Formicio Insights
On business operations, technology, people and change

The rise of killer complexity

Like all school, college and university students I was fed a diet of simple, linear and well-behaved problems with easy-to-define solutions. I later found it to be a far cry from the real world experiences of industry.

Throughout my professional life those initial 'innocent simplicity' assumptions of linearity may have started as a point of nucleation for my early thoughts, but they have inevitably been cast aside at an early stage! How come? The universe and everything in it, is essentially non-linear and complex, and it is becoming ever more so with each new layer of technology and the insights that it affords.

Where does this complexity come from? Well, it really is all about networks, connectedness and delay. Quite remarkably, and until very recently, all human progress was founded on simplistic models of the physical world, technology, society and peoples. And this was really successful because communication and interaction were disjointed and slow, and it was possible to get by with simple-to-understand models and basic decision trees involving a small number of parameters. As the non-linear effects occurred slowly the perception was one of well-behaved linearity.

Unfortunately, the growth of connectedness combined with the removal of delay increasingly confounds the simple world-view, and it is now clear that the occurrence of linearity is the (rare) exception. Take banking and finance: I think we can safely say that recent global events have shown that no one understands how it all works. The rapid rise of chaos (in the mathematical sense) that crashed the world economy can be assigned to greed, a lack of understanding, high-speed networks and the reduction of transaction delay driven by competition. In effect, it was as if the entire system was riding a bicycle and got into a speed wobble, and the rider was unable to get back to stability without having an accident!

Complexity is now visibly pervasive in everything; the workplace, government and everyday living. The thinking and models of the past industrial revolution and experiences of past centuries cannot solve today's problems as we try to engineer a future that supports a growing population without destroying our environment.

Not surprisingly managers and politicians are

Making sense of our non-linear world

In Alan Moore's latest book *No Straight Lines* he argues that our world is being overwhelmed by a trilemma of social, organisational and economic complexity. And that we are in transit from a linear to a non-linear world that is socially, organisationally and economically ambiguous, confusing and worrying.

He believes that we are presented with a pressing and urgent design challenge of how to create better societies, more able organisations, and more vibrant and equitable economies that are relevant to the world we live in today?

He offers a new logic, including six principles, to guide our journey into the non-linear future.

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Non-linear thinking in global governance

Linear thinking is no longer sufficient when it comes to global governance argues Andrea IIIy in a recent *European Business Review* article. He believes that the current challenges facing the European Union are a real-world exercise in non-linear complexity management.

Whether European leaders, or politicians in general, understand that managing these non-linear complex situations requires a completely different mental and scientific approach is unclear.

Andrea believes that they are probably aware that the old ways of organising processes and ideas in a linear, if not top-down, manner can no longer work. And only when they embrace this insight can we make real progress.

To read Andrea's article, click here.

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Formicio Collaborative Explorations

We are inviting organisations to become members of the following Collaborative Explorations:

struggling to make wise decisions. Their world-view is from a past era of infinite supply, disconnectedness, linearity and continual growth. If we are to engineer a world that is sustainable we have to think afresh and move away from the simplistic management of growth, profit and return on capital to something that encompasses the welfare of everyone and everything.

If you would like to read my full article where I offer some solutions to these challenges, click here.

I welcome your thoughts.

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Making IT Organisations Truly Service Centric

Optimising your HR Operating Model

Our Collaborative Explorations are multi-organisation research projects, where peers from different organisations come together to gain insight into an important topic or critical issue.

If you would like to participate in either of these explorations we would be delighted to hear from you.
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Parting thought

"The world that we have made as a result of the level of thinking we have done thus far creates problems that we cannot solve at the same level as they were created."

Albert Einstein, 1879-1955