Computational Strategic Thinking Modelling

Major Leon Young
Future Concepts Strategist
Australian Army
Scope

- Contextualise the problem of strategic thinking
- Cover the methodology basics
- Overview the results
- Brief analysis on what we found
Context of the problem
Situation

- There appeared to be a lack of strategic thinking within Defence

- “…the Australian Defence Force (ADF) needs to identify and develop Commanders that think at the strategic (macro) level in order to design and implement effective campaign plans”, Operational report, 2012

- “…there is plenty of room to improve education of military planners and … personnel to think in terms of effects”, Operational Report, 2011
Scope of problem

- **Strategy**
  - “Strategy is fundamental to the success and sustainability of any organisation”, Berg Consulting, 2011
  - “No subject is more essential in the preparation of national security professionals and military leaders than the teaching of strategy”, Douglas C. Lovelace Jr, 2010

- **Strategic Thinking**
  - “Strategic thinking is a valued skill in the Civil Service. It is one of the six core requirements in the Senior Civil Service competency framework” UK House of Commons, 2010
  - “Strategic thinking is required to secure the long term future of nations and organisations” Zabriskie and Huellmantel, 1991
  - “lack of strategic thinking as the main problem in their organisations”, Bonn, 2005

- **Capability**
  - “capability is the capacity to be or do or affect something” Gaidow, 2006
Research question

- How can we develop a strategic thinking capability?

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The real problem

- Strategy is poorly understood
  - “Strategy has “acquired a universality which has robbed it of meaning” Strachan, 2005

- Strategic thinking is poorly understood
  - “There is no agreement in the literature on what strategic thinking is” Bonn, 2001
  - “That debate revealed considerable confusion in strategic thinking”, Behm, 2007
  - “strategic thinking has turned into a synonym for almost all of the concepts with strategic as their first word” Jelenc and Swiercz, 2011

- There is no agreement on quantifying strategic thinking ability
  - “none actually measure strategic thinking using a cognitive approach logic” Daghir and Al Zaydi, 2005

- Apparently no literature on how to create a strategic thinking capability, 2015

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This is a problem of understanding rather than of optimising.
Methodology
A soft systems approach

- Based on Checkland (1985) Action Research and his adaption of Rational Thought

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Applying Action Research to Strategic Thinking Modelling
Results
A nodal analysis on the existing studies into Strategic Thinking revealed four key cognitive characteristics:

- Creative Thinking
- Systems Thinking
- Visionary Thinking
- Intuition (Holistic Big-picture and Holistic Abstract)
Learning about the Methodology (M)

- Designed a strategic thinking test
  - 26 min (average) survey that can be conducted on-line or on paper.

- Used existing tests for:
  - creativity (fluency, flexibility, originality and quality); and
  - intuition (TIntS by Pretz et al, 2014 measuring Inferential, Affective, Holistic Big-Picture and Holistic Abstract)
  - Systems thinking (simple assessment based on Cardenas et al, 2010)

- Developed tests for:
  - Visionary thinking (based on articulate, plausible, desirable and actionable)
After applying the Strategic Thinking cognitive framework (F) using the test (M) onto the strategic thinkers (A), I found that individuals had very different strategic thinking styles (F+)
Suited for:

- Immediate operations
- ‘strategic’ problems

Not suited for:

- Abstract problems
- Absent of direction

Suited for:

- Immediate operations
- ‘tactical’ problems

Not suited for:

- Absent of direction
- High level / strategic problems
Suited for:

- Problem finding
- Normal problems

Not suited for:

- Abstract problems
- Problem solving

Suited for:

- Problem solving
- Unusual problems

Not suited for:

- Absent of direction
- Problem finding
The Analysis
Strategic Thinking Test

- Learning about F
  - The metrics appear to be generally accurate
  - Visionary thinking assessment is based on assessor judgement

- Learning about M
  - The test is applied easily
  - Systems thinking metric may be too simple (only three levels)
Strategic thinking styles

- Learning about F
  - Different strategic thinking styles

- Learning about M
  - Broadly accurate though dependent on self-reporting

- Learning about A
  - Incredibly useful for workforce planning
  - Applicable to individuals and groups
What this means

- We can quantifiably measure the capacity for strategic thinking

and

- It is possible to deliberately build an organisational strategic thinking capability
Questions and comments?

leon.young@defence.gov.au; or
l.young@adfa.edu.au