Mapping the Un-Mappable: The History Of TRIZ 2020-2030

Darrell Mann

TRIZCON2020, 6-7 October
Mapping the Un-Mappable: The History Of TRIZ 2020-2030

1) Society
2) Business
3) Innovation
4) TRIZ
Hypothesis

Society is a complex emergent system.

In any complex system, there is much that cannot be predicted.

But that is not the same as saying nothing can be predicted.

By understanding society from a first-principle level, there is much that can be anticipated about our emergent future.
Unknowable...

‘Events happen at random, society’s reaction to those events is not.’

Covid-19 was not a Black Swan.

Decisions to not prepare for it were also not Black Swans

![Image of a diagram with various icons and text explaining the concept of information being bad for knowledge, the three most harmful addictions, the problem with experts, and the comparison between a wise man and a fool.](image-url)
1) Society

“Life is and will ever remain an equation incapable of solution, but it contains certain known factors.”

“Merciless is the law of nature, and rapidly and irresistibly we are drawn to our doom.”
“somewhere between 2000-2005 there will be an event that will change the mood of society and trigger the Crisis Period”

“over the period 2020-2025 the Crisis will reach its climax”
We Saw This Coming II

“During the Crisis Period, many of Society’s institutions will begin to wobble…

…once one falls, a Domino Effect will cause others to follow”
Crisis Periods...

...once the first domino falls...

...the sequence of other falls becomes much more mappable...
Where We Are Now

Strauss & Howe, ‘The Fourth Turning’

©2020 DLMann, all rights reserved
Where We Are Now

Strauss & Howe, ‘The Fourth Turning’
Where We Are Now

SI E-Zine issue 217, April 20 ‘Crossing The Crisis Threshold’

Ordinary World

Meeting The Mentor
Refusal Of The Call
Call To Adventure

Approach The Inmost Cave
Tests, Allies And Enemies

The Ordeal
Reward
Road Back

Crossing The Threshold

Meeting The Mentor
Refusal Of The Call
Call To Adventure

Ordinary World

Approach The Inmost Cave
Tests, Allies And Enemies

The Ordeal
Return With Elixir
Reward
Road Back

Crossing The Threshold

Invasion of Poland, Sep 1939
Pearl Harbour, Dec 1941
Hiroshima & Nagasaki Aug 1945

Covid-19, Jan-Mar 2020
TBD 2024-5

Where We Are Now

Suffocated

1930 1940 1950

2010 2020 2030

Resurrection

Return With Elixir

Resurrection
There Are Always Winners In A Crisis I

Crisis Periods spark enormous amounts of innovation.

Successful innovation attempts during the Crisis will reap tremendous rewards in the following Period of Stability.
There Are Always Winners In A Crisis II

Disaster Cycle:
There Are Always Winners In A Crisis II

Disaster Cycle:

http://systematic-innovation.com/assets/iss-218-may-20.pdf
Societal Scenarios 2020-2025

6 scenarios:

1) Financial Collapse - stay on current s-curve (e.g. Iceland 2008-11)
2) Commercial Collapse - back to previous s-curve (e.g. 1929-45, WWII)
3) Political Collapse - Back 2 s-curves (e.g. Arab Spring, Syria)
4) Social/Collapse - back to Tribal (e.g. Pashtan/Afghanistan)
5) Cultural Collapse - back to zero (e.g. The Ik)
6) Breakthrough - society makes first jump to higher s-curve (maybe some parts of the world - NZ?)
2030 Scenarios:

- **Societal**
  - Crisis, recalibration, new-world, stability
  - Doldrums then gentle recovery

- **Business**
  - Infrastructure lock-in
  - Major (tech/legal) breakthrough
There Are Always Winners In A Crisis III

**Always Win**
- Food & Essentials
- Local/Community
- Low-Cost Alternatives
- Security
- Little Luxuries
- Banks

**Likely Winners In This Crisis Period**
- (Low End) AI
- Education Disruptors
- Healthcare Disruptors
- (Community) Finance
- (Local) Tourism
- Older Consumers
- Sustainability
- ‘Meaning’
There Are Always Losers Too…
2) Business

“You may live to see man-made horrors beyond your comprehension.”
Maps Of The World...


©2020 DLMann, all rights reserved
The 20th Century Business Paradigm

Your External Environment

- SIMPLE
- COMPLICATED
- COMPLEX
- CHAOTIC

- Efficiency Triangle
- Ashby Line
- Disintegration Line
- AntiFragile Line

©2020 DLMann, all rights reserved
2012... The World Gets A New Word...

GAIN/BENEFIT

ANTIFRAGILE

Innovate

Adapt

Resist

BREAK

ROBUST

FRAGILE

STRESS/CHANGE

LOSS/COST

@2020 DLMann, all rights reserved
Complexity Landscape - ‘Natural’ Forces

SIMPLE

CHAOTIC

SIMPLE

COMPLICATED

COMPLEX

CHAOTIC

System

External Environment

standardisation

Globalisation & the 2nd Law of Thermodynamics

Edge Of Chaos

SI E-Zine, Issue 205, April 2019, ‘The Resilience Zone’
**Complexity Landscape - Management**

**External Environment**
- **SIMPLE**
- **COMPLICATED**
- **COMPLEX**
- **CHAOTIC**

**System**
- **SIMPLE**
- **COMPLICATED**
- **COMPLEX**
- **CHAOTIC**

- **eliminate command & control**
- **increase delegation/empowerment**
- **increase diversity**
- **increase flexibility**
- **increase education (‘good judgement’)**
- **increase meaningful work**
- **increase commitment**
- **decrease exhortations/targets**
- **decrease silos/barriers**

- **tighten boundaries**
- **segment/’eliminate’ certain customers**
- **increase advertising**
- **‘my way or the highway’**
- **outsource/use intermediaries**
Complex Change - The Golden Triangle

‘The Innovation ‘Golden Triangle’
The Hero’s Journey

System

Ordinary World

Crossing The Threshold

Disintegration Line

AntiFragile Line

Simple

Complicated

Complex

Chaotic

External Environment

The Inmost Cave

©2020 DLMann, all rights reserved
20th Century Business...

**PARADIGM**
human beings at work are factors of production, charged with producing goods and services

**PROBLEM**
in business, the primary challenge is to maximise operational efficiency by reducing variances and excising waste

**PRINCIPLE**
operational efficiency is maximised through stratification, formalisation and standardisation
## 21st Century Business...

<table>
<thead>
<tr>
<th>PARADIGM</th>
<th>human beings at work are factors of production, charged with producing goods and services</th>
<th>human beings at work are factors of meaning creation, charged with improving quality-of-life for all</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBLEM</td>
<td>in business, the primary challenge is to maximise operational efficiency by reducing variances and excising waste</td>
<td>in business, the primary challenge is to maximise effectiveness by empowering people to do what’s best for customers</td>
</tr>
<tr>
<td>PRINCIPLE</td>
<td>operational efficiency is maximised through stratification, formalisation and standardisation</td>
<td>effectiveness is maximised by eliminating distance between employees and customers, turning employees into a coherent eco-system of entrepreneurs</td>
</tr>
</tbody>
</table>
Three Types Of Enterprise

TYPE 1
Keep Climbing

TYPE 2
Collapse

TYPE 3
Paradigm-Shift

The K-Shaped Recovery

Professionals

Everyone Else
Three Types Of Enterprise

New World

Command+Control Goliaths

Command+Control Dinosaurs
3) Innovation

“Today’s scientists have substituted mathematics for experiments, and they wander off through equation after equation, and eventually build a structure which has no relation to reality.”
In many ways the primary drivers of the current turmoil thanks to their Operational Excellence offering

Clueless as far as innovation is concerned

Desperately trying to catch-up, but very vulnerable as most of their clients are TYPE 2
Defining Innovation (40 Years Too Late)

1) ‘Ideas’

2) ‘Implemented Ideas’

3) ‘Successfully Implemented Ideas’

indiscernible or inconsistent

http://systematic-innovation.com/assets/iss-221-aug-20.pdf
Innovation Capability Maturity

- Level 1: 60% of all organisations
- Level 2: 50% of all organisations
- Level 3: 40% of all organisations
- Level 4: 30% of all organisations
- Level 5: 20% of all organisations

Ready for TRIZ
98% of QFD-sparked innovation attempts fail
98% of Lean-sparked innovation attempts fail
98% of 6Sigma-sparked innovation attempts fail
98% of Design-Thinking innovation attempts fail
98% of JTBD-sparked innovation attempts fail
98% of OBI-sparked innovation attempts fail
98% of WOIS-sparked innovation attempts fail
98% of Blue-Ocean innovation attempts fail
98% of K-T-sparked innovation attempts fail
98% of Agile-sparked innovation attempts fail
98% of Scrum-sparked innovation attempts fail
99.5% of Open Innovation attempts fail
What Did The 2% Do?

Innovation Capability Maturity Model: An Introduction

Darrell Mann

22 years. 11 million case studies. 38 years of innovation battlescars.
And standing on the shoulders of giants…

©2020 DLMann, all rights reserved
“The hard work of the future will be pushing buttons”
TRIZ & The Hype Cycle

Emergence of lots of ‘TRIZ Consultants’

‘TRIZ didn’t work’

‘Don’t touch TRIZ’

‘Samsung save $91M’

TRIZ 2003

TRIZ 2020

Technology Trigger
Peak of Inflated Expectations
Trough of Disillusionment
Slope of Enlightenment
Plateau of Productivity

maturity
TRIZ’s Place In The World

External Environment (‘Super-System’)

System

SIMPLE  COMPLICATED  COMPLEX

SIMPLE

CHAOTIC

Disintegration Line

Ashby Line

TRIZ 1.0

TRIZ’s Place In The World

External Environment (‘Super-System’) vs. System

- SIMPLE
- COMPLICATED
- COMPLEX
- CHAOTIC

- SIMPLE
- COMPLICATED
- COMPLEX
- CHAOTIC

Ashby Line

Disintegration Line

TRIZ 1.0

TRIZ’s Place In The World

External Environment ('Super-System')

System

SIMPLE  COMPLICATED  COMPLEX

SIMPLE

CHAOTIC

Simple

Complicated

Complex

Chaotic

TRIZ 1.0

TRIZ/SI 2.0

TRIZ/SI 3.0

TRIZ/SI 4.0

Ashby Line

Disintegration Line


©2020 DLMann, all rights reserved
# Where The World Is…

<table>
<thead>
<tr>
<th>System</th>
<th>External Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIMPLE</td>
<td>Ashby Line</td>
</tr>
<tr>
<td>COMPLICATED</td>
<td></td>
</tr>
<tr>
<td>COMPLEX</td>
<td></td>
</tr>
<tr>
<td>SIMPLE</td>
<td></td>
</tr>
<tr>
<td>COMPLICATED</td>
<td></td>
</tr>
<tr>
<td>COMPLEX</td>
<td></td>
</tr>
<tr>
<td>CHAOTIC</td>
<td></td>
</tr>
<tr>
<td>SIMPLE</td>
<td></td>
</tr>
<tr>
<td>COMPLICATED</td>
<td></td>
</tr>
<tr>
<td>COMPLEX</td>
<td></td>
</tr>
<tr>
<td>CHAOTIC</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>COBRA+</th>
<th>Safe-To-Fail Experiments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classical TRIZ</td>
<td>TRIZ-based Safe-To-Fail Experiments</td>
</tr>
<tr>
<td>TRIZ</td>
<td>OODA</td>
</tr>
<tr>
<td>TRIZ</td>
<td>OODA</td>
</tr>
<tr>
<td>TRIZ</td>
<td>OODA</td>
</tr>
<tr>
<td>OODA</td>
<td>OODA</td>
</tr>
<tr>
<td>OODA</td>
<td>OODA</td>
</tr>
<tr>
<td>OODA</td>
<td>OODA</td>
</tr>
</tbody>
</table>

**Legend:**
- **Ashby Line:** Transition from simple to complex systems.
- **Disintegration Line:** Boundary between simple and complicated systems.
- **Oblique Strategies:** Approaches for dealing with complex and chaotic environments.
- **TRIZ:** The Russian Theory of Inventive Problem Solving.
- **Lean/SixSigma:** Business improvement methodologies.
Winston Churchill...

Democracy is the worst form of government...

...apart from all of the others

ТРИЗ is the worst innovation method...
Yes, Buts…

- perpetual fighting over crumbs instead of growing the pie.
- too many TRIZ providers are not TRIZ users
- innovation demands complexity-compatible strategies
- too many TRIZ providers stuck in ‘complicated’ world
- ‘Russian’ and ‘business’ are oxymoronic
- the ‘TRIZ’ word is pure poison in the Board Room
  (where the money is)
contradiction-solving is the basis for innovation now and in the future

Hegel/TRIZ/TOC are the homes of contradiction solving

the ‘TRIZ’ name has no serious future

for the next 4-5 years it’s best role is ‘underground’...
...all the time getting ready for 2025 coherence
...when the world will be ripe for a scalable innovation process
Thanks