The Reflective Practitioner

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Objective: reflect on how you ask questions, evaluate answers, and propose alternatives as a military professional

Clausewitz: Critical Analysis

Thucydides: Data and Inference
What’s in a Sword?

LEGIONARY ORGANISATION

1 MEN = TENT PARTY

They share a tent, which is carried with the camp
kettle & millstones by a mule, & in barracks two
rooms for equipment & sleeping

TENT = 1 CENTURY
PARTIES (80 MEN)
commanded by
a centurion

CENTURIES = COHORT (480 MEN)

A LEGION HAD 10 COHORTS

But the first cohort consisted of six double
centuries (360 MEN) and there were also
120 horsemen

TOTAL FIGHTING STRENGTH 5400 MEN
What is Critical Thinking?

The art and science of asking questions and evaluating answers

• What (data)
  – What happened
  – Who was involved
  – Time (temporal)
  – Where (location, spatial reference)
  – Proximity to the event

• Why (causation)
  – Correlation (patterns)
  – Process (how)
  – Context
  – Core assumptions (logic, prevailing theory)

“Critical thinking is about improving one’s judgement. Whether we are evaluating information on a power point slide in a Pentagon briefing, reading a newspaper article, or participating in a discussion with an Iraqi mayor, critical thinking is the deliberate, conscious, and appropriate application of reflective skepticism….the word critical really has to do with purposeful, reflective and careful evaluation of information as a way to improve one’s judgement.” (Gerras 2008, 3)
Our Guides
Clausewitz

Critical Analysis
The Enlightenment and War
- Principles of war
- Abstract models
- Geometry of violence

Napoleonic Warfare
- 1803-1815, continues French Revolutionary War 1792-1802
- War takes on a new scale and form (changing character)
- After the conflict veterans try and make sense of the conflict

Carl von Clausewitz
- Prussian veteran
- Begins analyzing the wars as early as 1801 at the PME of the day under Scharnhorst
- Synthesis of observations of the Napoleonic wars with:
  - Historical conflicts (campaign analysis)
  - Physics
  - Mathematics
  - Philosophy (esp. German Enlightenment)

“Cast your net widely” (LtGen Paul Van Riper, USMC Retired)
We distinguish between the critical approach and the plain narrative of a historical event, which merely arranges facts one after another, and at most touches on their immediate causal links. Three different intellectual activities may be contained in the critical approach. **First, the discovery and interpretation of equivocal facts.** This is historical research proper, and has nothing in common with theory. **Second, the tracing of effects back to their causes. This is critical analysis proper.** It is essential for theory; for whatever in theory is to be defined, supported, or simply described by reference to experience can only be dealt with in this manner. **Third, the investigation and evaluation of means employed.** This last is critical proper, involving praise and censure. Here theory serves history, or rather the lessons to be drawn from history. In these last two activities which are the truly critical parts of historical inquiry, it is vital to analyze everything down to its base elements, to incontrovertible truth. **One must not stop half-way, as is so often done, at some arbitrary assumption or hypothesis.**
The discovery and interpretation of equivocal facts
Tracing of effects back to their causes

Do technological advances produce a deterrent?

Timeline of Defense Department Strategic Offsets

First Offset
Nuclear Weapons
With the purpose of deterring the Soviet Union and enabling a reduction in overall defense spending, nuclear weapons comprised the first offset strategy.

Second Offset
Precision Guided Weapons
Developed during the Vietnam War, these new weapons provided an enduring U.S. advantage for decades.

Third Offset
Including Robotics, 3D Printing, Big Data, Miniaturization
Announced in response to an erosion in U.S. asymmetric advantages and new multi-faceted threats, although details continue to be a work in progress.
**Tracing effect back to causes = Identifying hypotheses**

- Hypotheses = propositions
- They are used to evaluate relationships with empirical data (trace effects back to causes)
- You see if a change in a factor is correlated with a change in the outcome
- Types of variables
  - Independent variable = the “cause”
  - Dependent variable = the “effect”
  - Intervening = determines the rate at which the “cause” acts on the “effect”

**Figure 3.6 Gross Domestic Product (GDP) per Capita and the Risk of Armed Conflict**

There is a strong association between levels of economic development and the risk of armed conflict: the poorer the country, the greater the risk.

**Matrix**

<table>
<thead>
<tr>
<th>Matrix</th>
<th>Democracy</th>
<th>Autocracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Conflict</td>
<td>Case 1</td>
<td>Case 2</td>
</tr>
<tr>
<td>Long Conflict</td>
<td>Case 3</td>
<td>Case 4</td>
</tr>
</tbody>
</table>
Major theories on what causes war

If two countries are democracies, then interstate war is less likely

If there is a territorial dispute, then war is more likely

Past conflict, rivalry increase the probability

Will the fallback to authoritarian regimes after the Arab Spring lead to more conflict?

Will territorial disputes in the South China Seas lead to war?
The investigation and evaluation of means employed
Why Critical Analysis Fails

- Confirmation bias
- Appeal to universal principles or laws
  - Principles of war
  - Doctrine as the answer vs. an approach
- Jargon and acronyms obscure more than they clarify
- Misuse of data
  - Selective historical examples
  - Cherry picking evidence
- Analyze events out of context
- Do not analyze negative cases
Thucydides

Data and Inference
• Peloponnesian War(s)
  – 431 – 404 BCE
  – Athenian Empire vs. the Peloponnesian League led by Sparta
  – Naval vs. land power
  – Democracy vs. Oligarchy
  – War led to a relative decline in all of Ancient Greece

• Thucydides
  – Athenian General
  – Attempting to explain the origins and evolution of the conflict
  – Claimed by both historians and political scientists as one of the founders of their crafts
  – Our focus: *his method*
    • Battle Narratives
    • Speeches
    • Archaeology
**Battle Narratives**

- **Equivocal facts**
  - “disorder of raw facts”
  - Demonstrate different points of view
  - Lead the reader through the “labyrinth of detail”

- **Trace effects back to their cause**
  - Identify the “guiding thread”
  - What combinations of observed factors appear to produce a position of advantage?

Maritime Campaigns and Expeditionary Warfare (5th century BCE)
• Protagoras’ Dialectic:
  – Thesis, antithesis, synthesis
  – “concerning the gods I am not in a position to know either that (or how) they are or that (or how) they are not, or what they are like in appearances; for there are many things that prevent knowledge, the obscurity of matter and the brevity of human life.”
  – Thesis: gods
  – Antithesis: no gods
  – Synthesis: I cannot know whether or not there are gods or they shape human affairs

• Early empiricism:
  – look to the actions of humans, not gods
  – Protagoras, “man is the measure of things”
  – Hippocrates seeks out Protagoras
    • Treat the body as a whole
    • Look to data, not gods
    • Diagnosis
In investigating the past history, and in forming the conclusions which I have formed, it must be admitted that one cannot rely on every detail which has come down to use by way of tradition. People are inclined to accept all stories of ancient times in an uncritical way….most people in fact, will not take trouble in finding out the truth, but are much more inclined to accept the first story they hear. However, I do not think that one will be far wrong in accepting the conclusions I have reached from evidence I which I have put forward. It is better evidence than that of the poets, who exaggerate the importance of their themes, or of the prose chroniclers, who are less interested in telling the truth than in catching the attention of their public, whose authorities cannot be checked, and whose subject-matter, owing to the passage of time, is mostly lost in the unreliable streams of mythology. We may claim instead to have used only the plainest evidence and to have reached conclusions which are reasonably accurate, considering that we have been dealing with ancient history.
Problems with Data Today
• How do you reconstruct large-scale events given equivocal facts?
  – Theory of the case and logic
  – “reasoning from resistant evidence and conceptual frameworks derived from the present”
• Sufficient Cause
  – Corcyra
    • An independent naval power
    • Seek assistance from Athens after Epidamnus, a colony, joins Corinth
  – Athens violates treaty in fighting alongside Corcyra (modern Corfu) against Corinth, a member of the Peloponnesian league
  – Sparta comes to the aid of her ally Corinth
    – **Immediate cause: alliances, factions, proxy war**
• Necessary Cause
  – Rising economic power of Athens threatens Sparta’s historic position in Ancient Greece
  – **Deep cause: relative power; fear, honor, interest**
The Archaeology of Da’esh\IS

• Possible sufficient conditions
  – Resources
    • Available combatants
    • Access to weapons\resources
  – Extremist narratives
  – Technological change; how social media lowers recruitment costs and provides a global audience

• Possible necessary condition
  – Alienation in youth populations
  – Weak institutions in MENA
Conclusion

Critical Thinking = reflective skepticism, asking questions to support judgement

Long tradition in the profession of arms!

A Process:

1. Ask a question: what is the problem?

2. Identify Equivocal Facts
   • Gather data; identify facts and assumptions
   • What you don’t know and cannot know are as important as what you know
   • Context: reconstruct facts from the view of the actors

3. Trace effects back to their cause
   • Form an argument (hypothesis)
   • Test your argument with evidence

4. Evaluation of the means employed
   • Draw inferences and make a judgement
   • Be mindful of context and intervening effects
The Third Reflective Practitioner

OH, YOU CAUGHT ME

I LIKE TO BREAK A MENTAL SWEAT TOO