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Addressing the Challenges: Putting Complexity to Work

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How might we take today's work forward?

"Until now complexity science has sought to observe and interpret the world: the point is to embed it in our thinking and actions, making it explicitly "second-nature"."

- From analysis to synthesis and praxis. *"Tool for change".*
- Putting human interaction at the heart of policy, and by extension, a greater "citizen focus." *"Change mind-set".*
- Build on growing recognition of the importance of problem-solving/a more holistic approach – but a need to make the transition from old organizational models to new. *"Make evolution possible".*

Some practical issues in search of a solution

- Systemic challenges demand systemic solutions, and it is not only matter now of operating efficiently within a system, but to shape that system so that the system itself is effective.

- One banker told me that that in the early nineties, during the US banking crisis, US government went to private capital and promised them that in return for dealing with bad debts, they would pay less tax. The economy improved. Later in the nineties, from private capital's perspective, government went back on that deal, and with the crisis over, taxed more heavily. Now private capital is reluctant to step in the same way.

- However true or fair that perspective, it is a perception that shapes the reality. Trust, or mistrust, has a crucial bearing on future economic revival. A "soft" issue with very hard results.

How might complexity science provide "strategic trouble-shooting" ?

What is to be done?

- Embracing the challenge: Not just "breaking down" the problem, but adding up/multiplying the parts and problem-solving. Not just situational awareness, but strategies for changing the rules of the game(s). *What is game-changing?*

- Envisioning success: What is holism in practice? The parts, the whole, connecting, and self-supporting; and interacting with other parts, and wholes. So not just a focus on outcomes, but what it takes for outcomes to come about through planning and spontaneity. *Complexity science: explaining that interaction.*

- Developing our role: What function does Complexity Science provide, what is its <u>interest</u>? Eg reality of holism; connections produce fresh challenges/opportunities; commonality and difference; multiple perspectives; planned and emergent; theory as hypothesis. *Another perspective? Facilitating, enabling change? Offering non-hierarchist alternatives?*

- Working with a "good enough" model for change. Collaboration provides a model – but only if we see its own scope and limitations. *Collaborative entrepreneurs?*

Where "on the river" and "on the bank" meet

- Practitioners are trying to embrace the co-dependencies / co-evolution between Thompson's 'Five solidarities' (10 if you include the darker side) and the wider environment in which we all live (including cyberspace and 'human-machine teaming' of course). One of the realities: we cannot, rationally, model all these factors. What we can do is become skilled at working with(in) the evolving dynamics of these complex situations. *Phronesis/Metis?*

- Integral Theory / Spiral Development shows the rich envelope of human variation - even before bringing in cultural elements.

- 'Homogenation' is not our aim, but diverse, creative dynamic contradiction.

4 types of Knowledge

- Lorraine Dodd and Gillian Stamp drew my attention to the work of Larry Prusak, who explores four kinds of knowledge differentiated by the Classical Greeks (Prusak, 2000):

- **Episteme**: technical/practical skills. Episteme covers abstract generalizations, basis and essence of sciences; scientific laws and principles. It's developed by practice and repetition.
- **Techne**: teachable knowledge. Techne is technical know-how, being able to get things done, manuals, communities of practice. It's developed by being taught in company of those who already know.
- **Phronesis**: experiential knowledge. Phronesis is practical wisdom, drawn from social practice. It can be learnt only by direct 'felt' personal experience.
- **Metis**: conjectural knowledge. Metis covers the learnt capacity for handling complexity that combines flair, wisdom, forethought, subtlety of mind, deception, resourcefulness, vigilance, and opportunism. It can provide the ability to anticipate, modify, and influence the shape of events, which can be interpreted as canny.
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What is to be done, specifically in these domains:

What are the implications for:

- Strategy and Policy: Whole cycle, and different cycles. Eg Climate change and "resource efficiency".

- Economics: scarcity/abundance- whose value/values? Renewal of political economy

- Leadership and Authority: Top/Down; Bottom/Up vs Alternatives to Hierarchism.

- Culture, Ethics & Technology: Constrained or freed by Technology vs What is Technology?

Ways in which complexity science could take off...

- Situation awareness/ Sense-Making

- Problem solving

- Leadership and teamwork

- Defining and creating value; delivering and claiming value

- Ethics and Dark Side of Collaboration: problematising what is "interest"; attention to group dynamics.

Situation Awareness/Sense-Making
(contribution from Dave Marsay and colleagues at QinetiQ)

- Current debate: situation awareness, where the basic (Endsley) model (http://en.wikipedia.org/wiki/Situation_awareness) is that 'percept of the situation' feeds 'comprehension' which in turn feeds decision-making. Some question this model's adequacy for complex situations, believing that a more sense-making approach (http://en.wikipedia.org/wiki/Sense-making) is needed.

- The situational awareness approach tends to fit within a process-oriented view of organisations, whereas a sense-making approach is more matched to a 'collaborative' problem-solving approach, requiring a different type of organisation, and possibly meaning something different by 'organization'. Thus organization can stifle necessary sense-making, creating blindness and hence risk.

- We are currently seeking to identify ways by which process-bound organizations can – pragmatically - reform themselves piece-meal, so that a virtuous cycle is created in which all aspects (process, tools, people, information) can incrementally support or enable each other to reform.

Shift of Power, or redefining Power?

- Is "Glocalism" the new reality, and if it is, how does complexity make a difference? Eg Transition Towns, Fair Trade Movement.

- Are society's dynamics now driven by Communities or Institutions? Or both? Implications for adaptation by Institutions. Eg Total Place initiative. From Government doing things to/for- to government as enabler.

- What is "Citizen Focus"? New economy, or Hybrid economy?

- What does Social Networking already tell us? Eg top blogger, Louis Gray.

What are we learning from successful Social Networks?

- From culture of deference to culture of reference.

- Weak Ties and Strong Ties.

- Is Added Value the new ethic/etiquette?

- Listening/broadcasting; positional/relational (as opposed to conventional positional, broadcasting). Asking, rather than telling.

- Inquiry/Advocacy – rather than advocacy alone. Competition of ideas, rather than competition of people.

The Louis Gray phenomenon

- Top blogger, based in Silicon Valley.
- Was in London last week, guest of Thomas Power and ecademy.
- To be successful on the blogosphere, you have to make more of real-time connections, listening and broadcasting.
- According to Einstein, "The only reason for time is so that everything doesn't happen at once". Well, the web does mean everything happens at once.
- Louis Gray enjoys the daily battle-rhythm he himself has constructed to skim 900 articles a day, and produce 2 to 3 blogs, help other bloggers to achieve recognition, and now make money out of alpha-testing new websites.
- Judging by how Louis Gray has turned his passion into a lifestyle, his goal, I think, is not *making a living*, but *living a life* where he is creating value not just for himself, but in ways that others find useful.
- His life, his routine, heavily turns on his ability and appetite for working with complexity.

What is authority? Who has leadership?

- Authority: status, effective command, credentials/expertise
- Authority: what does the situation or problem actually require?
- Author-ity: who has ownership/takes responsibility?

- Leadership: I know the way. Eg Charismatic leader, or Group of Elders
- Leadership: Somebody knows the way. Eg Messiah, Godot.
- Leadership: Only if we are lost can we find our way. Eg Heifetz' "razor's edge".

What it might mean to put people at the centre of government thinking

A key test will be how the collaboration among all the international organizations working with the Afghan government and local communities can show Afghan citizens that reconstruction projects are sustainable.

Simon Anholt, an independent vice-chairman of the FCO Public Diplomacy Board, visited Afghanistan and makes the point that what is needed are deeds rather than words. "Small power generators were issued to villages and were regularly attacked by the Taleban. Then the local people were charged for the generators. We found that, now they had responsibility for them, the generators didn't have to be replaced because they fought off the Taleban."

Leadership as containing the anxiety and conflict "to find the grit that produces the pearl"

- The more that accountability and legitimacy matter, the more that success or failure in leadership is determined by a combination of what gets done and the support generated and received. Leaders of collaboration are in a particularly exposed position when the collaboration that they lead addresses difficult social issues.

- In *Leadership Without Easy Answers*, Ronald A. Heifetz poignantly captures this tension.

- "Leadership is a razor's edge," he says, "because one has to oversee a sustained period of social disequilibrium during which people confront the contradictions in their lives and communities and adjust their values and behaviour to accommodate new realities." (Heifetz,1994, pp-126-128).

Grint's model of increasing problem complexity and need for collaboration

- Seeing Heifetz' "razor's edge" leadership in context.

- Grint shows how different types of problems lend themselves to different degrees of collaborative resolution: critical, tame and wicked problems.

- Horizontal Axis: Increasing uncertainty to solution to the problem.

- Vertical Axis: Drawing on Etzioni, he shows changes in the basis for legitimacy.

- Question for Complexity Science practitioners: what is our role in the defining of problems, and their collaborative resolution?

WICKED

TAME

CRITICAL

LEADERSHIP: Ask questions

MANAGEMENT: Organize process

COMMAND: Provide answer
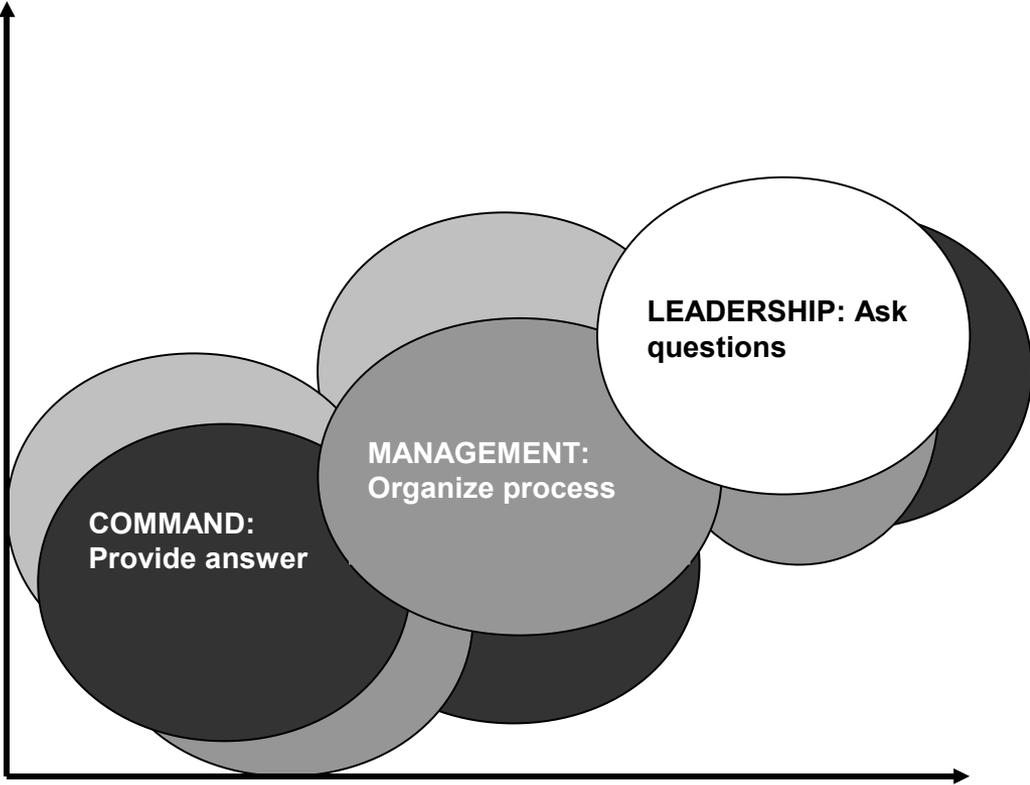
| COERCION Hard power | CALCULATIVE | NORMATIVE Soft power | Increasing requirement for collaborative resolution |

Implications for Authority

Command: authority is assumed -
  compliance

Management: authority is justified -
  consent

Leadership: authority is conferred -
  engagement

Where does complexity science make its contribution?

Addressing the commercial reality: producing extra value through higher performance

- "Flourishing" vs "Languishing" teams

- Losada's empirical studies
- Connected → Generative →High-Performing
- Attributes:
- positivity/negativity
- outward/inward orientation
- inquiry/advocacy

- Losada's 2.9 ratio

How might complexity science add value?

- Value is a mix of satisfying what is actually wanted and producing something that could be wanted over time. *Demand/desire.*

- Mark Moore says: "It is all very well for entrepreneurs to have a hunch about what customers want; it is far better to know from the customers themselves what they desire. It is also important to recognize that consumers could change their minds about what they consider valuable not only through the provision of abstract information about products but also through experience." (Moore 2003, p66). *Knowing/not knowing the other.*

- Gambling carries negative connotations. But if leadership is about the mingling of reality and possibility, it must be about risk-taking. *Elevating risk-management from operational to strategic.*

If human action- and interaction- is at the heart of a Complexity Science vision, we cannot escape the Ethics

Ethically, a new vision of agency: beyond Aggressor/Victim/Rescuer.

"We are all co-workers in repairing a broken world." Tikkun Olam.

Tutu's Challenge

(taken from speech to World Health Assembly, May 2008)

- I have a favourite book of cartoons by the late Mel Calman of the London *Observer newspaper* entitled, "My God".

- One shows God somewhat nonplussed and saying, "Oh dear, I think I have lost my copy of the Divine Plan!" Looking at the state of the world we might be forgiven for wondering if God ever had a plan at all. There are devastating floods in one part and destructive droughts in another. Couldn't God have organized things better so that there was enough water for all everywhere? Then there are all the man-made disasters of tyranny and oppression, an endless doleful catalogue of woe.

Tutu's "Answer"

"All of you, all of you, including those fantastic people who are part of NGOs around the world;

all of you in the healing enterprise are God's collaborators in making this a better world – more compassionate, gentler, more caring, and more sharing. In the tradition of Abraham there is a notion that God deliberately made the world imperfect, so that God could enlist us all in the business of making the world perfect."

OK, so what does this ethical challenge mean in practice?

- Ensure that the "human dimension" is adequately factored into models and theories; particularly "judgment, imagination, discretion, common sense". *Trust as the conscious regulation of dependence on the other (Gillian Stamp).*

- Need to find scientific/other ways of restoring this dimension to our thinking and planning. Different strategies for collaboration. *Collaboration/Competition.*

- A better appreciation of how complexity science relates to issues of independence, dependence, interdependence, and identity. *Ways of influencing and being influenced.*

So what is the gamble Complexity Science is taking?

- Society's challenges now require Leadership of Innovation on an unprecedented scale, just a time that uncertainty and risk are greater than ever.

- If more is connected than we are usually ready to acknowledge, how we make those connections explicit so that we can make sense of them, and act upon them? As Einstein said, Keep it simple, but not simpler. Resisting the default hierarchical view.

- What is Value?

- Who is an Actor? Where does this leave Government, Business and Civil Society?

- Hedge our bets, but which bets are we hedging, and why?