

Confessions

- Topic of my paper is utterly unrelated to "the human factor"
- Form more akin to that of an essay, rather than research paper,
- So, it's really about me, as Montaigne noted

Aim

- Present personal reflections occasioned by recent work
- As an essay, an attempt, a mere trial
Will grade myself “passed” if your reaction is not “So what?”
Fail if not aroused some critique and discourse

Theme

- Methods for C2 systems assessment
 - How to develop, document, disseminate
- Reflections from recent work
- My view on C2 assessment
- Thoughts on analytical cultures

Background

- Division of C2 systems seeking participation in new project
- Aim to improve assessment methods
- Bridge the gap - tech <> tactics
- Complex C2 systems more demanding

Professional challenge

- Found it hard to explain OA methods
- Methods must be transparent and transferable to pretend to be scientific
- Otherwise, OA is more like an old craft: respectable but rigid, with antiquated methods, jealously protected by a guild, its shortcomings concealed

Reflections

- A near-random selection from the paper

On asking the right question

- Seems obvious, still common failure!
- Complicated system, in context; hard!
- People don't know what they need:
Ask what the Q is, then what the REAL Q is
- Corollary:
Then what part of that Q can be answered

On roles and relations

Customer first and last, but after dialogue,
integrity rather requires limited contact

Strong need for military SME

Military participation inside team?

Many roles within team:

Head, secretary, lead analyst, SME etc

Must be shared for smaller tasks

On the use of scenarios in technical studies

Provide a military context for the system in focus, closing the gap

Also pedagogical function: Stories and pictures are far easier to communicate than charts, tables and numbers

Need more detail, but must avoid "point samples"

On explaining scenarios to engineers

- Metaphor: a scenario is
 - A measurement environment, a test bench, a set of external parameters
- Requirements and good usage follows:
 - Must be well defined and documented
 - Never vary many parameters at once
 - Sensitivity analysis is required

On synthesis, assurance and applicability

Synthesis answers, in customers terms:

What the result is (obviously)

How sure we are of that (assurance)

How generally applicable it is

On continuous testing

- Our "meta-method":
 - Craft small method pieces, as hypotheses
 - Quick, small-scale tests of these
 - Reuse, refine and invent scenario details
- Always have a "daily build"
- One comprehensive test each year

On validation of methods

- How can you measure improvement?
- What is actually the baseline?
- Our tests are naturalistic experiments
- Tests evaluated by "real" customers
- Quick-and-dirty gut level assessment
- Peer review

On the meaning of assessment

- "The act or result of judging the worth or value of something or someone"
- Common synonyms: Appraisal, estimate, rating, valuation, judgement
- All connote element of subjectivity
- Operative words: "Judging", "value"
- Value is context dependent

On subjectivity

- Foolish to deny that you are passing judgement
- Neither a problem; the customer understands, and is asking for that
- Method should expose and minimise subjectivity and bias

On learning from other fields

- On a scale from atomic spectroscopy to literary criticism, C2 assessment is closer to the latter, I say
- Examples to learn from:
 - Forensic science
 - Evidence-based Medicine (metastudies)

On analytical cultures

- Difference over time, generational
- I have a typical OA academic background, have done work that traditionally would be called OA, but do not consider myself an OA
- Indeed, some colleagues refuse to call themselves that; has no true meaning to them

On analytical cultures

- National differences!
- Anglo-Saxon OA (is there anything else?) relatively more concerned with metrics, simulation, numbers
- Present-day OA in Sweden generates text, not numbers