



# The Evolution of Command Approach

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The Evolution of C2



Defence Research and  
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## Outline of talk

- Introduction
- Command approach in the 19<sup>th</sup> Century
- Command approach in the modern era
- The influence of new technology
- Elasticity and equilibrium
- National differences
- Future challenges
- Conclusions



## Command Approach in History



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## Interest in Command Approach

- Analysis of German performance in WWII
- How did they perform effectively in the face of overwhelming force?
  - Soviet superiority in Belorussia and Ukraine:
    - Manpower x5
    - Armour x5
    - Artillery x5
    - Air x17
  - Allied superiority in France
    - Tanks x20
    - Aircraft x25
  - Territory held at end 1944 was still larger than the pre-war boundaries of The Reich

(Souce P Kennedy, 1989)



## Battlefield Dispersion

	Area KM <sup>2</sup>	Depth	Front
<b>Antiquity</b>	1	0.15	6.5
<b>Napoleonic Period</b>	20	2.5	8
<b>WWII</b>	2,750	57	48

Dispersion of 100,000 personnel  
(source: T. Dupuy, 1980)



# The Influence of Technology

- By the late 18<sup>th</sup> Century central control of forces was becoming unrealistic
  - Improved weapons technology
  - Requirement for reduced concentration
  - Formations broken up
  - Communications could not keep up
- Historically, junior officers' roles were focused on motivation rather than direction
- Dispersion:

“Only when modern weapons forced armies to burrow into the ground and wear uniforms that made them hard to see did junior officers have to become minor tacticians.” (Desmond Morton)
- With dispersion, advantage was gained by forces that could delegate command authority



## Interest in Command Approach

- Consensus was that the keys to the effectiveness of German performance were:
  - Doctrine – emphasised flexibility and decentralisation of decision making at the tactical level
  - Personnel – high calibre and well-trained
- Analysis underpins the trend towards Manoeuvrist ideas in the 1980s
  - (A time when German performance was ‘rising book by book’)





## Origins of German Capability

- Twin battles of Jena / Auerstedt 1806
- Comprehensive defeat by Napoleon's Grande Armée
- Treaty of Tilsit (1807)
- Prussian military reforms were grounded in an analysis of Napoleon's forces.





## What influences way of command?

- Personnel (selection / training)
- Process (grounded in doctrine, concepts, experience)
- Organisation (structure)
- Technology (weapons, vehicles, communications etc.)



## French Innovations

- Personnel
  - Officers: selected on merit – professional
  - Rank and file: citizen soldiers
- Organisation
  - Corps d'armée
- Process
  - Latitude given to Corps commanders
  - Napoleon's *vision* shared with the whole force



## Prussia Pre-1806

- Personnel:
  - Officers: primarily nobility / junkers
  - Rank and file: majority are foreign, many 'pressed' men, discipline was savage
- Organisation:
  - Linear, rigid, drilled
- Process
  - Centralised decision making
  - Reliant on the commander's capability



## Prussian Reform After 1806

- Personnel
  - Officers: Increased meritocracy
  - General staff Officers: Selected and trained
  - Soldiers: Motivated, Patriotic, Reserve.
- Organisation
  - All-arms Corps system introduced
  - General Staff instituted
- Process
  - Directive command
  - Führen durch Auftrag



## Prussian Reform After 1806

- The debate continued even after the Unification wars
- Two opposing camps:
  - Normaltaktik / Befehlstaktik
  - Auftragstaktik
- Maintenance of cohesion in the face of continued dispersion remains a concern
- Directive command was undermined by some headstrong commanders



# Auftragstaktik

- Effective reform required more than structural change
- Responsiveness of French commanders to the will of Napoleon is noted
- Gneisenau's concept of command by direction:
  - Clarity of objectives
  - Only general indications of method
  - Enables initiative in the face of opportunity
- Moltke blends these ideas with Clausewitz's notion of chaos
  - Control should be devolved to the level at which the commander can read the battle
  - Orders are prone to obsolescence as situations change
  - Strict obedience to the superior commander's intent may require subordinates to alter or even disregard the original order
  - Officers must have independence of mind
- These reforms took time to embed in the culture



## The Prussian General Staff

- Under Scharnhorst most divisions had a General Staff Officer as Chief of Staff.
- Dual responsibility – parallel chain of command
  - Field Commander
  - CGS
- Gneisenau institutionalises the COS's role in advising the commander up until the decision point
- 1866 CGS authorised to issue operational orders in time of war on behalf of the King
- Under von Moltke, as CGS, the principle of Führen durch Auftrag reaches maturity
- Essential role of the military education system, notably the Kriegsakademie





‘A favourable situation will never be exploited if commanders wait for orders. The highest commander and the youngest soldier must be conscious of the fact that omission and inactivity are worse than resorting to the wrong expedient’

Moltke the Elder



## Command Approach in the Modern Era





## Moltke in the 20<sup>th</sup> Century

- Moltke believed:
  - Action can be unified by the higher commander's intent
  - Small formations and units require individual missions within that intent
- Still relevant in 20<sup>th</sup> Century, for example:
  - Canadians at Vimy Ridge break infantry into small teams with their own objectives (Morton 2003).
  - US Marines in Vietnam
    - 'We didn't fight in the formations we had learned at Camp Lejeune and Quantico because at the squad and platoon levels, definable targets such as a formation of men got shot to pieces. Our seniors didn't know it but we just quit doing it – quit using the structure' (Wyly, 1991).*



## The Influence of Technology

- New CIS technology:
  - has caught up!
  - supports any command approach
  - “At the tactical level, network-enabled capabilities enhance forward command.” (UK ADP Land Operations 2005)
  - Soviet forces used “C3I systems to strengthen top-down authority in a system described as ‘forward command from the rear’” (Toffler, 1994)



## The Influence of Technology

- There are plenty of examples / anecdotes of ‘mission command’ organisations operating in a centralised fashion:
  - Digitisation observed to support personal command style
  - In high-risk operations
  - In early ‘networked’ environments
  - In coalitions



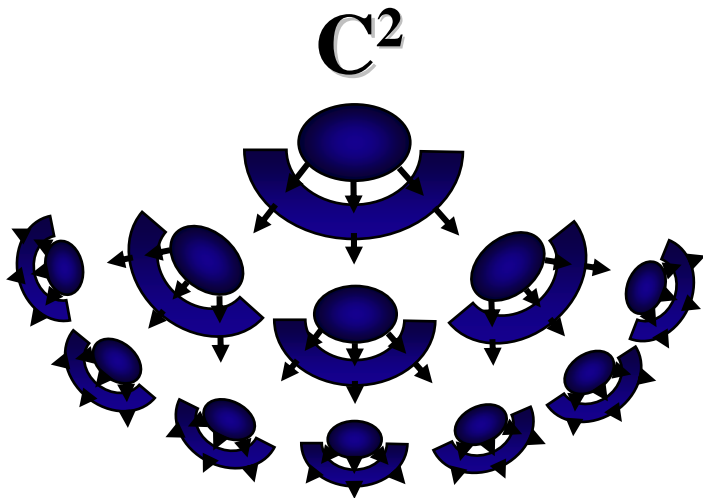
## Mission Command and NEOps

- Is mission command redundant?
- Is centralisation a new concern?
- Is CIS technology the only driver of command approach?
- Although centralisation is possible – is it inevitable?
- Isn't the truly agile organisation one that can exercise command across the continuum?



# Conceptual Framework for C<sup>2</sup>

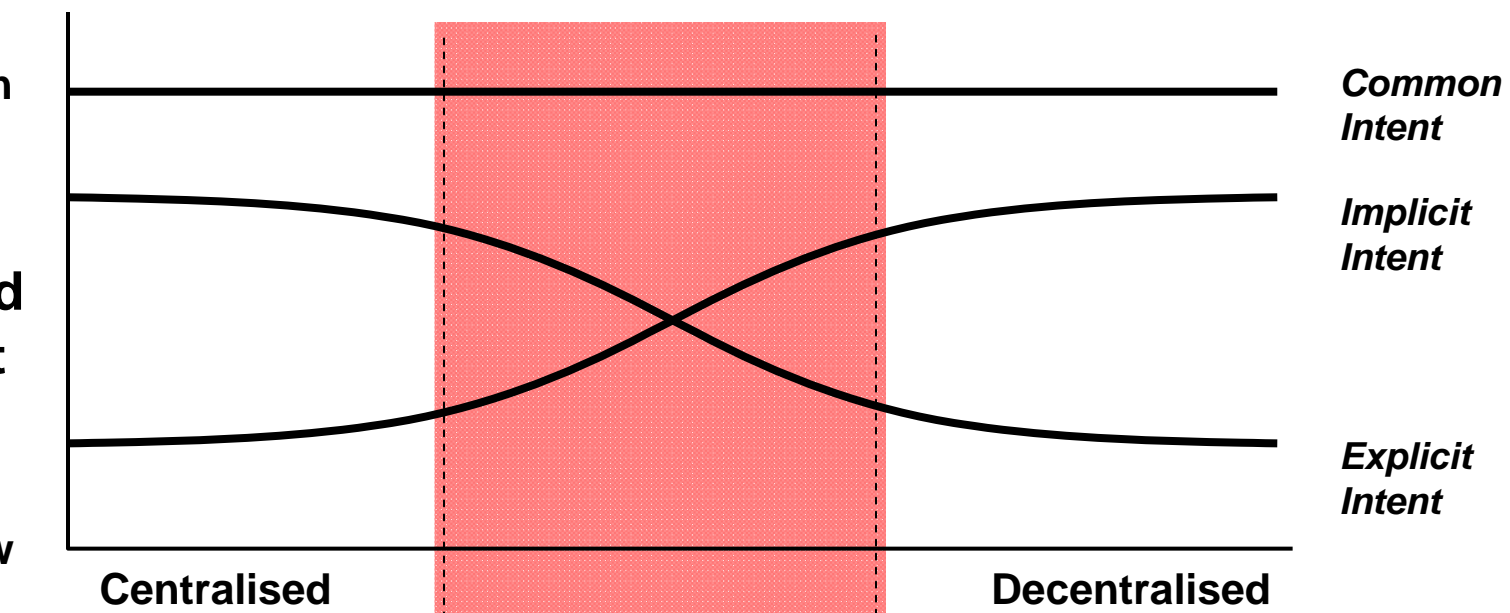
(Pigeau and McCann)



The establishment of common intent to achieve coordinated action.

- Common Intent: The sum of shared explicit intent plus operationally relevant shared implicit intent.
- Therefore:
  - Common intent underpins performance
  - Common intent can be used as an indicator of risk





Adapted from Pigeau & McCann (2006)

**Command by Direction**

**Command by Plan**

**Command by Influence**

Adapted from Czerwinski (1996)

Cyclic Interventionist

Problem-solving Problem-bounding

Selective-control Control-free

**Command Approach**

**Order Specific**

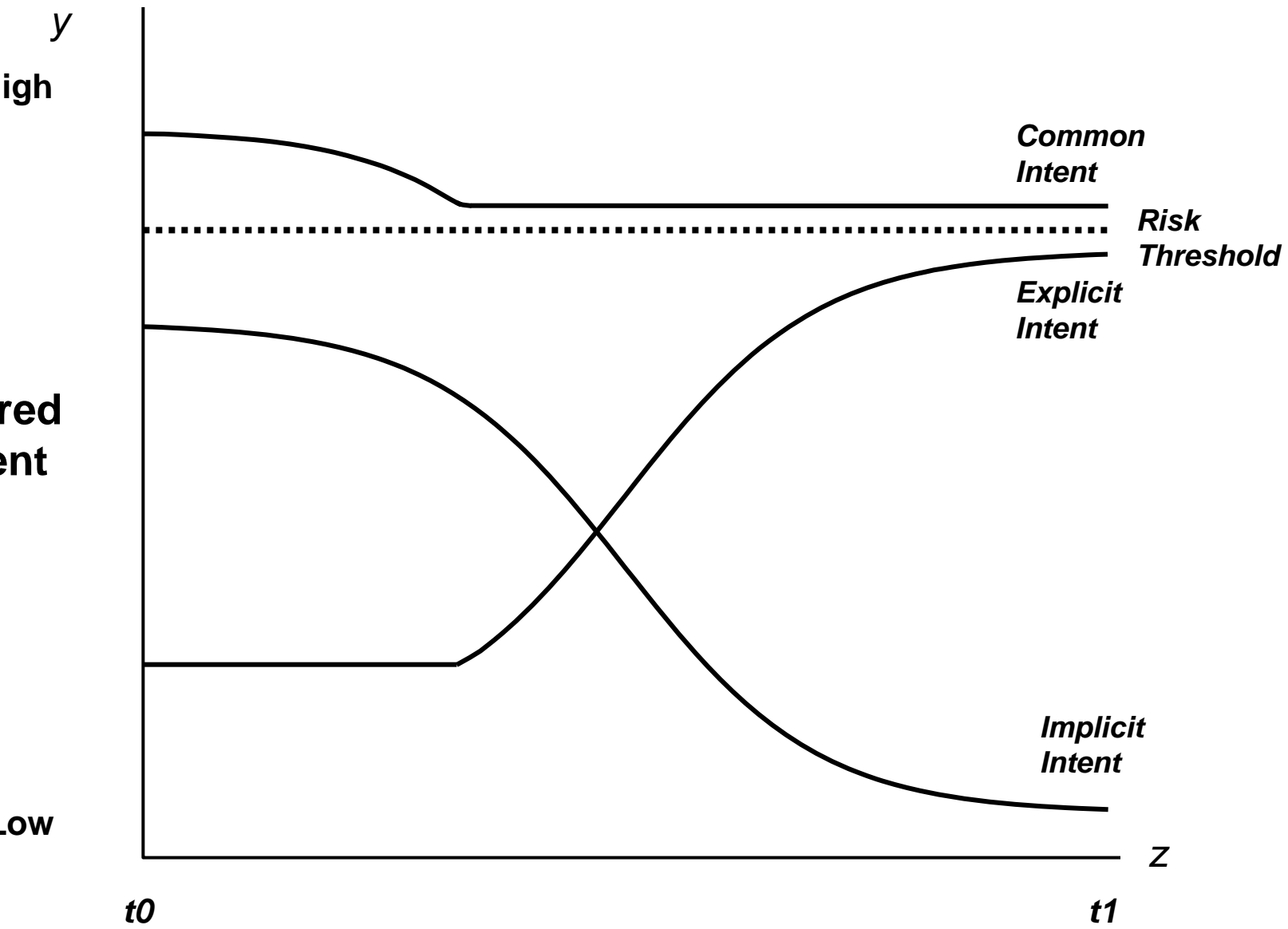
**Objective Specific**

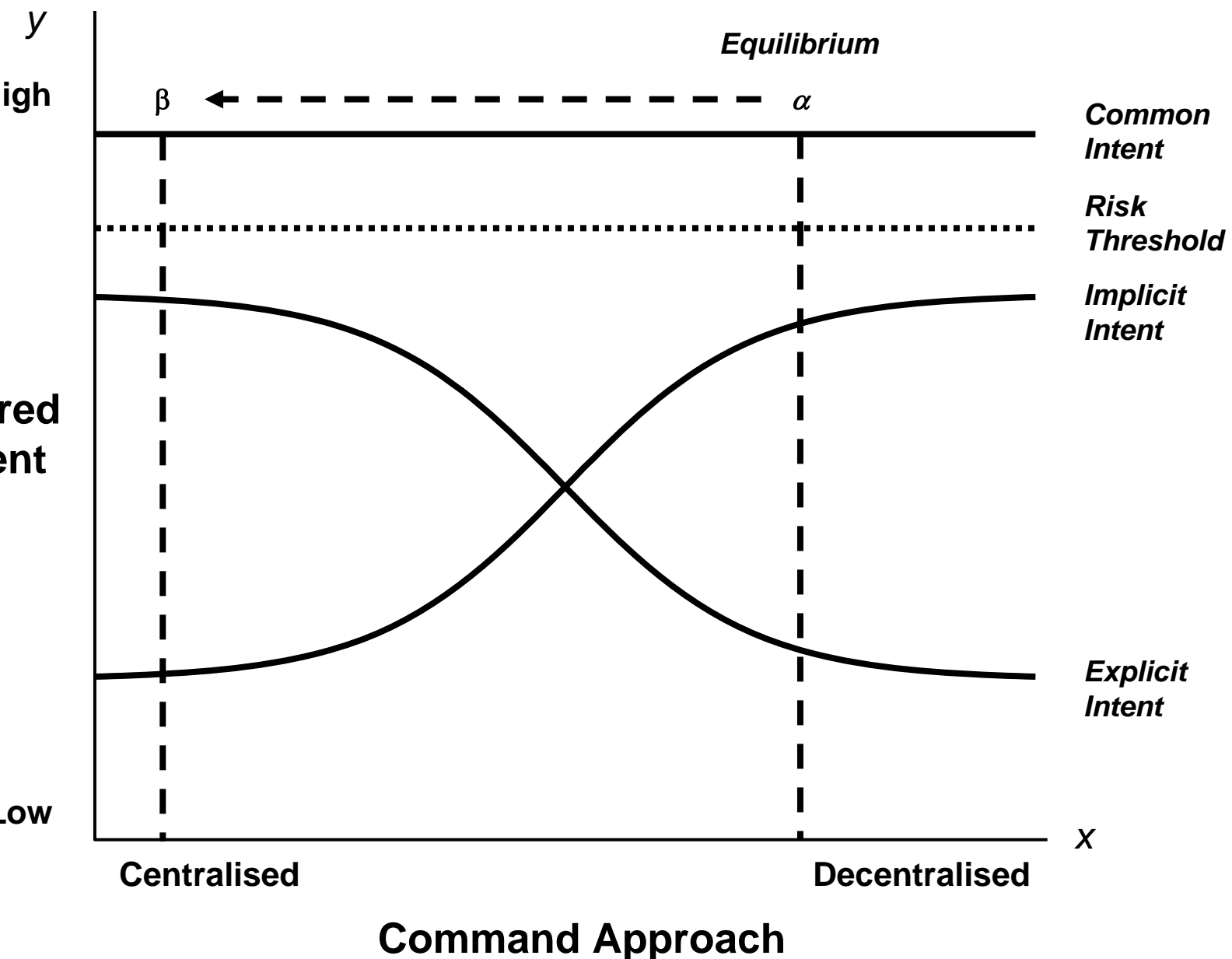
**Mission Specific**

**Directive Specificity**



Detailed      Loose





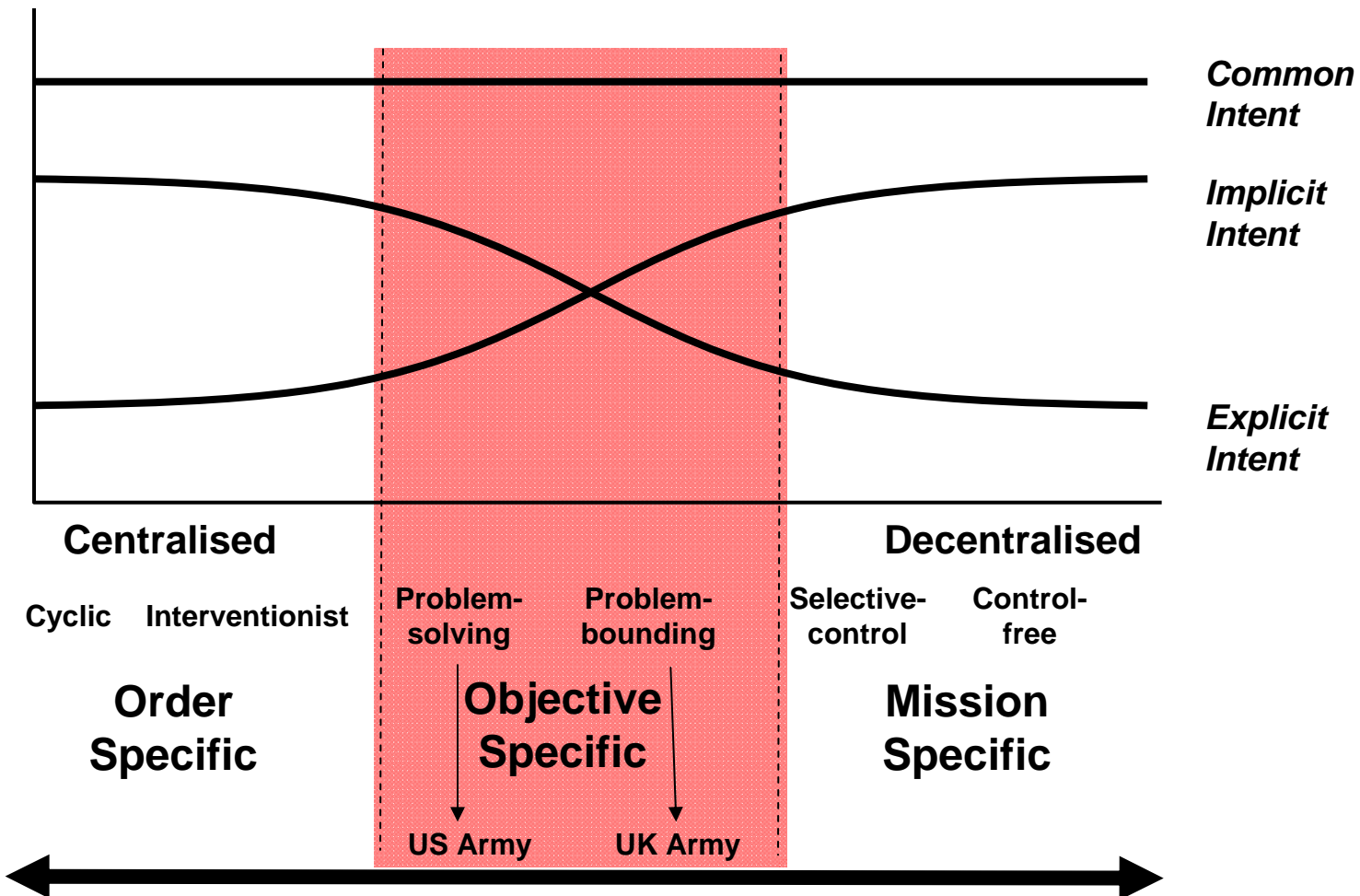


## Equilibrium and elasticity

- All military organisations:
- Have a point of command and control equilibrium for which ALL lines of development are optimised
- Have a level of ‘elasticity of command’ – a capacity to move away from equilibrium
- Organisations differ in:
  - How far they can move and remain efficient
  - How long they can sustain this move

# Command Approach: National Differences?

Alberts & Hayes (1995); Stewart [2009, based on: Klein (1993), Murphy (2002), Molloy et al. (2001), Firth (1993)]



Detailed

Objective Specific

Loose



## What influences command approach?

“Conceptual grafting” of auftragstaktik into other nations’ doctrine is mistaken unless the fundamental building blocks, including culture and societal influence are in place.

Col Chuck Oliviero (1998)

- Culture: Values, beliefs, attitudes
- Psychological contracts
- Trust
- Expectation of initiative
- Lack of risk aversion
- Benign non-compliance
- Mission command is bottom-up: a style of ‘followership’.



## What enables command approach?

- Mission command is based on intangible qualities of the organisation e.g. trust, expertise, experience, culture
- The aspiration for decentralisation of command requires that forces develop a deep, broad, reservoir of implicit intent.
  - Shared knowledge
  - Comparable reasoning ability
  - Shared commitment and motivation
- The adoption of command approach is a question of economics
  - Costs go up with degree of decentralisation
  - Mission command is costly
  - Mission command takes time to cultivate
  - It is reliant on all lines of development





## Conclusions





## Conclusions

- In the era of 'industrial war' mission command has been an efficient compromise owing to the physical and organisational structuring of military forces.
- Communications and information technology have, to a limited extent, widened the range of command approaches.
- Decentralisation still offers the advantage in adaptation to novel situations – this is based on potential implicit intent
- Organisations that have equilibrium in the region of decentralisation can, in the short term, step down to centralised operation
- Such organisations have more 'elasticity'



# The future of command approach

- 'JIMP'
  - Joint operations
  - Multinational operations
  - Interagency and Public
  - The Comprehensive Approach
- The influence of new technology
- 'Full spectrum operations'
  - Effects orientation
  - Influence operations
  - The human domain of operations
- Risk tolerance

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