

The First Scientific Dispute over
EFFECTS

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Weaponneering Principles 1943

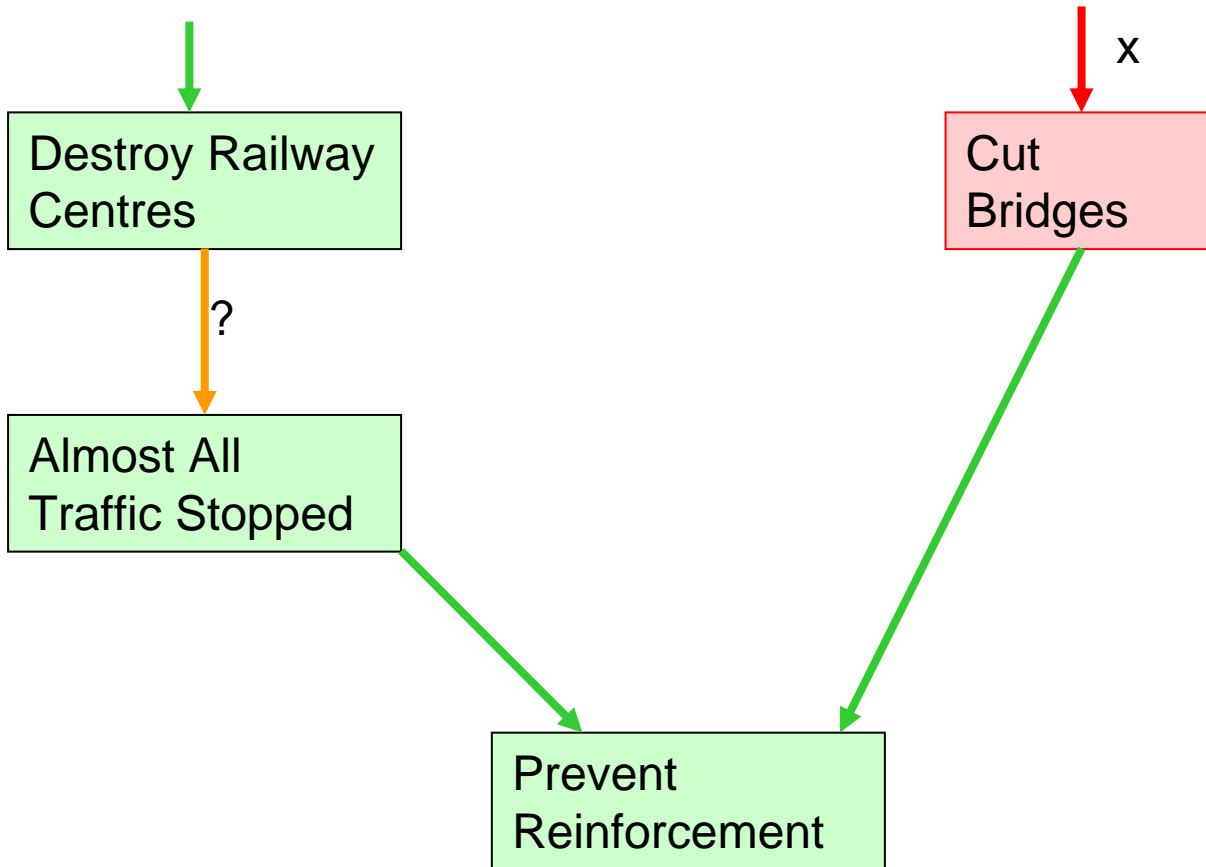
- Distribution of impact points about aim point
- Weapon effects (cookie-cutter)
- Sufficient to kill 1/3 of guns
(because Alderney guns arranged in batteries of 3
– but this ratio was then used elsewhere)

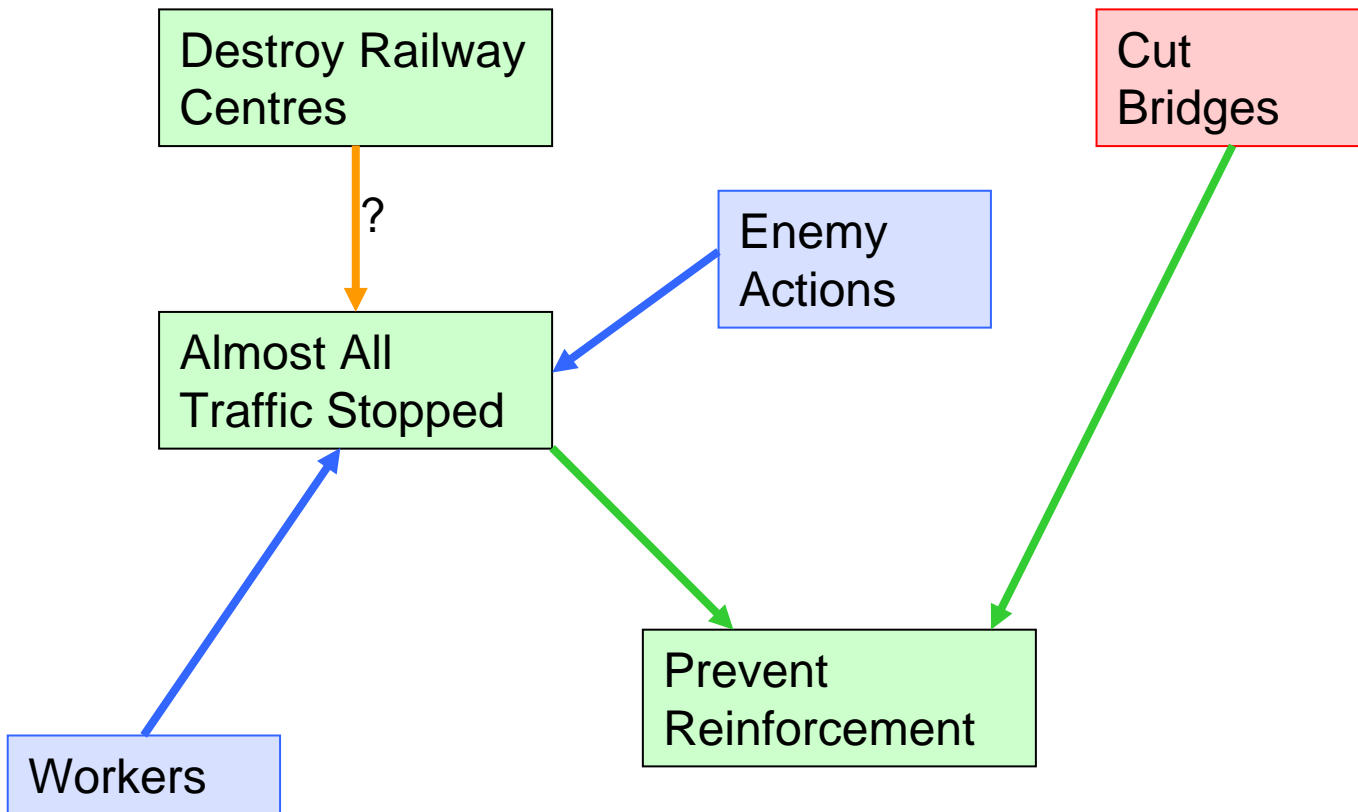
Attacking Railways

- Strategic / Systemic approach
 - Attack key nodes
 - junctions, marshalling yards, repair & maintenance
 - definition varied with time
- Tactical approach
 - Cut lines

The Opposition

- Oliver Lawrence
 - UK Ministry of Economic Warfare
- C P Kindleberger
 - Hd / Enemy Objectives Unit
Economic Warfare Division
US Embassy, London

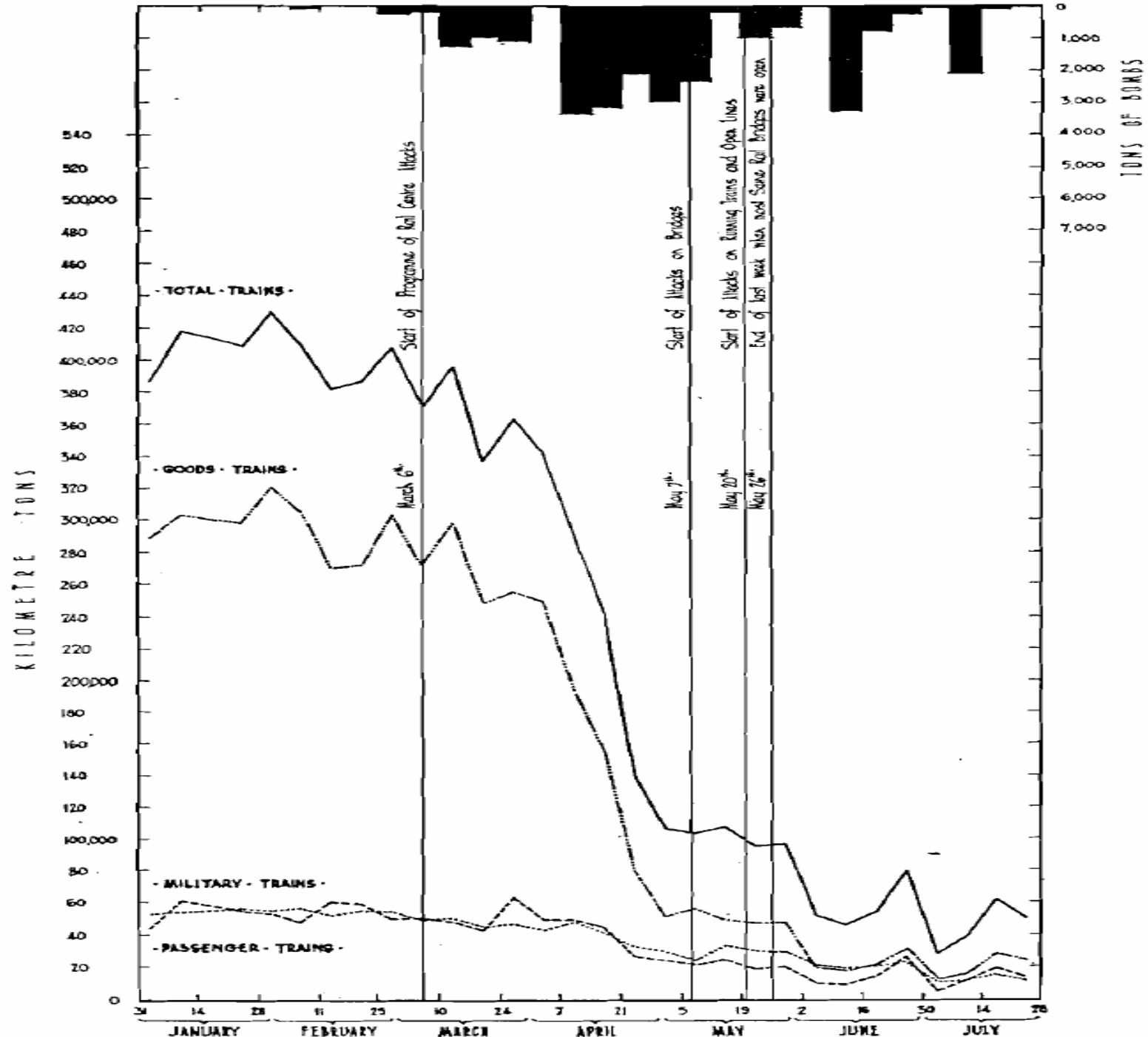




Timetable of Events (France etc)

1944	Systemic	Tactical
March	START	
end April		Experiments
7 May		Coordinated plan
20 May		+ strafing trains
26 May		X Seine bridges
6 June	D-Day	D-Day

- TONNAGE OF BOMBS DROPPED ON RAIL-CENTRES IN REGION NORD -



Italy Railway attacks

Tonnage	M/Yds	Bridges	Other
Jan 44	1189	584	0
Feb	509	151	8
Mar	1238	673	53
Apr	123	3052	537
May	351	2418	312

Conclusions

- Clarity of argument
- Need to persuade all stakeholders
- Commander's intent