

# The psychology of wargaming

Prof Neil Verrall PhD, CPsychol, FBPSS

Senior Principal Psychologist

Human and Social Science Group

DSTL

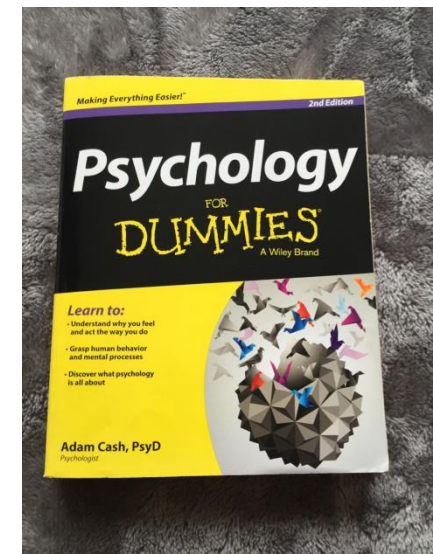
[ngverrall@dstl.gov.uk](mailto:ngverrall@dstl.gov.uk)

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# What is Psychology?

- Definition from the British Psychological Society (BPS)
  - ‘Psychology is the **scientific** study of the mind and how it dictates and influences our behaviour, from communication and memory to thought and emotion’
- Psychology is a broad church
  - N = 9 BPS Chartership routes
    - Health, education, clinical, counselling, neuro, forensic, clinical, sports & exercise, and academia, research & teaching
  - N = 11 BPS Divisions
  - N = 22 BPS Sections and Special Groups
    - Social, Cognitive, Defence & Security, Cyber, Political, Biology, Occ/Org, Maths/Stats, Qualitative, History/Philosophy, Sex/Gender, Crisis/Disaster

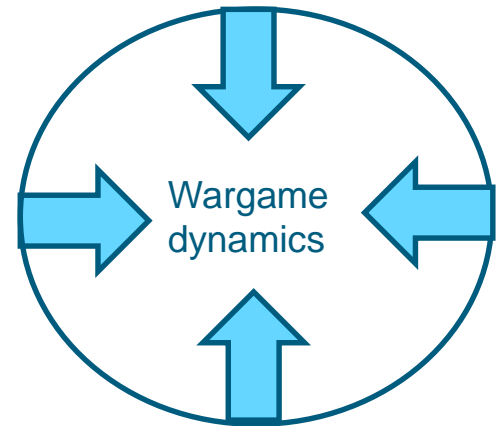


# What is Psychology...

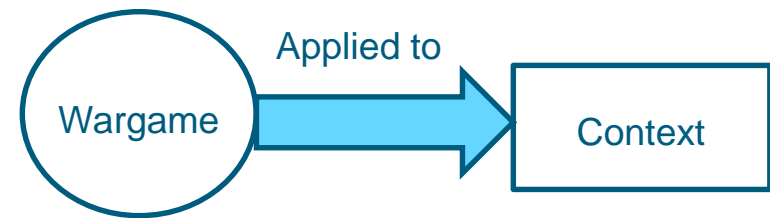
- Many terms for the same thing?
  - Psychology (psychological science)
  - Social science (anthropology → economics)
  - Behavioural science (cross-disciplinary)
  - ‘Human factors’ (catch all title, but originates from engineering/ergonomics)
  - Big data and digital
    - ‘Behavioural analytics’ aka ‘computational social science’ aka ‘social physics’ aka ‘social data science’
- Key messages:
  - Psychology is a broad church of disciplines
  - Be clear about what ‘behaviour(s)’ you want to address within your WG
  - Psychology is scientific in nature (empirical, experimental)

# Internal vs external foci

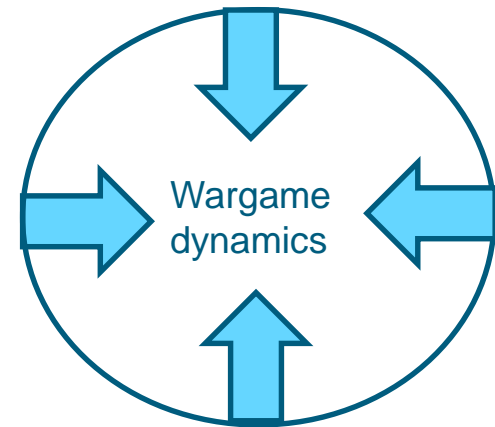
- **Internal dynamics – what is happening during the WG?**



- **External subject – WGs to answer a question**

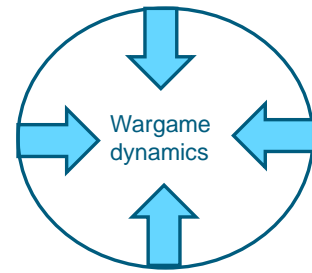


# Internal (the dynamics)



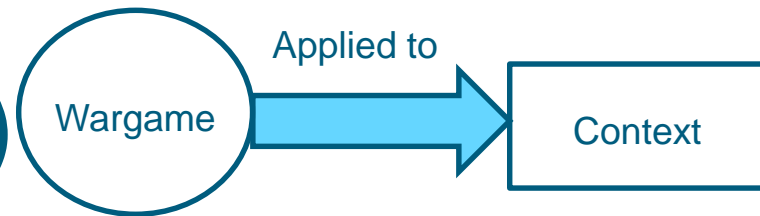
- Consider the range of dynamics
  - *Inter-personal (between people/teams)*
    - (players vs players; players vs controllers/adjudicators)
  - *Intra-personal (within a person/team)*
  - How experience and expectations influence engagement (fixed mindset)
    - Confidence/optimism → anxiety/fear
  - Group dynamics
    - In-group/out-group prejudice, conformity/obedience, minority/majority influence, cohesion/identity
- Dynamics as confounding variables to the WG
  - Incl. culture, rank, cap badge
  - Consider/control the impact of these variables (design considerations)
  - Adopt an experimental mindset, if not an experiment *per se*

# Internal...



- ‘Some’ useful theories
  - To look at: patterns, attention, decision-making, influences on behaviour, information, etc
  - Confirmation bias, belief bias, Gambler’s Fallacy, Optimistic bias, Framing effects, Groupthink, etc
  - WGs allows opportunities to explore and test psychological theories
- WGs as ‘evidence’ (deception and self-deception – Downes-Martin, 2016)
- Closed vs open WGs (opportunities and challenges)
  - Open: Tacit use of Non-Verbal Communication (NVC)
  - Closed: Loss of NVC indicators / need better ‘understanding’ *a priori*

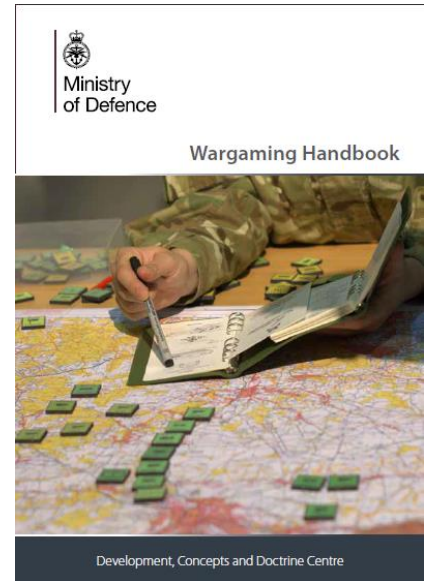
# External (subject and context)



- Psychology and role playing games (Bowman & Lieberoth, 2018)
- Real-world environmental context as both unique and important
  - Ecological Psychology (design of wargames) (Granberg &Hulterström, 2016)
  - Psychology ('Applied') and Semiotics ('Umwelt')
- Command and Control (C2)
  - Maritime C2 Agility (Waldenström, 2012)
  - C2 Experimentation (Rubel, 2003)
- Decision making
  - Modelling strategic effects (Whittemore, 1999)
- Planning behaviours (Kardos & Chapman, 2003)
- Information Operations (Ball, 1999)
- Overconfidence and 'positive illusion' (optimistic bias) (Johnson et al, 2006)



# MOD Wargaming Handbook (2017)



- Is behaviour ‘soft’?
  - Behaviour is important (fundamental)
    - Core of WG (para 1.5): the players, decisions, narratives, experiences, lessons
  - Behaviour is quantifiable (quantitative data)
    - Numbers, scale, ratio, trend, etc.
  - Behaviour is observable (as opposed to ‘cognitions’)
    - Objective, subjective, online, offline, formal, informal, qualitative, quantitative
  - **It all depends on how you design your WG!**
    - What you design, collect/measure, and find

Term	Mentions
Behaviour	2
Psychology	0
Social science	1
Social	3
Cognitive (cognition)	2
Thinking (cognition)	9
Culture (org)	6

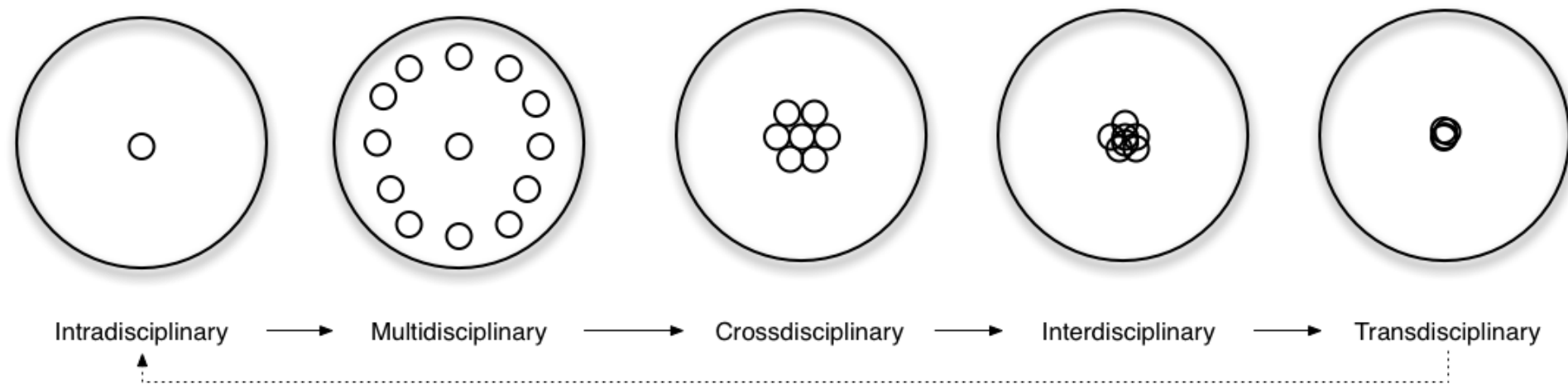
# Some food for thought



- Wargaming other areas of ‘behaviour’
  - Cultural differences (‘international by design’)
  - Organisational culture (inter-military and also ‘full spectrum’ across-government)
  - Information advantage and information manoeuvre
  - ‘Understanding’ (of the adversary)
  - Deception (the art of stratagem)
  - Future threats and mitigations (lots to choose from!)
  - Search the various policies, strategies and missives for topics
  - **The array is limited only by the inventiveness of smart minds**
- Adopt a more ‘experimental’ approach (where appropriate)
  - Independent variables (IV) and dependent variables (DV) – data collection
  - Bottom-up: to conduct exploratory research, ‘discovery research’ (drive new theories)
  - Top-down: to test existing theories (from a different perspective)

# Some food for thought...

- Interdisciplinary
  - Wargamers, historians, psychologists, analysts, geographers, etc. etc.
    - Put together a composite team
  - Better designs = better collection/metric opportunities = better insights



Source: A. R. Jensenius, 2012 <http://www.arj.no/2012/03/12/disciplinarity-2/>

# Summary

- Psychology is a broad church – what aspect(s) are you interested in?
  - Behaviour as a focus of the WG (the subject and context)
  - Behaviour as a potential confounder (the dynamics)
- Work with psychologists to help consider and design WGs with ‘behavioural’ foci (interdisciplinary/transdisciplinary)
- Wargaming can be used for:
  - Bottom-up: to conduct exploratory / discovery research (drive new theories)
  - Top-down: to test existing theories
  - Adopt an experimental mindset, if not an experiment *per se*

## Useful references and resources

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## Useful references and resources

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