

“Divided by a Common Language - or *the Tyranny of the Explicit*”

Workshop by Ian Glendinning

ISSS 68th Annual Meeting, Washington DC 2024
4:30pm to 6:00pm, Day 2, Tuesday 11th June 2024

Divided by a Common Language / *the Tyranny of the Explicit*

ABSTRACT:

Among systems thinkers and practices, there are many taxonomies covering *at least two* broad groups:

Those concerned with complex systems as scientific objects with behaviours, processes, methodologies and technologies according to explicit, objective, definitive, reductive, causal theories. The *Explicit*.

Those concerned with complex systems involving human agents and ecosystems who may focus on the implicit, humanistic, intuitive, tacit, spiritual, mindful, holistic aspects of systems-in-action. The *Implicit*.

Whilst the Implicit may appreciate the domain in which the *Explicit* applies, there is a tendency for the *Explicit* to deny the language of *the Implicit* and if taking the *Implicit* into account, to proceed in terms of surrogate “objects” (eg of social-science) to which the language of the *Explicit* can then be applied.

This is a problem because the *Implicit* aspects may be important to the human subjects in the system but undervalued, under-represented or misrepresented in models that are subsequently applied. It is relevant to (meta / about) systems sciences, because they are the subject at issue and the conference themes.

The proposal is a workshop facilitated by a brief presentation of the problem statement, and a dialogic format of participants discussing alternative language re-statements the problem. The first step is to achieve acceptance the gap between the *Explicit* and the *Implicit* involves “something more than science”. The second to record language used to communicate between the *Explicit* and the *Implicit*.

- **Language?** – Here I’m just talking about *a few words*(*) to agree on, to enable dialogue.
- Already used “*Explicit*” (*) to represent scientific, objective, definitive, reductive, causal theory & practice. I could have said “*Scientific*”?
- And I used “*Implicit*” to represent humanistic, intuitive, emotive, tacit, subjective, spiritual, mindful, holistic aspects of systems-in-action in their ecosystem(s). I could have said “*Humanistic*”?
- (*) **Why?**
 - Me - Systems Engineering (20+ years) >> Systems Thinking (20+ more years >>)
 - ISSS - just 2 years of Presentations and Mini Symposia – *dialogue killers*?
 - “*Tyranny of the Explicit*” is a quote used by Dave Snowden originally coined by Johnnie Moore. *Requisite variety includes necessary ambiguity*. Making the tacit & implicit objective & explicit has its uses – but there are always losses.
- **Natural language**, not about full Ontology / Taxonomy / Epistemology not today anyway!

- **Many Taxonomies** of systems approaches,
(*before we even consider a potential ontology of the whole world*).
 - Gary Smith, **Comprehensive detail** of all extant approaches to “the concepts of system science”
(Contributing detail to ISSS Education and the Systems Engineering “Body of Knowledge” and more)
 - Ramage and Shipp – “Systems Thinkers” - **Seven** Groupings of Systems & Complexity Thinking *since* early Cybernetics and General Systems Theory
 - Dave Snowden “Cynefin” – **Four** strategic approaches recognising Simple / Complicated / Complex / Chaotic contexts, plus *many* metaphors.
 - Stuart Umpleby’s - “**Three** Fields – Cybernetics, Systems and Complexity)”
(Less is more, it’s about how they relate - and “fields” have #GoodFences ...)
 - Arandzazu Saratzaga – “Epistemological Questions between the **Two** - Complexity and Cybernetics (*in the widest sense*)” (my paraphrasing)
“A standard definition of complexity would be absurd.”
“Complexity starts where causality breaks down.”
“Complexity as a language game”
- **#GoodFences** – (make good neighbours ...)
And any taxonomy is binary “this not that” – the Aristotelian knife.
(intersecting, many times over – each for a purpose – taxonomic hierarchies are natural).

- Our conference theme “**Influence and Responsibility**” in and to the world.
 - All systems of significant interest involve humanity in our wider ecosystems?
 - This is complexity of the highest order? (First, second, third ... plus)
 - We owe it to the world to ensure that our explicit / scientific thinking is joined-up with our implicit / humanistic understanding?
- The epistemological language game is *more than* science?
 - So, my first task here is to get us comfortable with the fact that there is content of value in the Humanistic camp over and above what is in the Scientific camp – ***There is more than Science.***
 - The second task is ***to conduct dialogue and capture what language*** / which words we actually use to talk about either camp in terms of the other.

The basic assertion: *There is more than science?*

- There are limits to science, in the sense that some aspects of the world are beyond science?
- There is more to the real world than science?
- Some kinds of (*real / natural / valuable*) knowledge – truths – of the world are more than science? *Not necessarily valid or helpful* to seek or use scientific explanations or descriptions for these?

Not suggesting anything “supernatural” or “anti-science” ...

“As scientific as possible but not more so.”

Trivially True in one obvious / irrelevant, sense (ie – we don’t worry that our taste & appreciation in art & music & poetry & prose-fiction is non-scientific?) (*Irony – there’s a lot for our topic in such artistic endeavours.*)

The Whole (Natural) World

According to
Scientific
Knowledge

According to
Un-Scientific
Knowledge

Science

Knowledge meeting **scientific criteria**
With varying levels of agreement about
certainty. (How much certainty and
agreement matters, depends on the
scope of intended use.)

Future Science

Mysterious stuff we don't
appear to know with any
certainty but should meet
scientific criteria when we
do work it out.

Other Stuff

Stuff which ***is excluded from***
being scientific by definition of
orthodox **scientific criteria**,
but nevertheless appears to
be part of the world.



This dividing line is the focus of this discussion.

(And the fact that however we shift it
through (say) Kuhnian and other (r)evolutions
the set to the right can and should never be zero.)

What about Definitions? (and Examples?)

Science / orthodox science? The line(s) on my picture are effectively my “*working definitions*” – moveable ones – good fences for our purpose here. (*Empirically verifiable / falsifiable, objectively repeatable according to explanatory thesis? Science involves a lot more, but what makes it “scientific”? Your list may vary. And what about real “ontological” commitment?*)

What about the “*discourse*” itself? What makes for a good “argument”? When is a “dialogue” not a “debate” or a “critique”? (Rules of Engagement & Good Fences)

Hold your definition / definition as a coffin / definitions are not definitive – *if you may argue only on your opponent’s terms, you’ve already lost.* (Dennett, Levenchuk and many more)

Choosing our words – dialogue towards understanding – clearly with added criticism & challenge – but NOT pejorative / dismissive. **#GoodFaith**

Another Word - **Wisdom?**

Me: (A long dialogue with “ISSS friend” based on the above.)

ISSS Friend: “My real strength is my experience of relating to and working with people of diverse cultures and mindsets.”

Me: “And would you describe that as science or scientific?”

ISSS Friend: “Absolutely not (*laughs*).”

Me: “So in fact there is real, valuable *humanistic stuff* beyond science, some might call it wisdom?”

Aim#1 QED?

“There really is – always will be – more than science that matters, when it comes to everyday engagement in the real world.”

Aim#2 – let’s talk about it Choice of words?

Additional Background Slides ?

My Systems Trajectory

- **1970's to 1990's** - Aeronautical & Process Plants Engineer – Industrial (from Need to O&M)
 - Physical Systems - Fluid, Pressure, Energy, Structural, Process & Control AND
 - Human Systems - People, Organisation, Process, Methods, Procedures
- **1988-1991** - MBA - Cultural Aspects of Managing Organisational Change.
- **1990's to 2010's** - ICT Systems Engineer – Architect & Implementation – Users & Providers
 - Focus - Information Architecture & Semantics for Digital Twins, etc - **NOT** the technology
 - International Standards (eg ISO15926) on Ontologies and Libraries - Generic "System Engineering (Meta)-Language"
- **2010 - 2022** independent Information Management Architecture Consultant.
 - Most recently in UK Nuclear projects - "Systems Thinking" as a response to complexity.
 - And eg using BIM / CDBB (Centre for Digital Built Britain) - exploiting ISO Systems Language Architecture Standardisation.
- **2000 to Today** - Epistemological Research – Large-scale human decision-making "going wrong".
 - **"What, Why and How do we Know?" as Psybertron** www.psybertron.org under a "Cybernetics" umbrella (Wiener). True/original cybernetics ie from 1946 Macy Conferences onwards - post-war **organisation of human society** as a whole, (with engineered "homeostatic control" systems (ie "first cybernetics") as ONLY EVER a small subset (Maruyama et al)
 - Philosophical > Increasingly Metaphysical - Ontology and Epistemology involves "more than" reductive science of a 4D deterministic world. (Strong Emergence, Evolved Autonomy, Affective Perception, Ergodicity, etc) Too many sources to name.

My engagement with Systems as a “Discipline”

Working with "smart" systems thinkers along the way.

- with BCS – Cybernetics Group (2004) w Peter Rowlands (2007)
- with INCOSE Members
since 2007 in Russia via Viktor Agroskin and Anatoly Levenchuk and
since 2017 in UK Nuclear
 - *explicitly Systems Thinking as a response to complexity*
 - general & project management UK conferences adopting ST
- with Hull CSS
in 2021 on Bogdanov via Rovelli & Mason w Mike Jackson & Orsan Senalp
and Mike Jackson Annual Lectures since – Dave Snowden, Charles Foster
- with AI (Active Inference Institute) Daniel Friedman
since 2021, via Friston, Solms, Fields and Levenchuk)
- with EEMI (Russian ex-INCOSE / Management School, via Levenchuk)
- with ISSS (only since 2022 via Dennis Finlayson et al)

It's Complicated?

Complexity as part of managing / governing / *making-collective-decisions-for-the-best* in human situations.

Pre-WWII

- Henry Ford & Taylorism vs Mary Parker-Follett

Post-WWII

- Macy and more
- Systems / Operations Research / Cybernetics
(Theories, sciences(?), methods, approaches ... too many to name)
- Management consulting – Peter Drucker (re Parker-Follett)
- Tom Peters “Management is more than a science”

21st Century

- Dave Snowden (Cynefin) current favourite ...
- But also many thinkers in general (non-systems-specific) sciences

Consequences of Complexity?

Orthodox science needs to recognise not just many moving parts, connected by cause and effect, but many layers where “*magic happens*”. Synergies that cause emergence of objects not causally determined by (knowledge of) objects in other layers – historicity (ergodicity) matter too.

(Even if Causality emergent from complexities / synergies can be deemed “scientific” – need to look at the consequences of which defining criteria of science can / cannot be met and should not necessarily be met?)

Sticking to a *too simplistic* interpretation of where scientific objective facts fit any given situation inevitably leads to war-like polarisation pro / anti – exaggerated in our days of “anti-social” media attention diversion. (Žižek’s “Empty Wheelbarrow”)