the Labyrinth of the Mind" (New York Times Magazine), 21 August 1983

Golenan, Daniel "Vital Lies, Simple Truths", 1985

Goodenough, Simon and Deighton, Len "Tactical Genius in Battle", 1979

Gribbin, John "In Search of Schrodinger's Cat", 1984

Griffith, Paddy "Forward into Battle", 1981

Grigg, John "1943 The Victory That Never Was", 1980

Guderian, Heinz "Panzer Leader", 1952

Guevara, Che "Guerrilla Warfare", 1961

Hall, Edward T. "Beyond Culture", 1976

Handel, Michael I. "The Yom Kippur War and the Inevitability of Surprise" (International Studies Quarterly), September 1977

Handel, Michael I. "Clausewitz in the Age of Technology" (The Journal of Strategic Studies), June/Sept 1986

Heibroner, Robert L. "Marxism: For and Against", 1980

Herrington, Stuart A. "Silence Was a Weapon", 1982

Hoffer, Eric "The True Believer", 1951

Holmes, W.J. "Double-Edged Secrets", 1979

Howard, Michael "The Causes of Wars", 1983

Hoyt, Edwin P. "Guerilla", 1981

Humble, Richard "Hitler's Generals", 1974

Irving, David "The Trail of the Fox", 1977

Isby, David C. "Modern Infantry Tactics, 1.914-74" (Strategy and Tactics), Sept/Oct 1974

Jomini, "The Art of War" (translated by G.H. Mendell and W.P. Craigbill, 1862), 1836

Karnow, Stanley "Vietnam: A History", 1983

Keegan, John "The Face of Battle", 1977

Kennedy, Marilyn Moats "Powerbase: How to Build It; How to Keep It", 1984

Kesslering, Albert, et al "Manual for Command and Combat Employment of Smaller Units" (Based on German Experiences in World War II), 1952

Kitson, Frank "Low Intensity Operations", 1971

Kohn, Hans and Hazard, John N. "Communism" (EB), 1972

Krepinevich, Andrew F. Jr. "The Army and Vietnam", 1986

Lamb, Harold "Genghis Khan", 1927

Landauer, Carl "Marxism" (EB), 1972

Lanza, Conrad H. "Napoleon and Modern War, His Military Maxims", 1943

Laqueur, Walter "Guerrilla", 1976

Laqueur, Walter (editor) "The Guerrilla Reader", 1977

Lawrence, T.E. "Seven Pillars of Wisdom", 1935

Layzer, David "The Arrow of Time" (Scientific American), December 1975

LeBoeuf, Michael "GMP* The Greatest Management Principle in the World", 1985

Leonard, George "The Silent Pulse", 1978

Lewin, Ronald "Ultra Goes to War", 1978

Liddell, Hart, B.H. "A Science of Infantry Tactics Simplified", 1926

Liddell, Hart, B.H. "The Future of Infantry", 1933

Liddell, Hart, B.H. "The Ghost of Napoleon", 1934

Liddell, Hart, B.H. "The German Generals Talk", 1948

Manstein, Erich von "Lost Victories", 1958

Mao Tse-Tung "On Guerrilla Warfare", (translated by S.B. Griffith, 1961), 1937

Mao Tse-Tung "Basic Tactics" (translated by Stuart R. Schram,, 1966), 1938

Mao Tse-Tung "Selected Military Writings", 1963

Mao Tse-Tong "Four Essays on China and World Communism", 1972

Marchetti, Victor and Marks, John "The CIA and the Cult of Intelligence", 1974/1980

Marshall, S.L.A. "Men Against Fire", 1947

Marshall, S.L.A. "The Soldiers Load and The Mobility of a Nation", 1950

Martin, David C. "Wilderness of Mirrors", 1980

Masterman, John C. "The Double-Cross System", 1972

Matloff, Maurice "Strategy" (EB), 1972

May, Rollo "The Courage to Create", 1975/1976

McWhiney, Grady and Jamieson, Perry D. "Attack and Die", 1982

Mellenthin, F.W. von "Panzer Battles", 1956

Mellenthin, F.W. von "German Generals of World War II", 1977

Mellenthin, F.W. von "Armored Warfare in World War II" (conference), 10 May 1979

Mendel, Arthur P. (editor) "Essential Works of Marxism", 1961

Messenger, Charles "The Blitzkrieg Story", 1976

Mikheyev, Dmitry "A Model of Soviet Mentality" (Presentation before International Studies Association), March 1985

Miksche, F.O. "Blitzkrieg", 1941

Miksche, F.O. "Atomic Weapons & Armies", 1955

Ortega y Gasset, Jose, "The Revolt of the Masses" (anonymous translation, 1932), 1930

Ouchi, William "Theory Z", 1981

Pagels, Heinz R. "The Cosmic Code", 1982

Palmer, Bruce Jr. "The 25 Year War", 1984

Pascale, Richard T. and Athos, Anthony G. "The Art of Japanese Management", 1981

Patrick, Stephen B. "Combined Arms Combat Operations in the 20th Century" (Strategy and Tactics), Sept/Oct 1974

Pauker, Cry J. "Insurgency" (EB), 1972

Peters, Thomas J. and Waterman,, Robert H., Jr. "In Search of Excellence", 1982

Phillips, T.R. (editor) "Roots of Strategy", 1940/1985

Pike, Douglas "PAVN: Peoples Army of Vietnam", 1986

Pincher, Chapman "Their Trade is Treachery", 1982

Polanyi, Michael "Knowing and Being", 1969

Pomeroy, William J. (editor) "Guerrilla Warfare and Marxism", 1968

Powers, Thomas "The Man Who Kept the Secrets", 1979

Prigogine, Ilya and Stengers, Isabelle "Order Out of Chaos", 1984

Pustay, John S. "Counterinsurgency Warfare", 1965

Reid, T.R. "Birth of a New Idea" (Washington Post Outlook), 25 July 1982

Rejai, M. "Mao Tse-Tung On Revolution and War", 1976

Restak, Richard M. "The Brain: The Last Frontier", 1980

Rifkin, Jeremy (with Ted Howard) "Entropy - A New World View", 1980

Rominel, Erwin "Infantry Attacks" (translated by G.E. Kidde, 1944), 1937

Savkin, V. YE. "The Basic Principles of Operational Art and Tactics" (A Soviet View), 1972

Sella, Amnon "Barbarossa: Surprise Attack and Communication" (Journal of Contemporary History), 1978

Senger und Etterlin, Frido von "Neither Fear Nor Hope", 1963

Shannon, Claude E. "Information Theory" (EB), 1972

Sidey, Hugh "Playing an Assassin Like a Fish" (Washington Star), 14 June 1981

Sidorenko, A.A. "The Offensive" (A Soviet View), 1970

Singh, Baljitt & Mei, Ko-Wang "Modern Guerrilla Warfare", 1971

Sprey, P.M. "Taped Conversation with General Hermann Balck" (for Battelle), 12 January and 13 April 1979

Sprey, P.M. "Taped Conversation with Lt. General Heinz Gaedcke", (for Battelle), 12 April 1979

Stevenson, William "A Man Called Intrepid", 1976

Strausz-Hupe, Robert; Kintner, William R.; Dougherty, James E.; Cottrell, Alvin J. "Protracted Conflict", 1959/1963

Summers, Harry G. Jr. "On Strategy: The Vietnam War in Context", 1981

Sun Tzu "The Art of War" (translated by S.B. Griffith, 1971), about 400 B.C.

Sun Tzu "The Art of War" (Edited by James Clavell, 1983), about 500 B.C.

Taber, Robert "The War of the Flea", 1965

Tang Zi-Chang "Principles of Conflict" (Recompilation of Sun Zi's Art of War), 1969

Thayer, Charles W. "Guerrilla", 1961

Thompson, R.W. "D-Day", 1968

Thompson, William Irwin "Darkness and Scattered Light", 1978

Toffler, Alvin "Future Shock", 1970

Van Creveld, Martin "Supplying War", 1977

Watts, Alan “Tao: The Watercourse Way”, 1975

Wernick, Robert “Blitzkrieg” (Time-Life Books), 1976

Whiting, Charles “Patton”, 1970

Wilson, Edward O. “On Human Nature”, 1978

Winterbotham, F.W. “The Ultra Secret”, 1975

Wintringham, Tom “The Story of Weapons and Tactics”, 1943

Wolf, Eric R. “Peasant Wars of the Twentieth Century”, 1969

Wolf, Fred Alan “Taking the Quantum Leap”, 1981

Wylie, J.C. “Military Strategy”, 1967

Wynne, G.C. “If Germany Attacks”, 1940

Zukav, Gary “The Dancing Wu Li Masters”, 1979

Sources by institution

BDM “Generals Balck and Von Mellinthin on Tactics: Implications for Military Doctrine”, 19 December 1980

German Army Regulation 100/100 “Command and Control in Battle”, September 1973

German Army Regulation 100/200 “Army Command and Control System”, August 1972

National Defense University “The Art and Practice of Military Strategy”, 1984

ORD/CIA, “Deception Maxims: Fact and Folklore”, April 1980

U.S. Army FM 100-5 “Operations”, July 1976

U.S. Army FM 100-5 “Operations”, 20 August 1982

U.S. Army FM 100-5 “Operations”, 5 May 1986

About this edition

This edition of *Patterns of Conflict* is our attempt to recreate the last version of the briefing actually presented by the late Col John Boyd, USAF (1927 – 1997). The last printed version known to exist carries the date December 1986. We have used that as the starting point and then modified the text based on changes we received from Col Boyd, which continued until around 1991. By that time, he had moved on to other activities, such as *Conceptual Spiral* (1992), his advice to then-Secretary of Defense Dick Cheney during the First Gulf War, and his interest in application to other forms of conflict, including business.

In addition to specific textual changes, Col Boyd would routinely emphasize certain points during his briefings that he probably would have incorporated into the charts, but never did (this was pre-PowerPoint and so changes required manually retyping the entire page.) We have indicated some of these by “JRB comment:”

The 9/2020 version replaces the right half of slide 144 with “IOHAI,” which Boyd began using after 1989. The 5/2026 version revises slide 177 to reflect this replacement.

About the Editors

Chuck Spinney was a colleague of Boyd’s both in the Air Force and in the Office of the Secretary of Defense, where he participated in every edition of “Patterns.” Chuck is the author of *Defense Facts of Life* and numerous monographs and op-eds. His commentaries on defense issues appear from time to time at <http://chuckspinney.blogspot.com/> and are archived at <http://dnipogo.org>.

Chet Richards worked with Col Boyd on his first paper, “Destruction and Creation,” on *Conceptual Spiral* (1992), and near the end of Boyd’s life, on business applications. He is a retired colonel in the Air Force, and his 2004 book, *Certain to Win*, applies Boyd’s concepts to business. He is the only one of Boyd’s associates still presenting *Patterns*.

Ginger Richards was co-owner and president of Kettle Creek Corporation, which owned the site, Defense and the National Interest, where Boyd’s briefings were originally posted. She also designed Chet’s current blog, <http://fasttransients.wordpress.com>