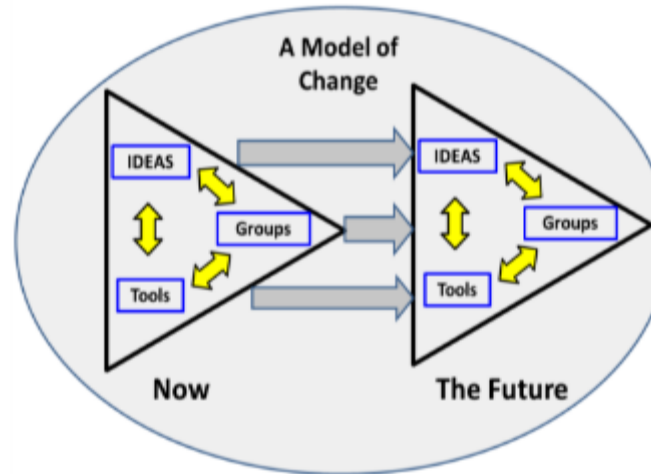


Examining the Relationship between Strategy and Innovation

Using “Ideas, Groups, and Tools (IGT)”



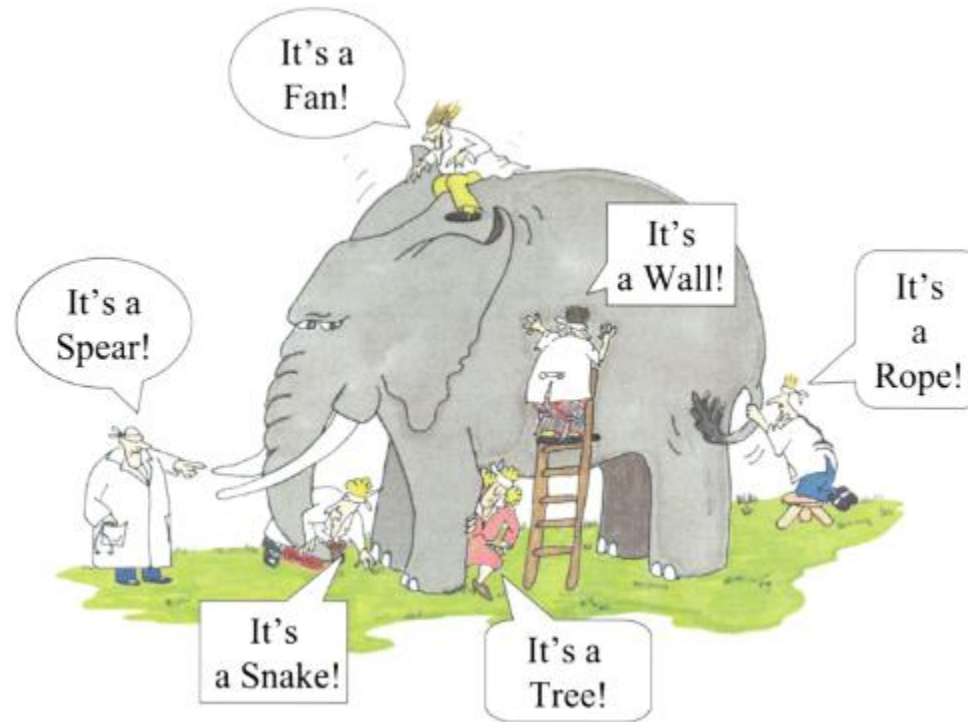
Lt Col Dave “Sugar” Lyle, USAF

30 Jan 2019

Original 7 part Blog Series on AU Innovation Community of Interest page:

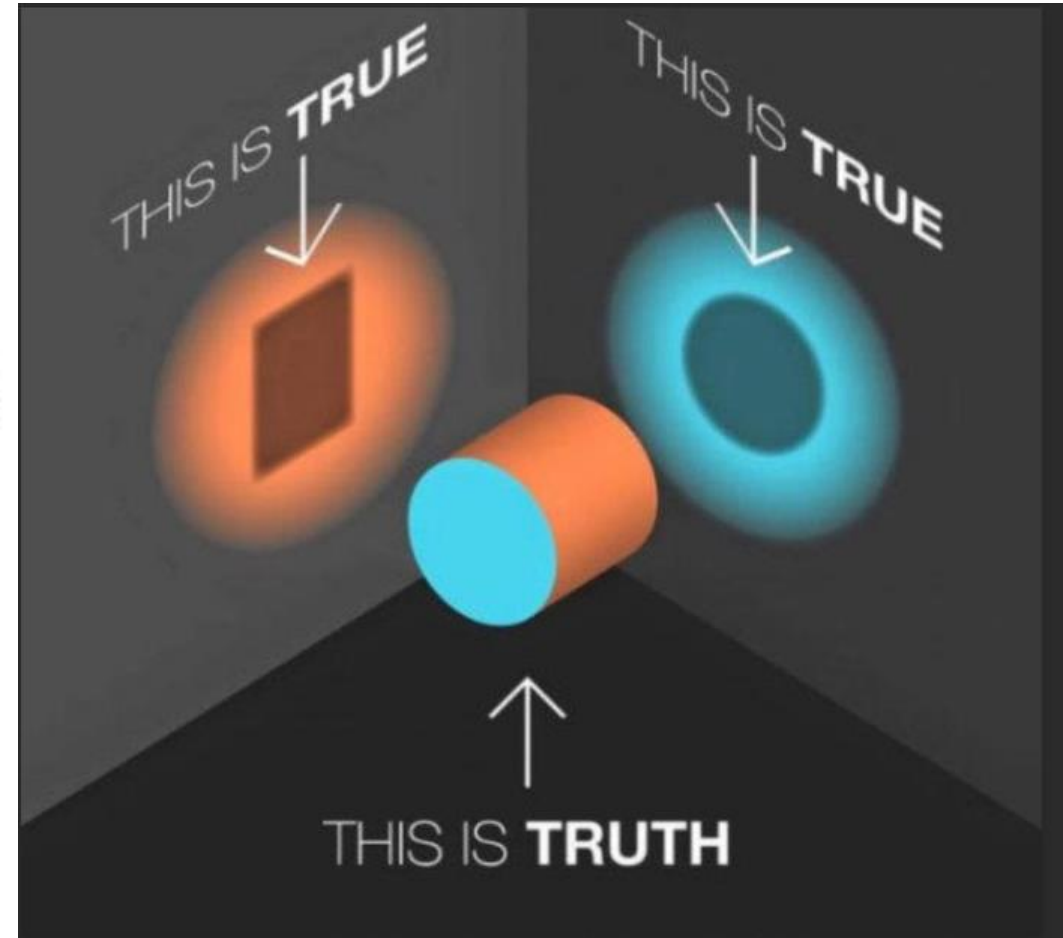
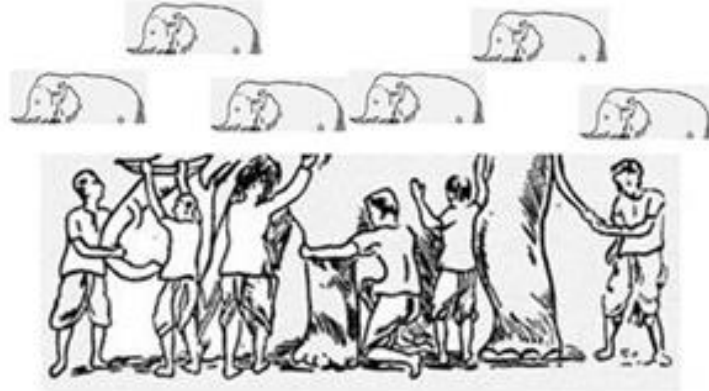
<https://community.apan.org/wg/aucoi/air-university-innovation/>

The constant challenge...

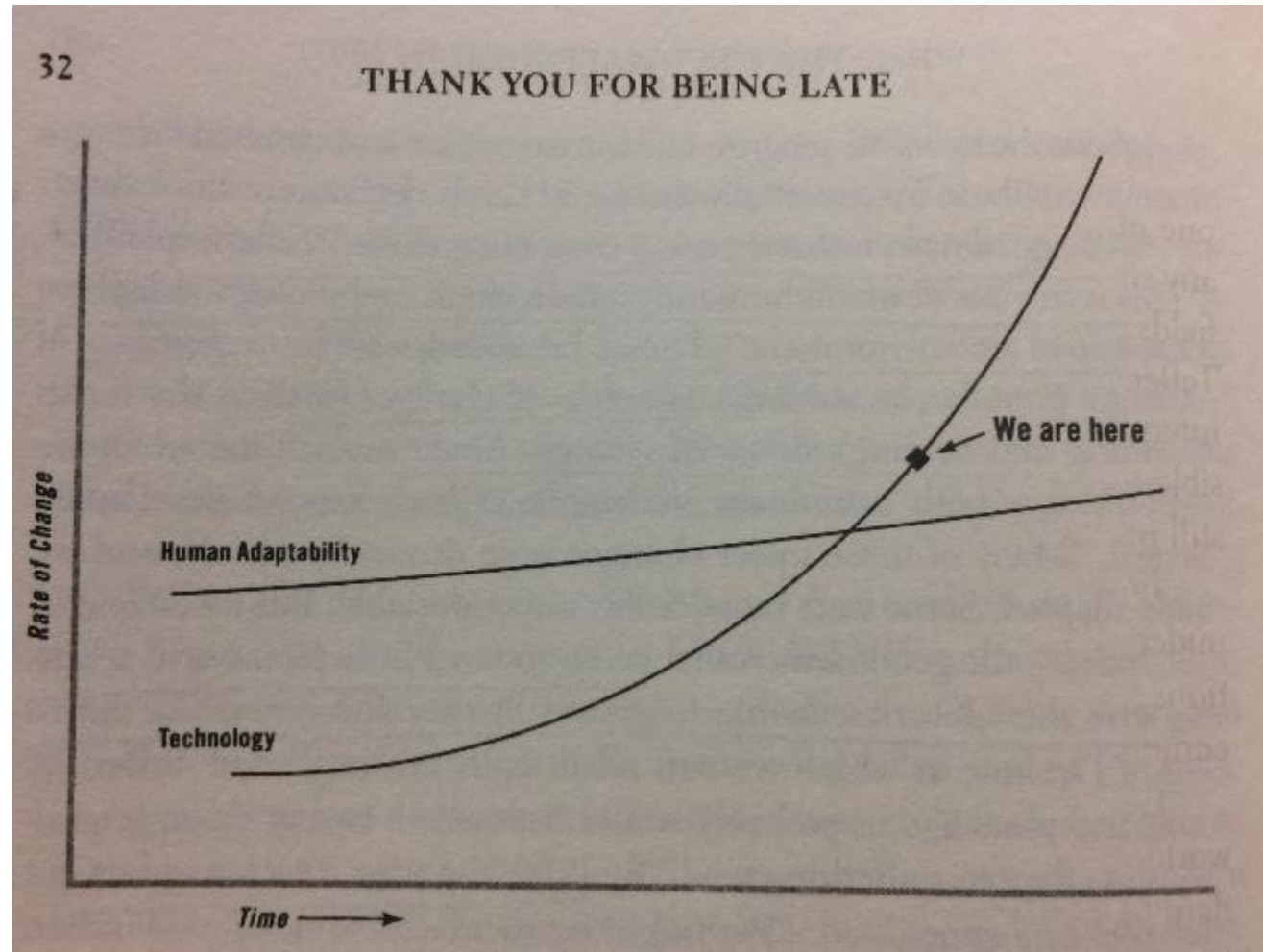


Building systemic understanding...
while managing cognitive and cultural bias

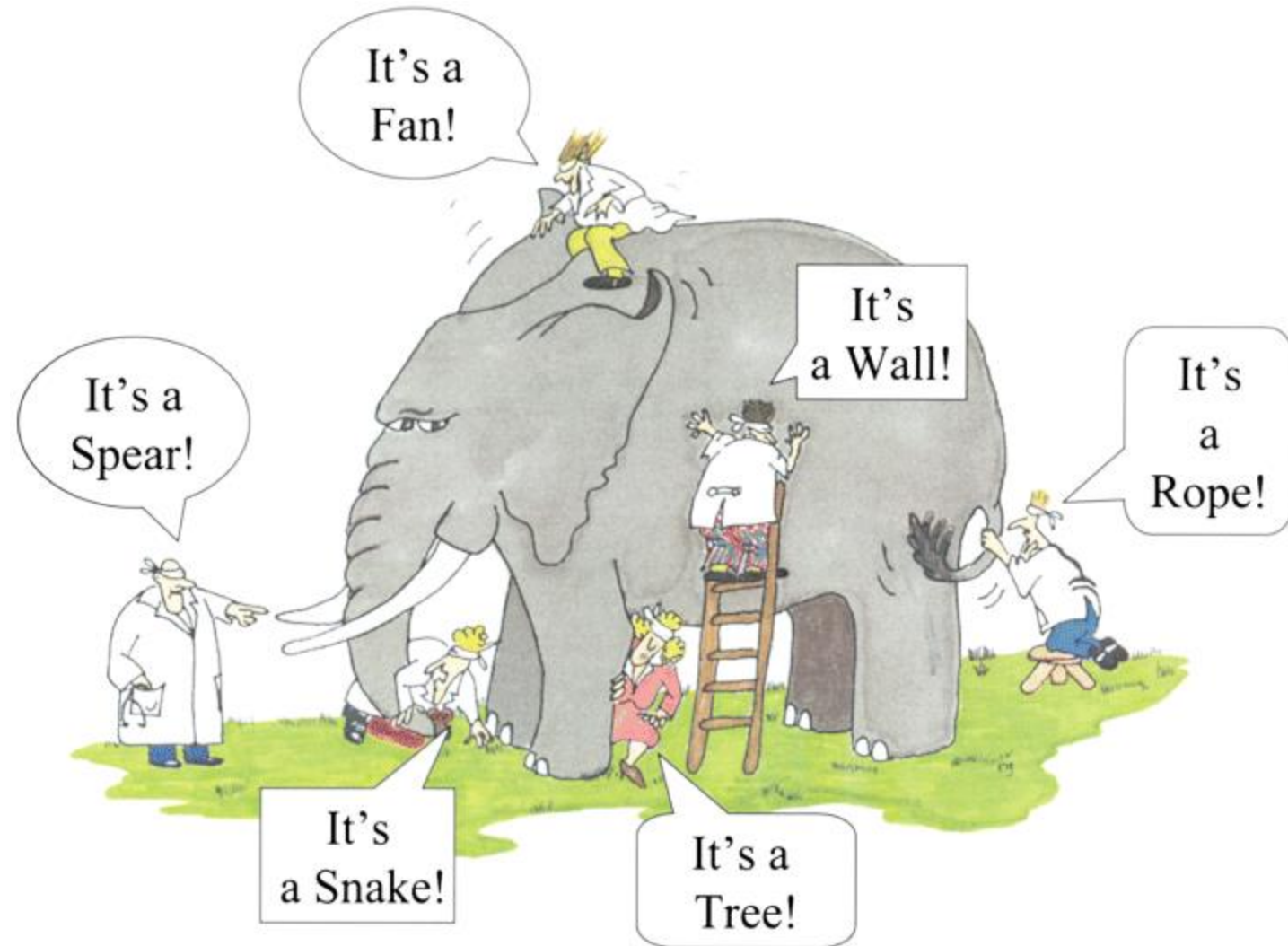
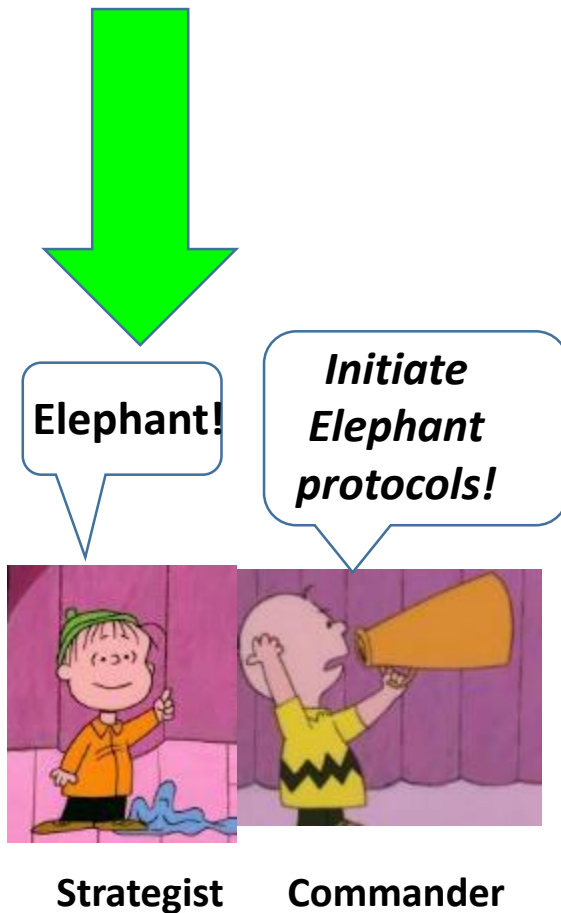
The Truth is...(?)

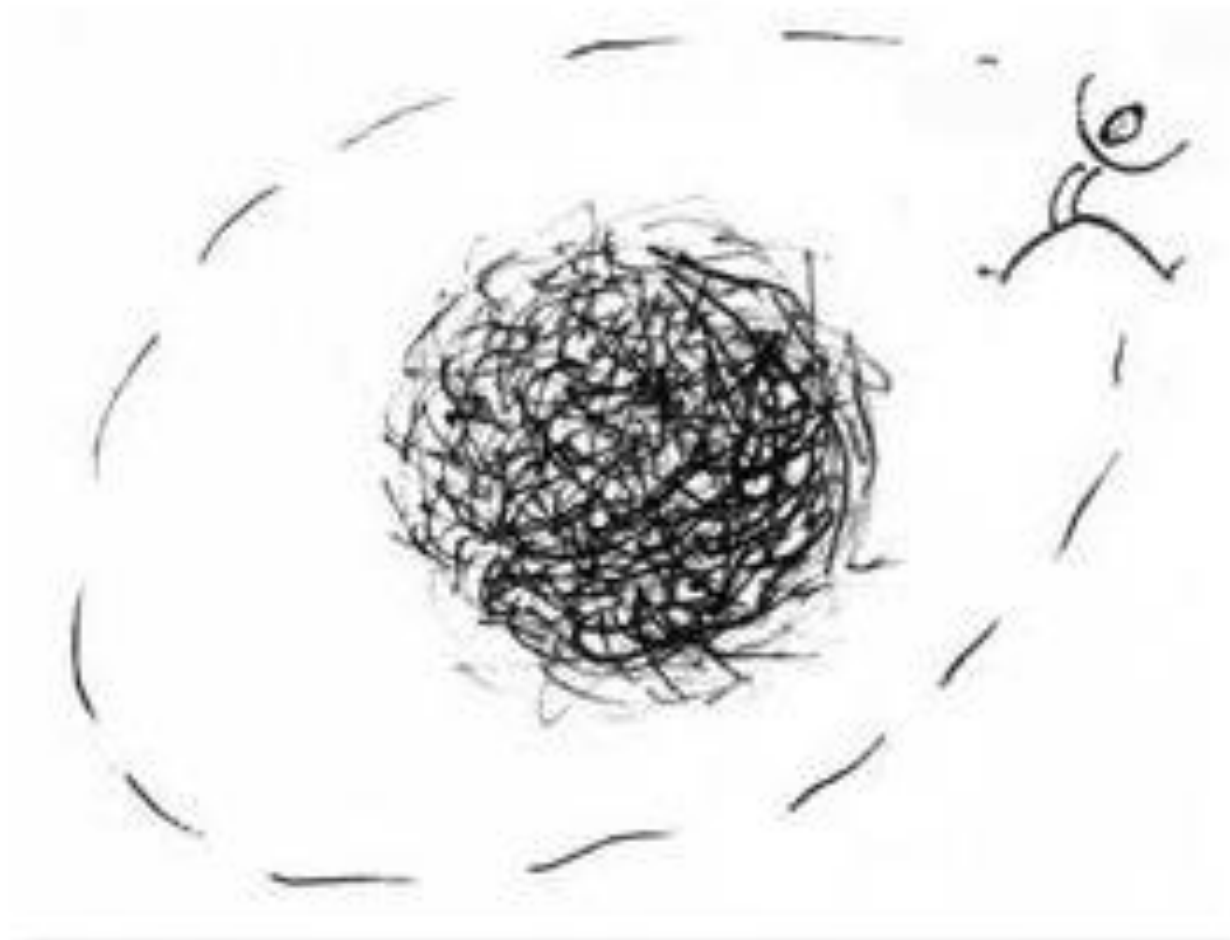


Why is this happening?



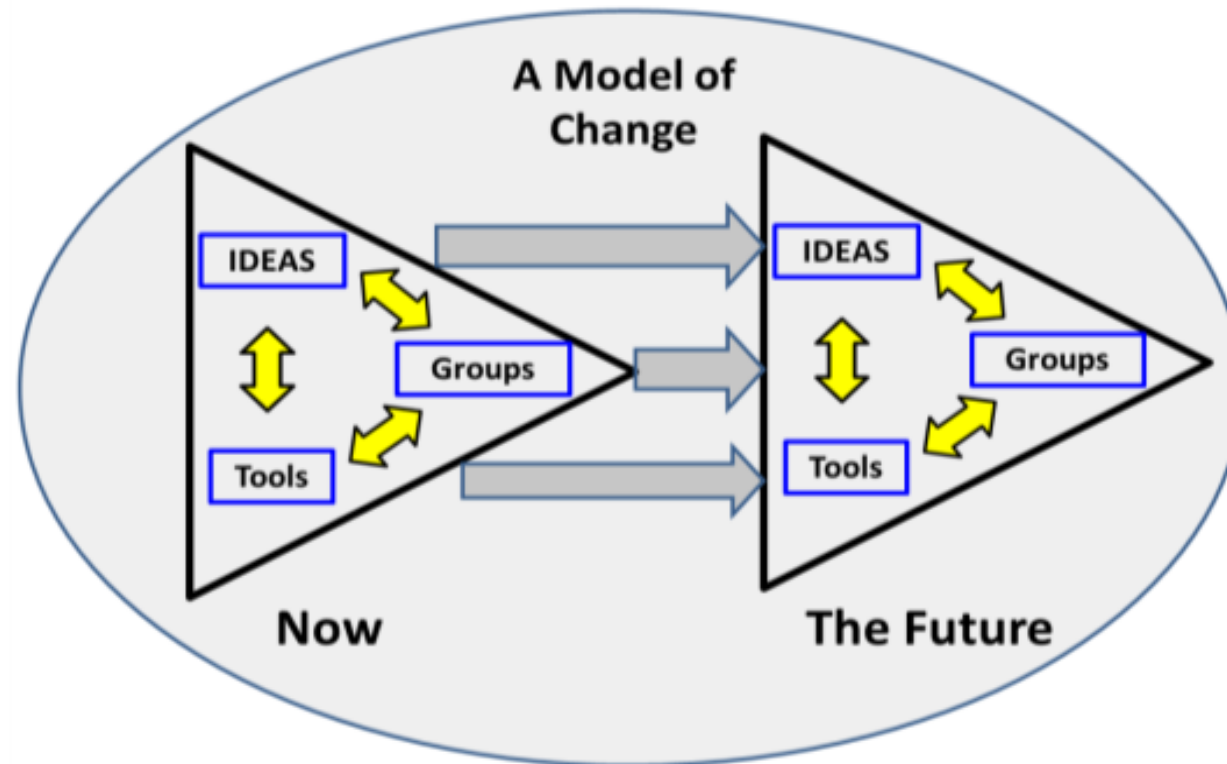
The Role of the Strategist



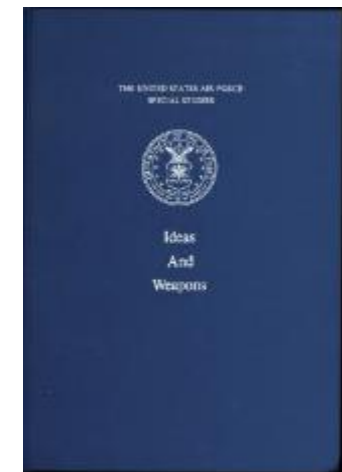
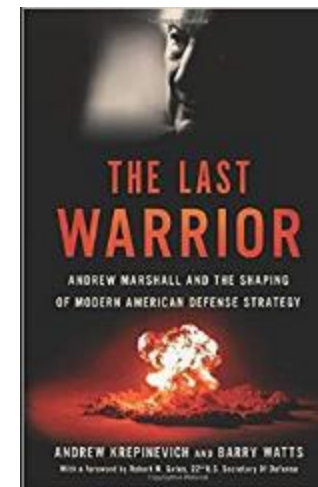
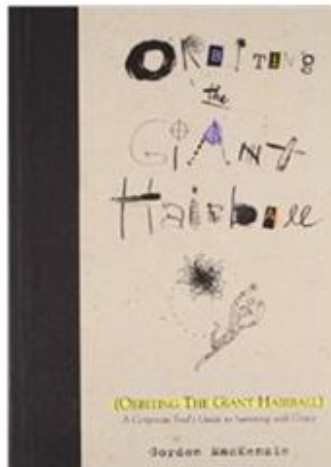
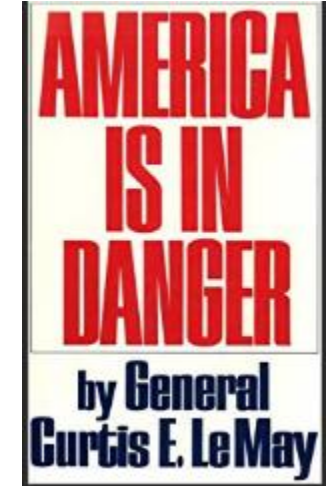
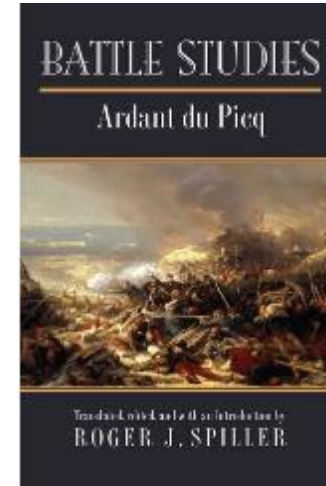
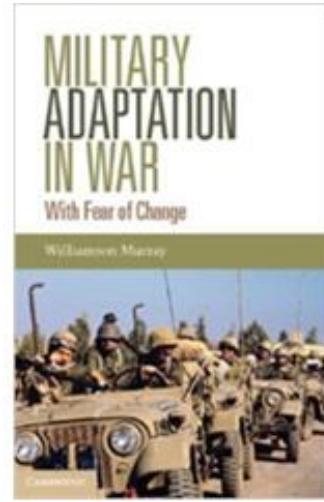


From Gordon McKenzie's *Orbiting the Giant Hairball: A Corporate Fool's Guide to Surviving with Grace*.

The Ideas Groups Tools Model



Origins of the Ideas- Groups - Tools Model



Origins of the IGT Model

“Here was a practitioner-theorist after Patton’s own heart. Although DuPicq clearly argued that good **arms**, sound **doctrine**, and proper **organization** were necessary for success in battle, he emphasized the moral dimension of combat effectiveness.”

Discussion of Du Picq’s ideas in *Battle Studies From* Harold R. Winton, “An Imperfect Jewel: Military Theory and the Military Profession” in *Strategy: Context and Adaptation from Archidamus to Airpower*, Naval Institute Press, 2016, page. 46

*“At the very heart of warfare lies doctrine. It represents the central beliefs for waging war in order to achieve victory. Doctrine is of the mind, a network of faith and knowledge reinforced by experience which lays the pattern for the utilization of **men, equipment, and tactics.**”*

Curtis LeMay, *America is in Danger*, Funk & Wagnalls, 1968, page 23

Origins of the IGT Model

“In brief historical sketches the pages above have shown that the pace at which **weapons** develop is determined by the effectiveness of the **procedures** established to translate **ideas** into weapons. The prior acceptance and application of the thesis that superior **arms** favor victory, while essential, are insufficient unless the “superior arms” are accompanied by a military **doctrine** of strategic or tactical application which provides for full exploitation of the innovation. But even doctrine is inadequate without an **organization** to administer the tasks involved in selecting, testing, and evaluating ‘inventions’.”

IB Holley *Ideas and Weapons* Air Force History and Museums Program, 1997, page 19.

*“A Military-Technical Revolution occurs when the application of new **technologies** into military systems combines with innovative operational **concepts** and **organizational** adaptations to alter fundamentally the character and conduct of military operations.”*

Andrew Marshall's construct for the RMA study as described by Krepenevich and Watts in [*The Last Warrior: Andrew Marshall and the Shaping of Modern American Defense Strategy*](#) (Basic Books, 2015, pages. 200-205)

Origins of the IGT Model

*“It is assumed here that an administrator is one who (a) directs the activities of other persons and (b) undertakes the responsibility for achieving certain objectives through these efforts. Within this definition, successful administration appears to rest upon three basic skills, which we will call **technical, human, and conceptual**. It would be unrealistic to assert that these skills are not interrelated, yet there may be real merit in examining each one separately, and in developing them independently.”*

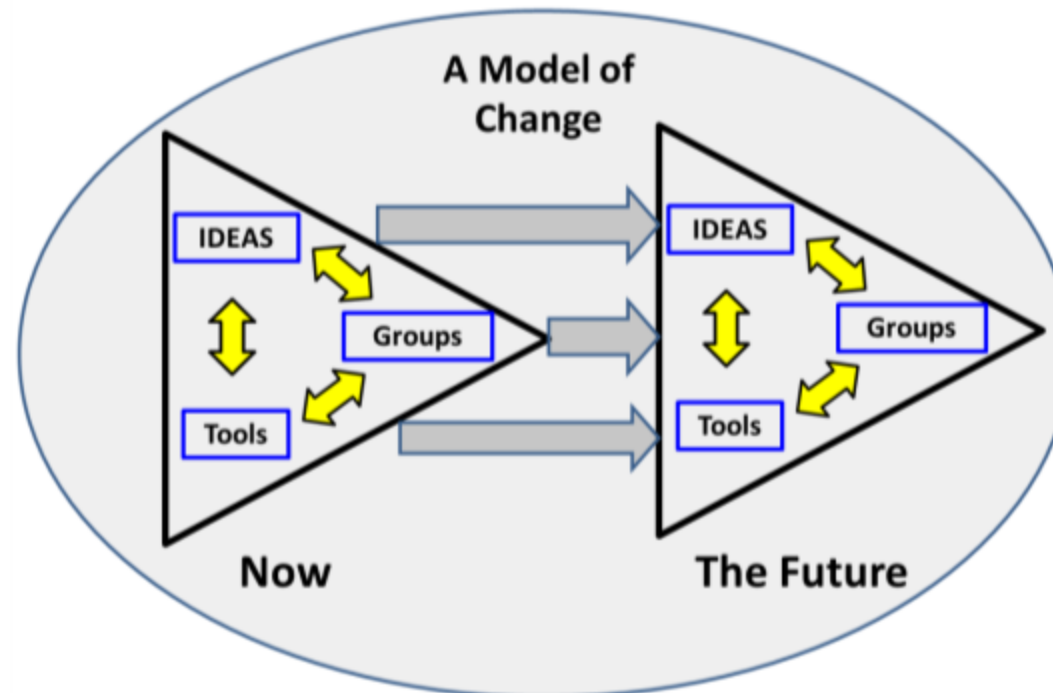
Robert Katz “The Skills of an Effective Administrator” *Harvard Business Review* September 1974

“There are clear indications that China has pursued military innovation in three areas of **technology, organization, and operational concepts**.”

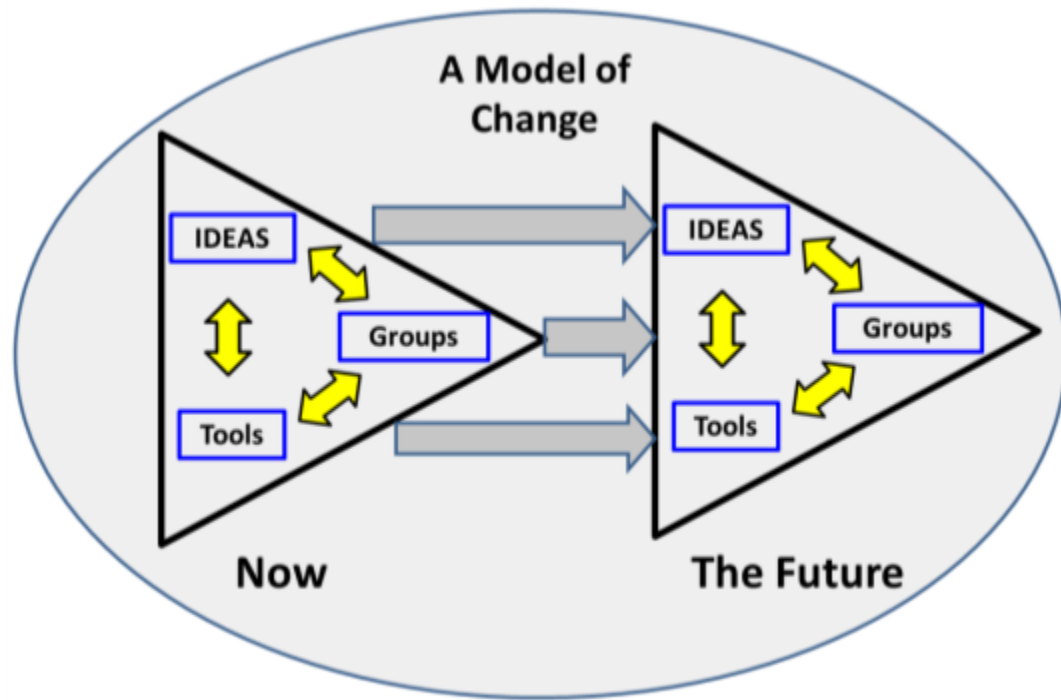
“Chinese Military Innovation and Xi Jinping’s Pursuit of a ‘World Class Force’” RAND Project Air Force PAF-1P-481 November 9, 2018

...hence IGT

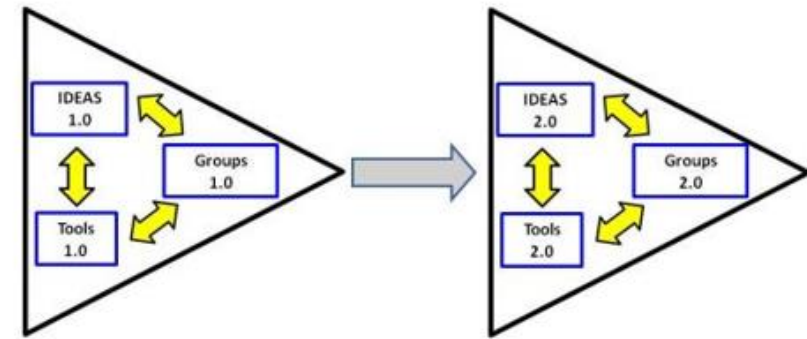
- **Ideas** (doctrine, tactics, concepts),
- **Groups** (organization, procedures, people), and
- **Tools** (arms, equipment, hardware, technologies).



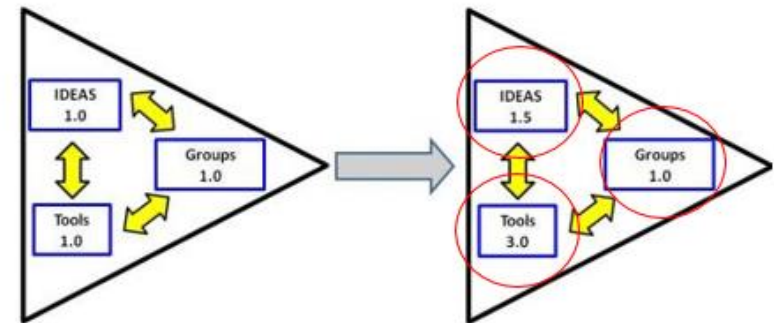
A Model of Innovative Change



What we assume will happen



What Really Happens



What is Strategy?

“A prudent idea or set of ideas for employing the instruments of national power in a synchronized and integrated fashion to achieve theater, national, and/or multinational objectives.

Joint Publication 1-02, *DOD Dictionary of Military and Associated Terms* 08 November 2010, as amended through 15 October 2015

“Military strategy is the direction and use made of force and the threat of force for the purposes of policy as decided by politics”.

Colin Gray, *The Future of Strategy*, 2015

“Strategy is fundamentally about identifying or creating asymmetric advantages that can be exploited to help achieve one’s own ultimate objectives despite resource and other constraints, most importantly the opposing efforts of adversaries or competitors and the inherent unpredictability of strategic outcomes.”

Andrew F. Krepenovich and Barry D. Watts, *Regaining Strategic Competence: Strategy for the Long Haul*, 2009

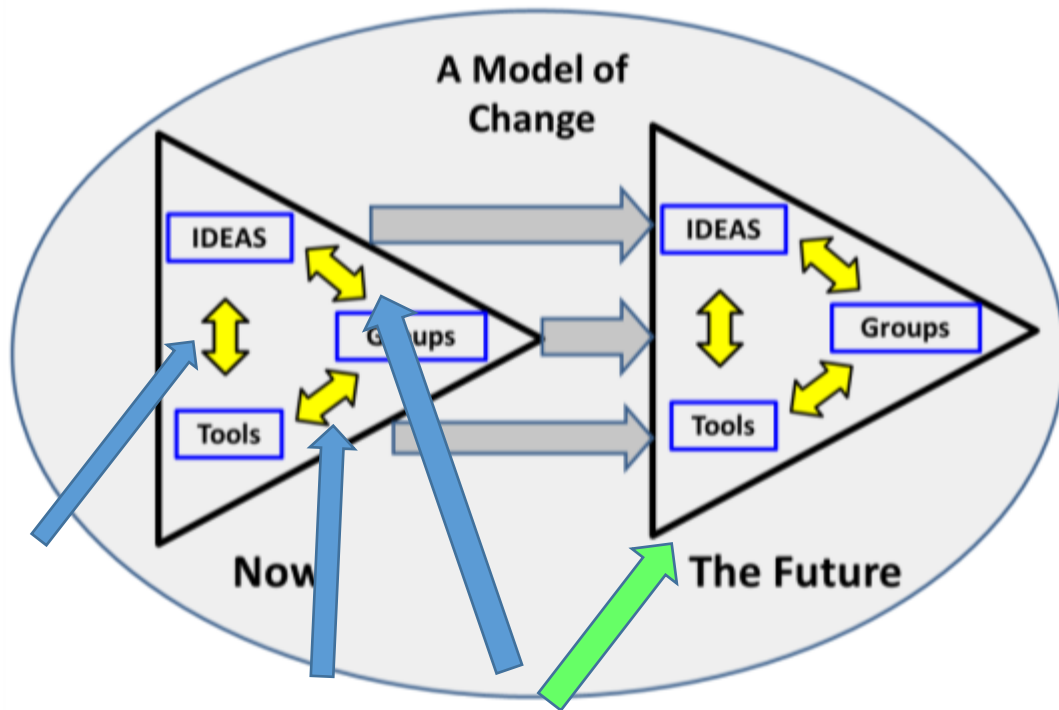
How do strategists think?

“The tactical thinker seeks an answer... The strategist will instead search for the right questions...Strategy is thus an unending process that can never lead to a conclusion. And this is the way it should be: *continuation* is the goal of strategy – not *culmination*.

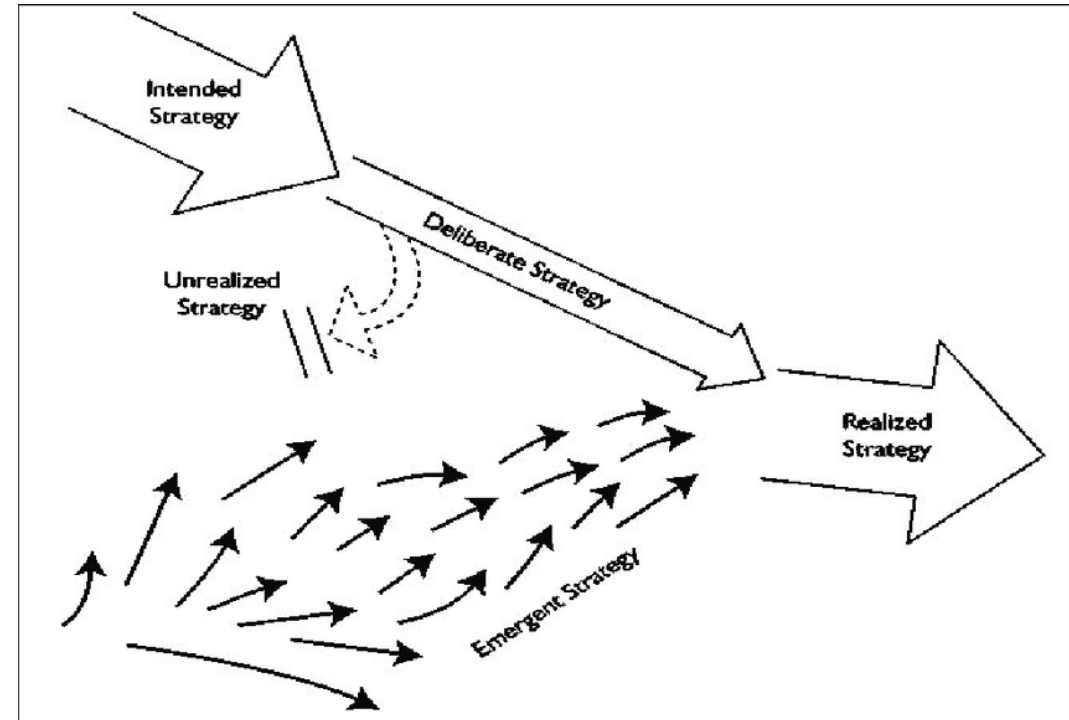
To the extent that the game of chess has master strategists, they would not be concerned about the outcome of a particular game or tournament. For them, the outcome of each game establishes new conditions and boundaries for subsequent play. The desire is not to win but to continue playing chess on favorable terms.

Everett Carl Dolman, “Seeking Strategy” in *Strategy: Context and Adaptation From Achidamus to Airpower*, 2016

Strategists = architectural assistants for building adaptive social ecosystems



Strategists concentrate on the processes represented by the arrows...while imagining what the new ideas, groups, and tools combos could/will be given what's happening outside of the triangle of their own organization



From Henry Mintzberg's *The Rise and Fall of Strategic Planning* and *Strategy Safari*

Design as the bridge

From Dr. Jack Kem *Planning for Action*, 2012

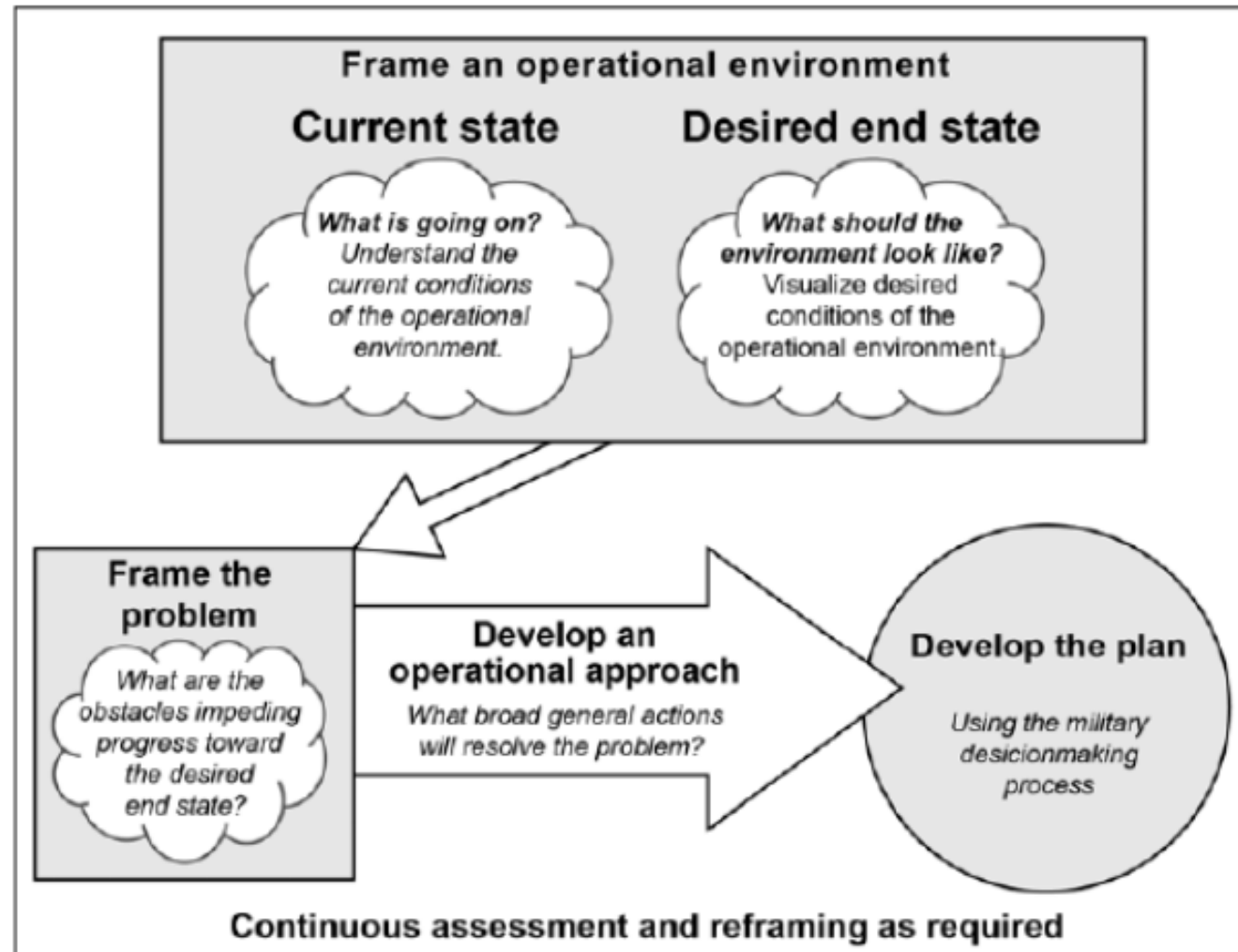
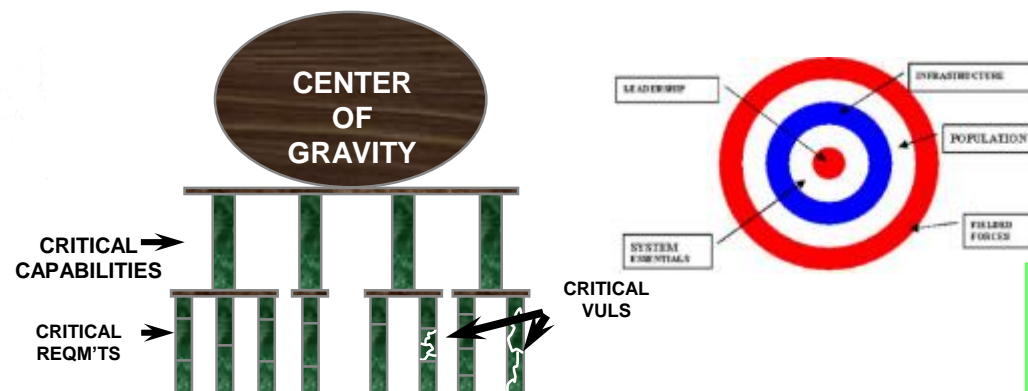
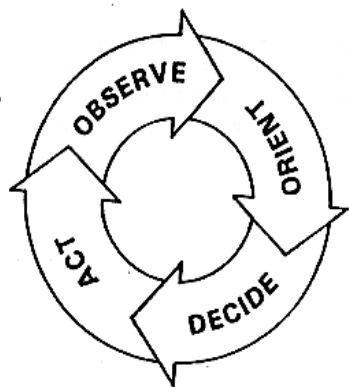


Figure 7-2

These...



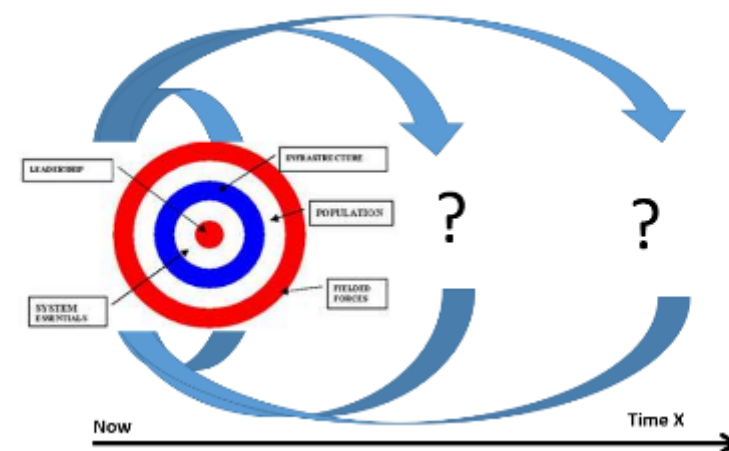
...led to this



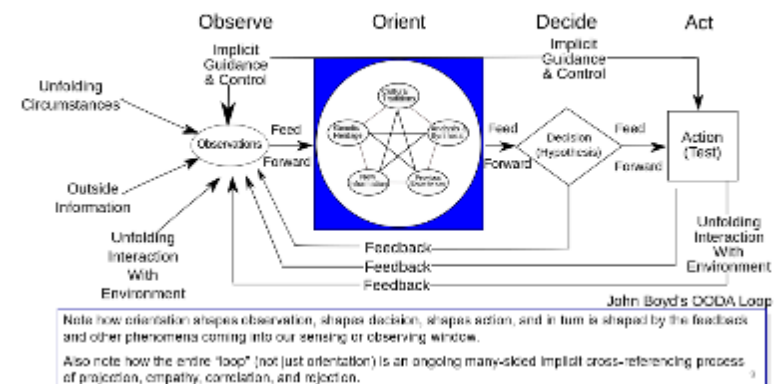
But also this...



What about...



The Real OODA Loop



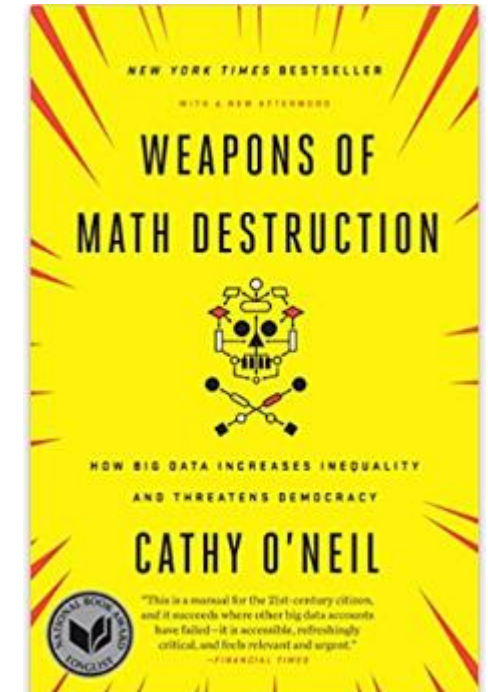
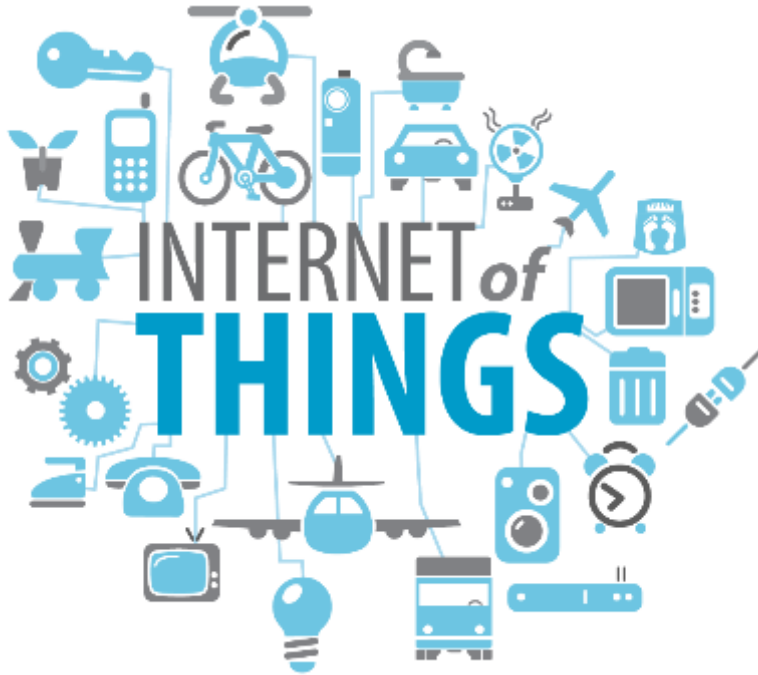
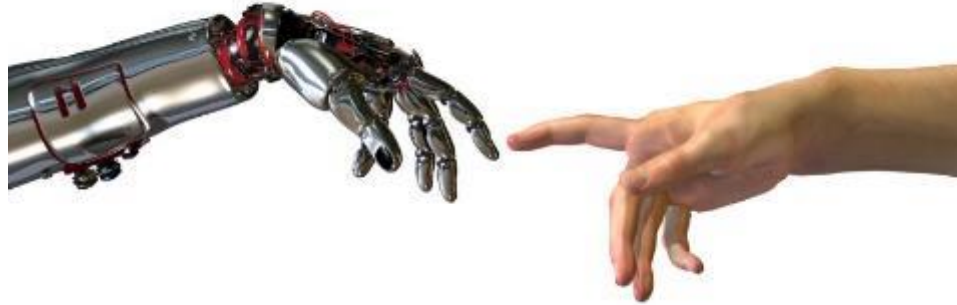
Fifth Generation Warfare

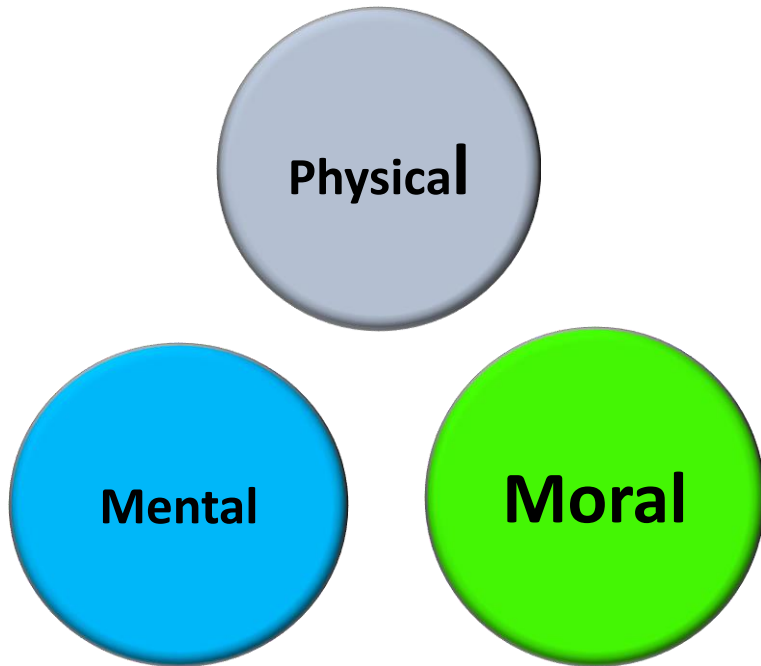
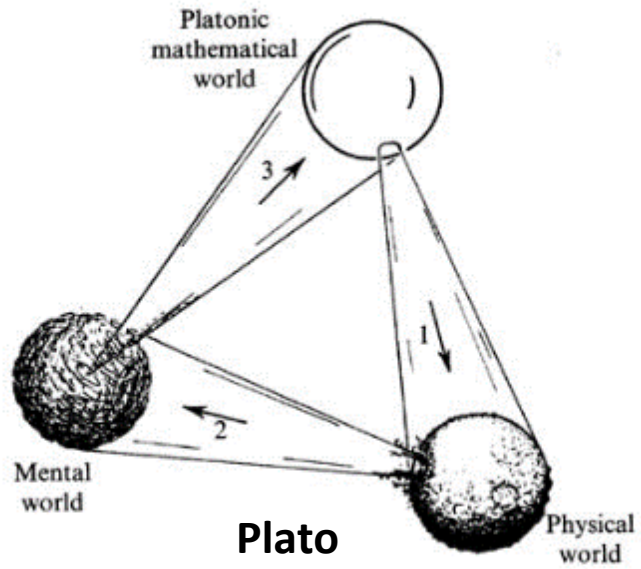
- Networks
- Combat Cloud
- Multi-Domain Battle
- Fusion Warfare
- Distributed Ops



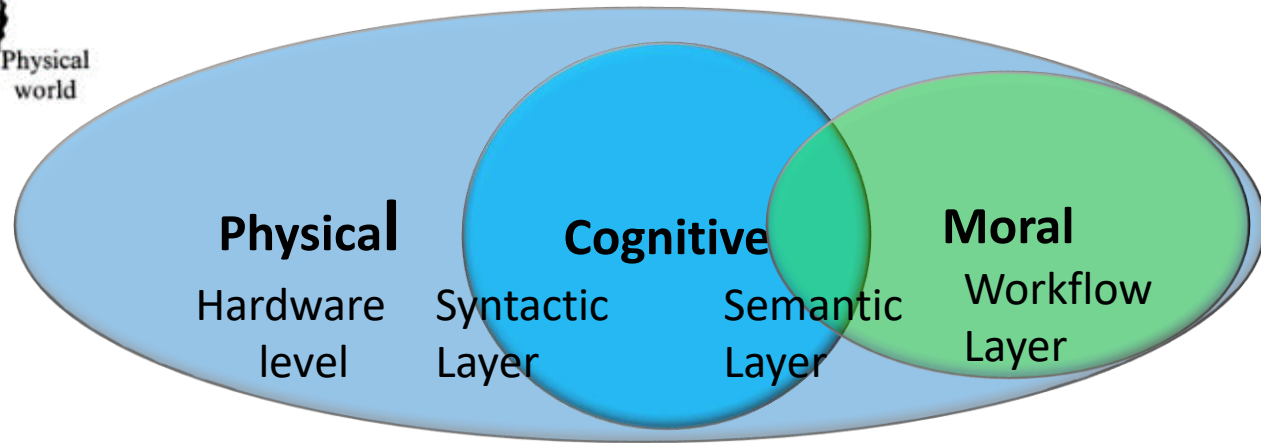
Image: The Tactician's Database

The Critical Issue for our Generation?





JFC Fuller's 'Spheres'



How structured data is sensed and gathered as information

How info is processed/ converted into knowledge

What we perceive consciously as value, meaning, & choice

Today?

Strategy & Innovation

*“This has been from the very beginning **an experimental society**. By virtue of geography, exploration, immigration, the tradition of free inquiry, the nature of the federal political system, the episodic nature of the developing technology, **it has always had in the past a continuous array of novel proposals to choose from**. The opportunity for free choice within a broad band of alternatives is in fact the essence of the democratic process.”*

Elting Morison *Men Machines and Modern Times*

*If the preceding statements are correct, they suggest that **we might give some attention to the construction of a new view of ourselves as a society which in time of great change identified with and obtained security and satisfaction from the wise and creative accommodation to change itself**. Such a view rests, I think, upon a relatively **greater reverence for the mere process of living in a society** than we possess today, and a **relatively smaller respect for and attachment to any special product of a society**.*

Williamson Murray *Military Adaptation in War (with Fear of Change)*

Conclusion

- The greatest challenges during past periods of revolutionary change have been primarily intellectual, not technical
- You can't just “fix” one or two parts of the model in isolation
- IGT helps us think about the entire innovation ecosystem before we pursue ill-matched organizational or technical solutions
- Strategists help groups avoid “RFA” as they frame & solve problems

