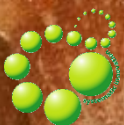




# **Business TRIZ: Complexity, Contradictions & First Principles Innovation**

darrell mann

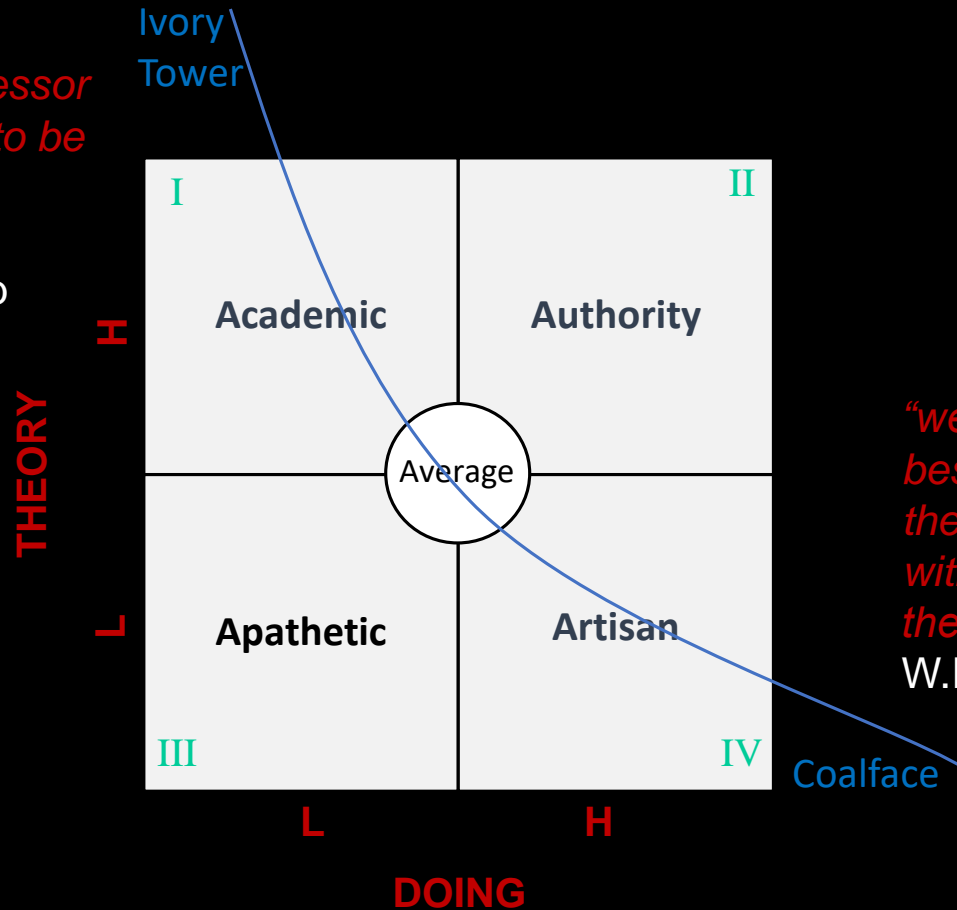


Leipzig University, 4 February 2022 Interdisciplinary seminar:  
Continuous Improvement, Engineering Systems, & Systems Engineering

# (Healthy) Scepticism?

*"The only thing a Business School Professor can teach you is how to be a Business School Professor."*

Nassim Nicholas Taleb



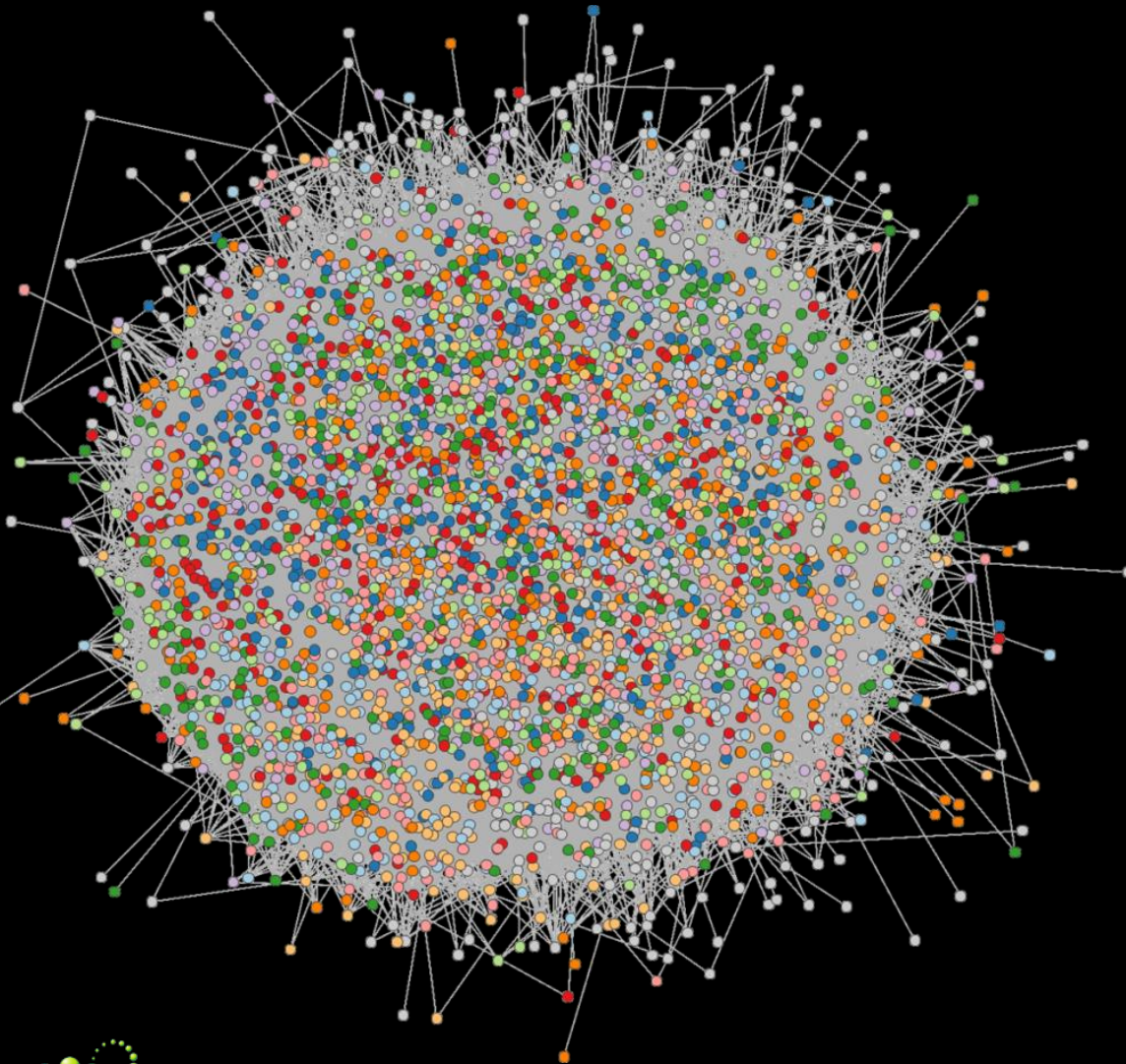
*"we are being ruined by best efforts put forth with the best intentions but without guidance of a theory of management ."*

W.Edwards Deming





# The World Today... I



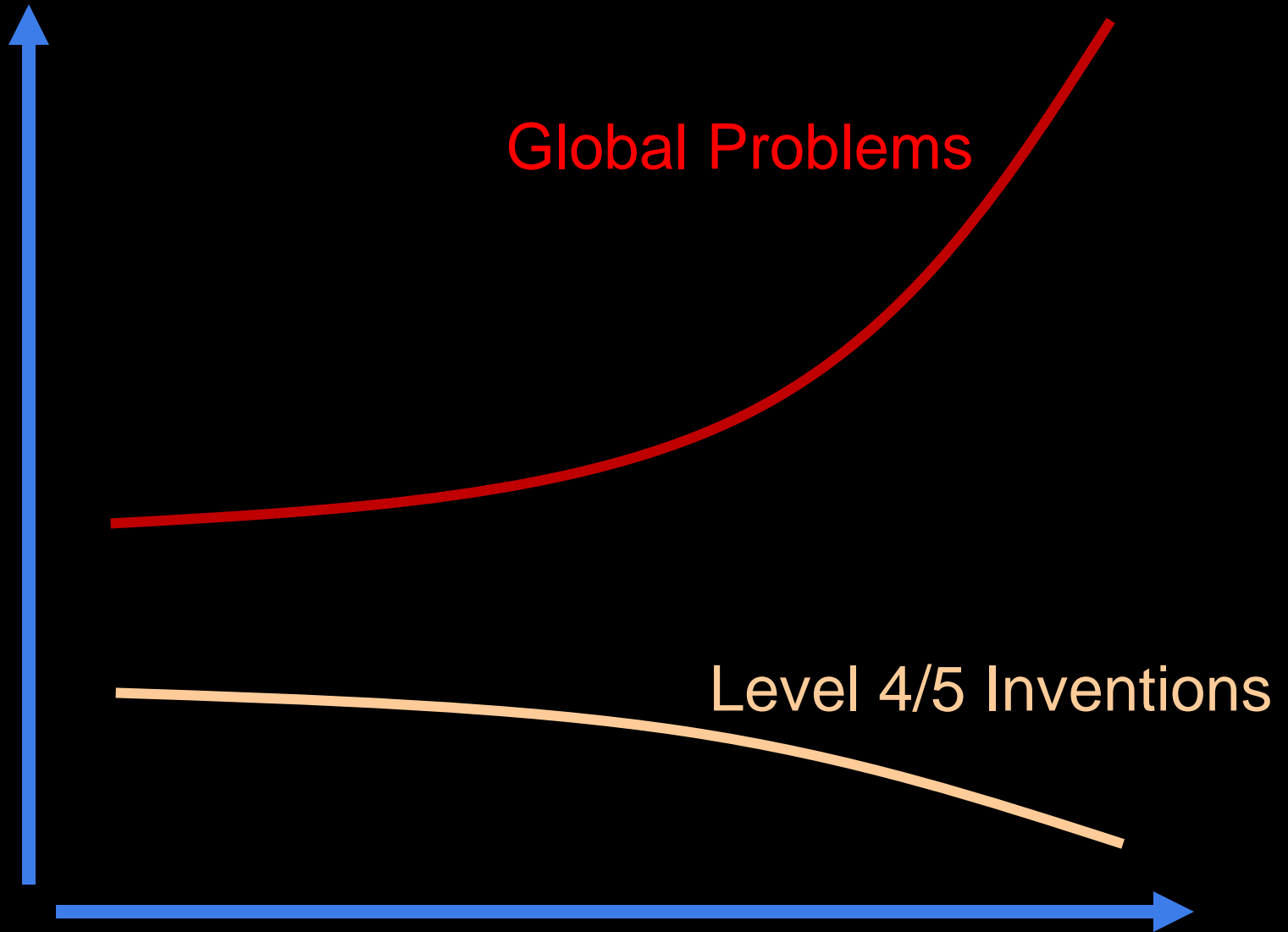
Everything is  
connected to  
everything else.

(Business) innovation  
starts from finding the  
right questions

TRIZ Redux:  
Theory Of Innovative  
Problem *Finding*



# The World Today... II



# The World Today... III

*rate of  
knowledge  
generation*

*individual  
knowledge  
retention ability*

*time*

# Why First Principles I

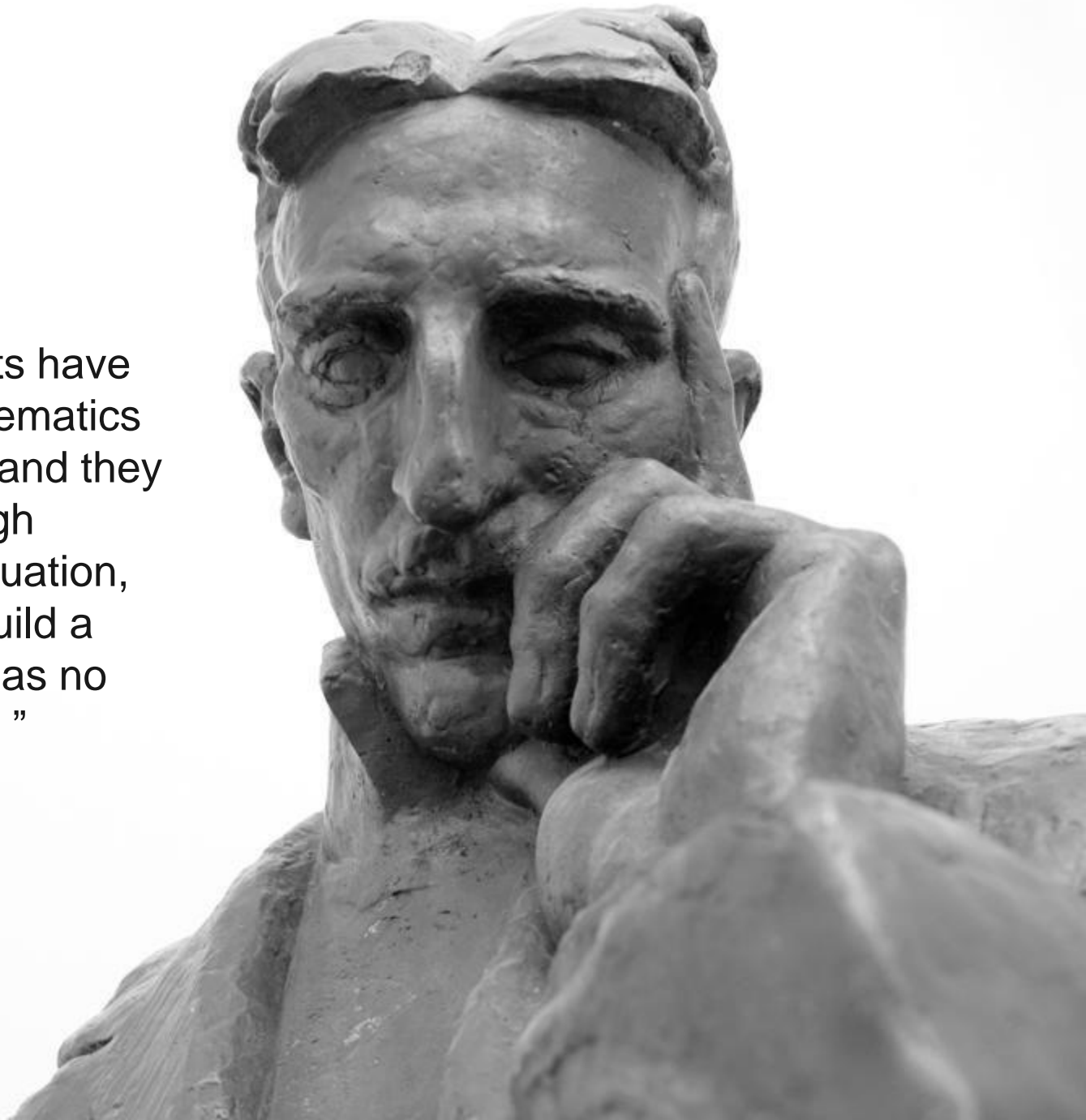
*rate of  
knowledge  
generation*

*individual  
knowledge  
retention ability*

*principles*

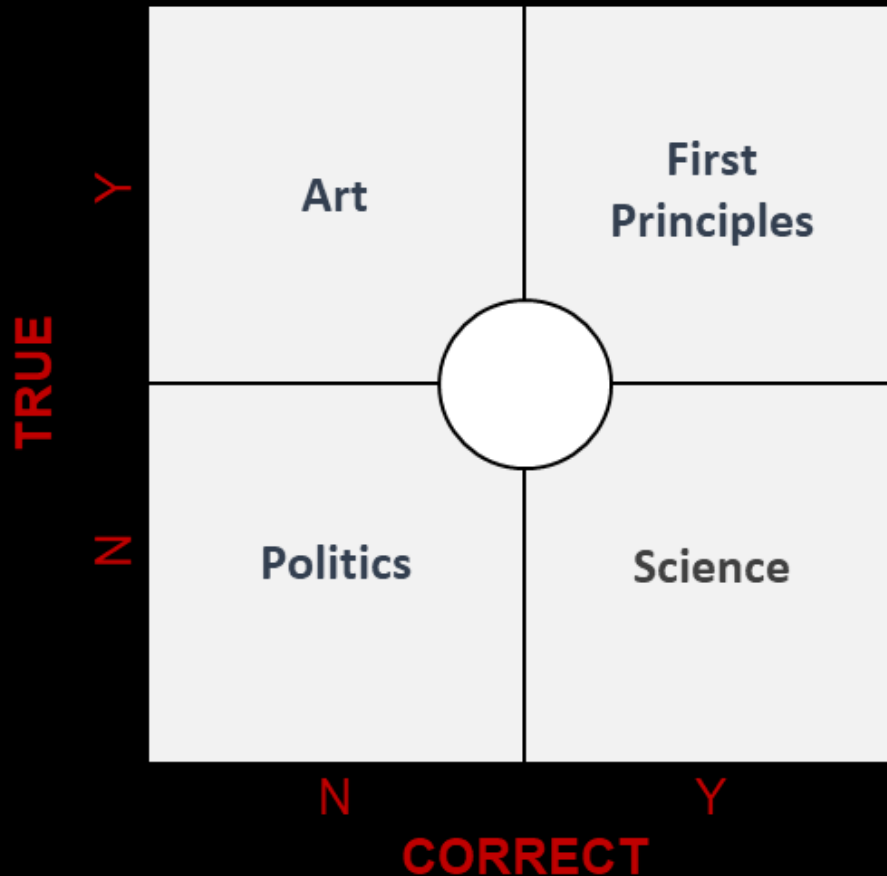
*time*

“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. ”



# Why First Principles II

“Art is the lie that enables us to realise the truth.” **Pablo Picasso**



Separation of the Arts and the Sciences began in the 19<sup>th</sup> Century and has now resulted in two un-connected worlds.

The Arts tell us **WHY**

The Sciences tell us **WHAT/HOW**

Innovation needs both.



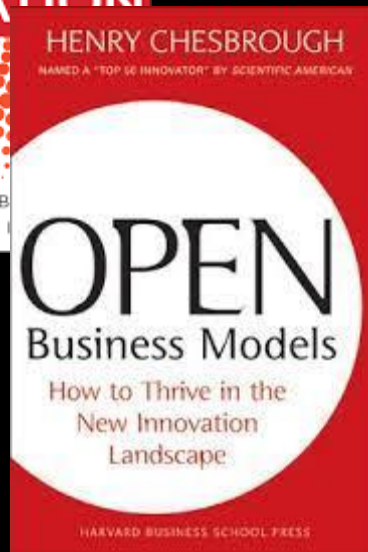


98% of QFD-sparked innovation attempts fail  
98% of Lean-sparked innovation attempts fail  
98% of 6Sigma-sparked innovation attempts fail  
98% of Design-Thinking innovation attempts fail  
98% of JTBD-sparked innovation attempts fail  
98% of OBI-sparked innovation attempts fail  
98% of WOIS-sparked innovation attempts fail  
98% of Blue-Ocean innovation attempts fail  
98% of Agile-sparked innovation attempts fail  
98% of Scrum-sparked innovation attempts fail  
99.5% of Open Innovation attempts fail  
98% of TRIZ-sparked innovation attempts fail

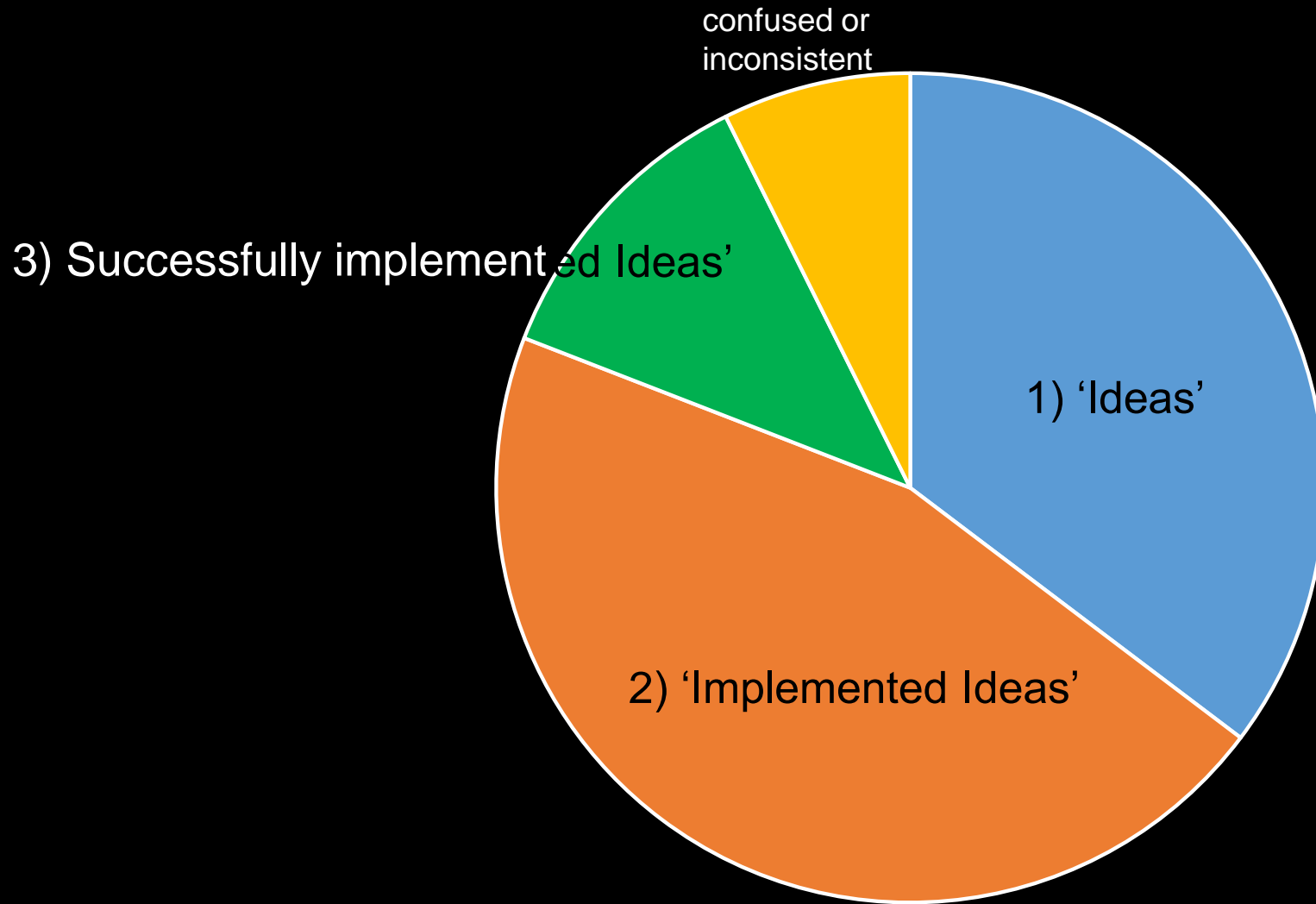


# You Get What You Ask For

If you define innovation as *'novel ideas'*, if people follow your recipe they will obtain many novel ideas



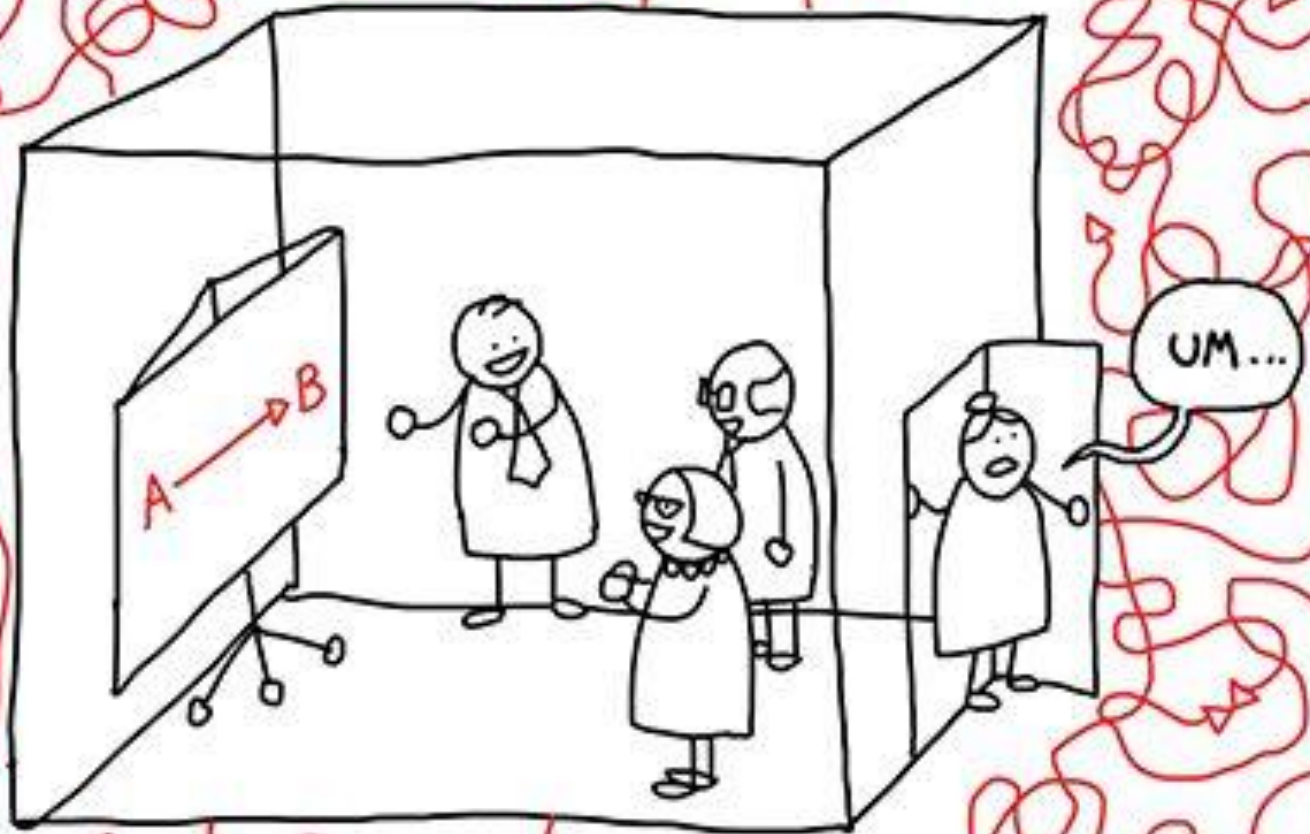
# Innovation?



<http://systematic-innovation.com/assets/iss-221-aug-20.pdf>

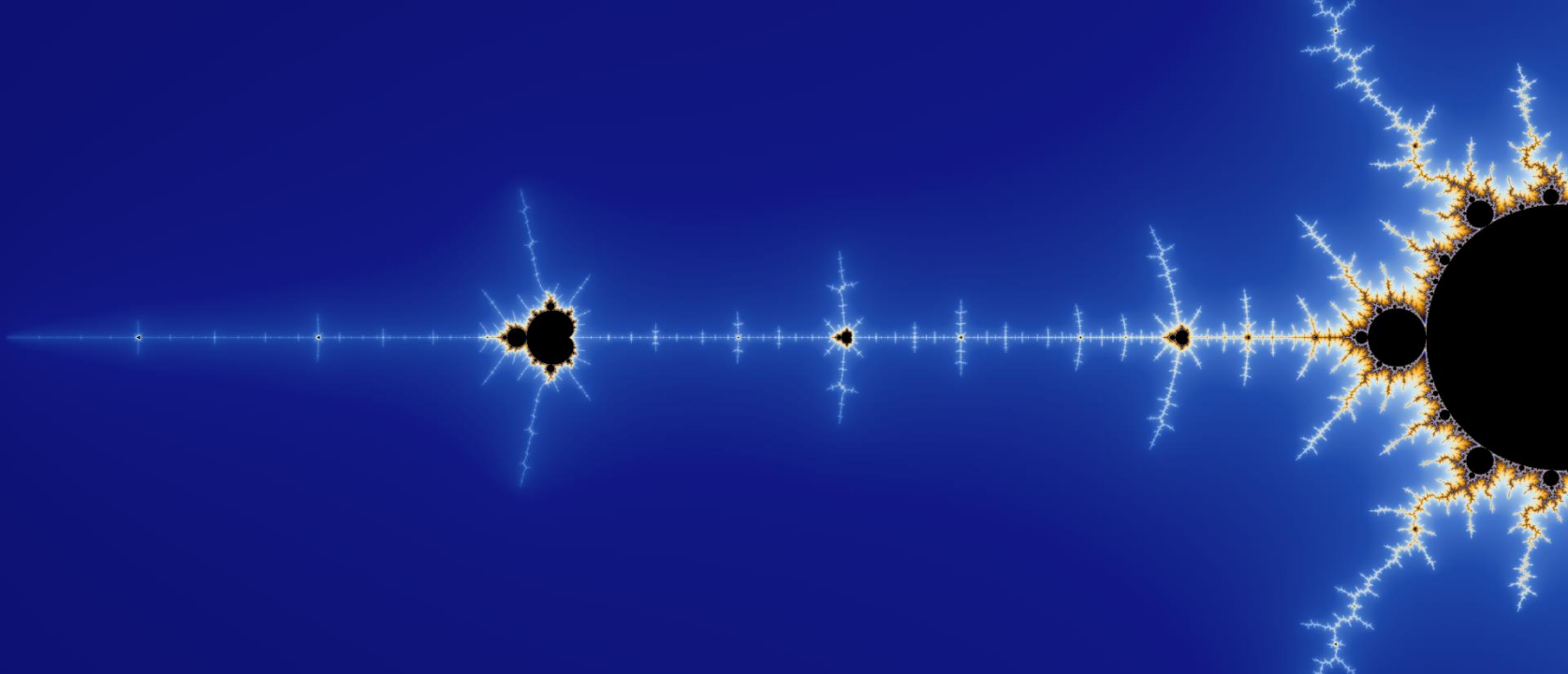






*Don't Keep It Simple, Stupid*

For every complex problem there are thousands of clear, simple, wrong answers.



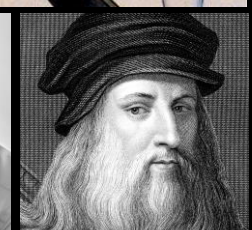
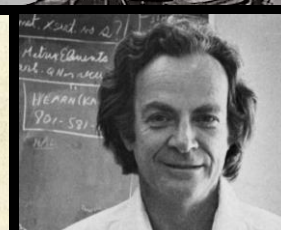
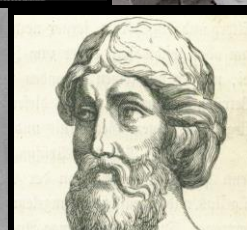
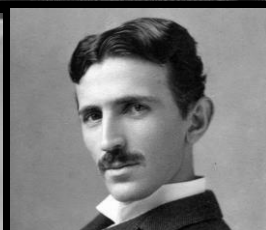
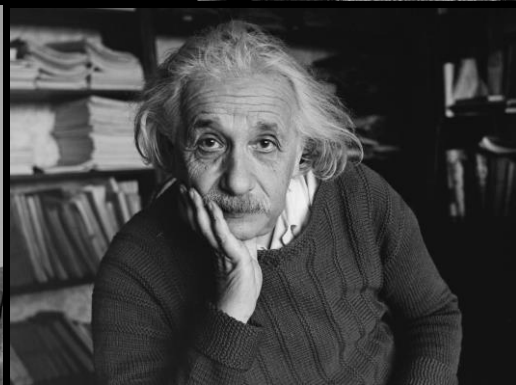
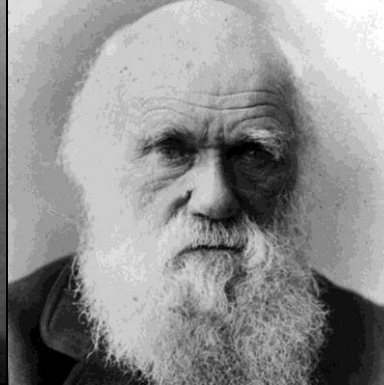
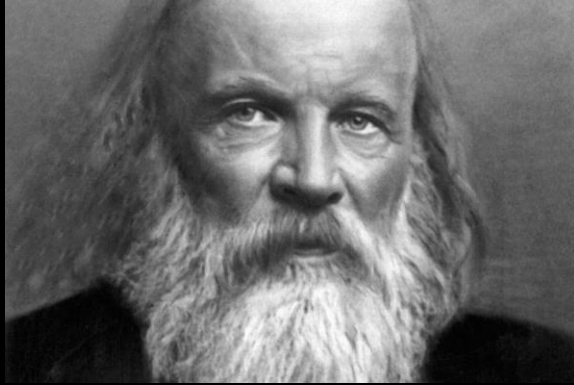
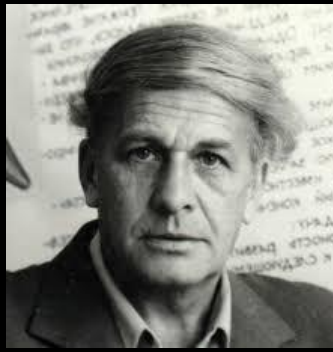
For every complex problem there is a clear, simple, right one.

If we understand and affect **the first principles**.





# First Principle Thinkers



# Human First Principles...

1. Survival

2. Tribal

3. Feudal

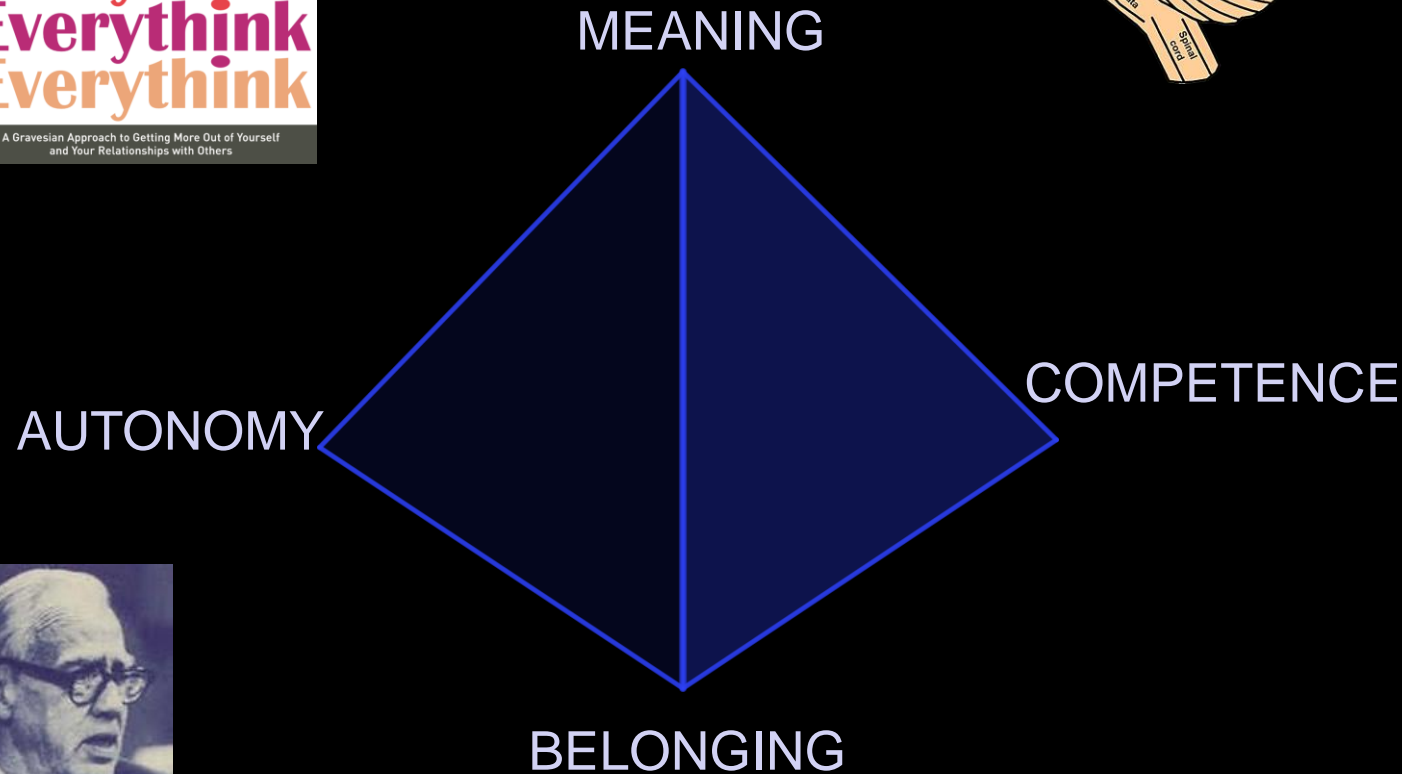
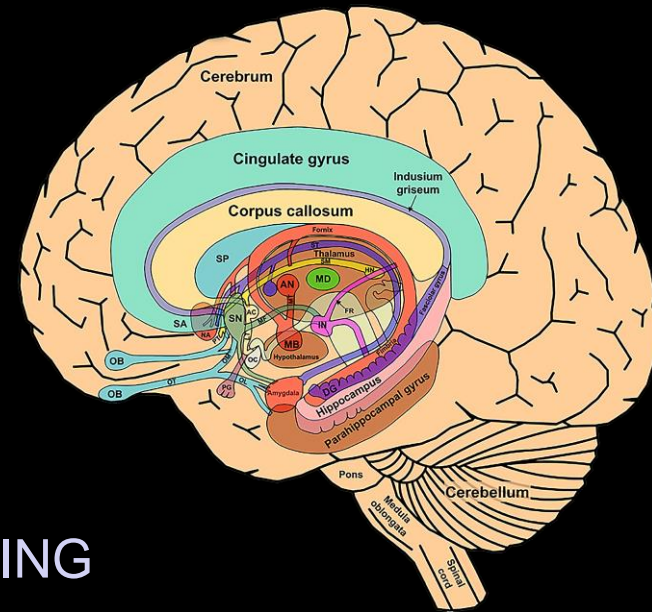
4. Order

5. Scientific

6. Communitarian

7. Holarchy

8. Holistic

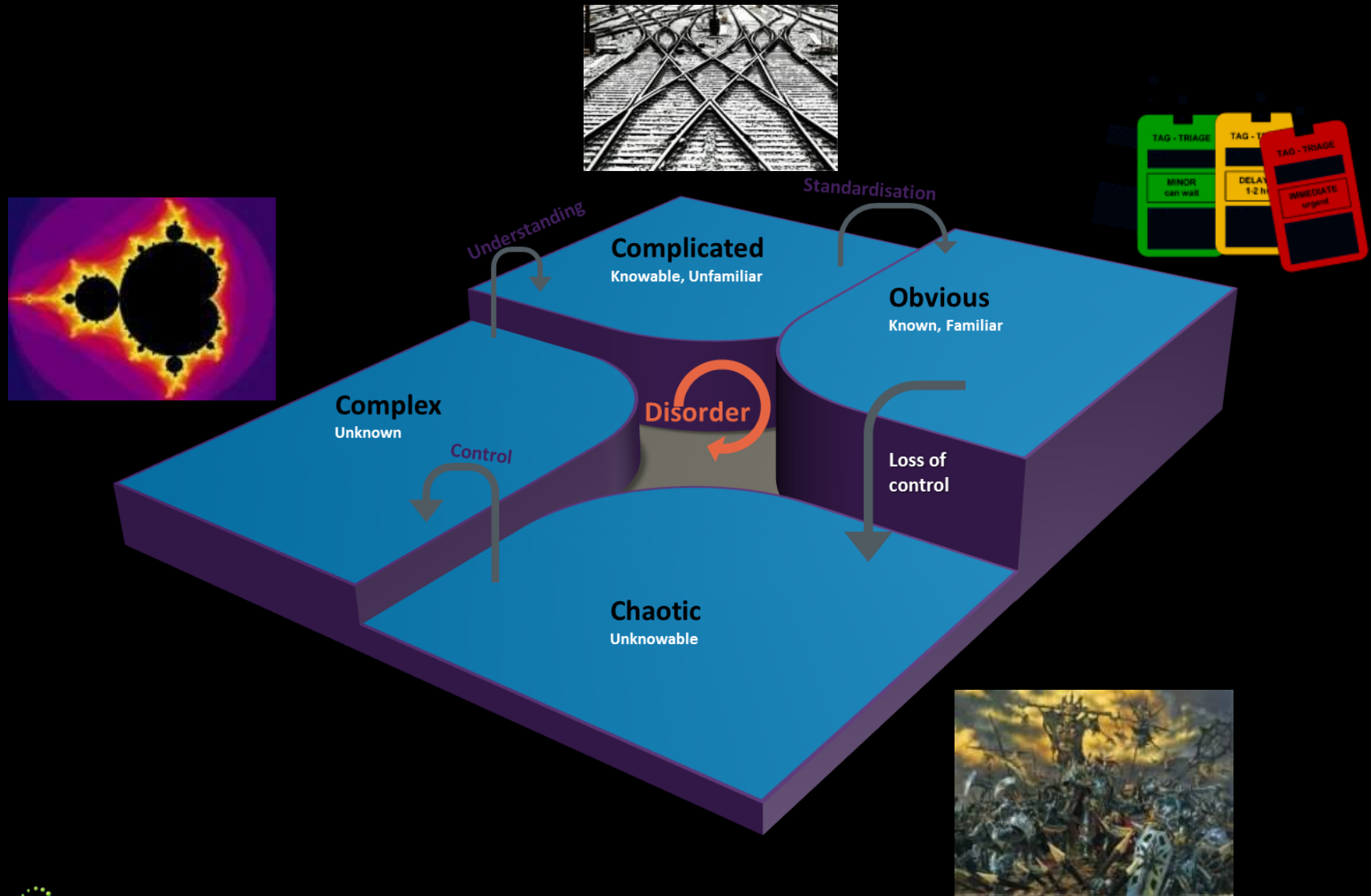


“fly as close to your neighbours as possible”





# Cynefin

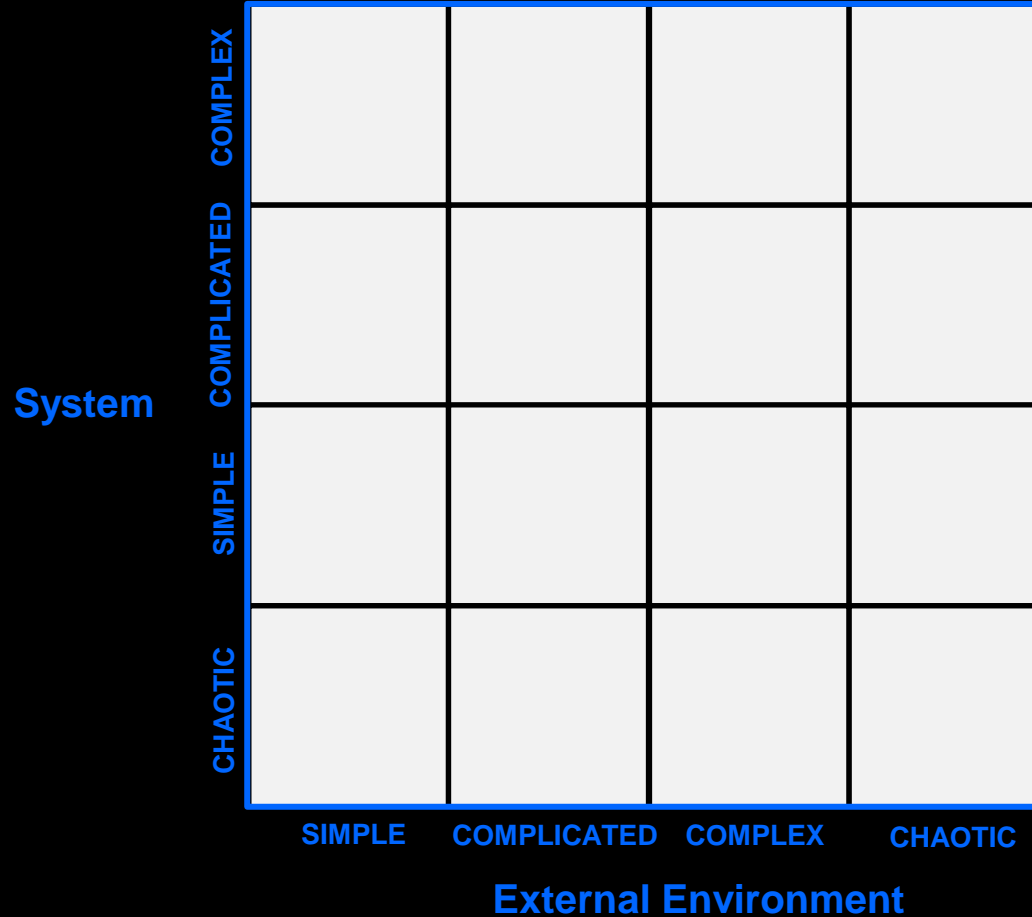


“get away from the falcon”





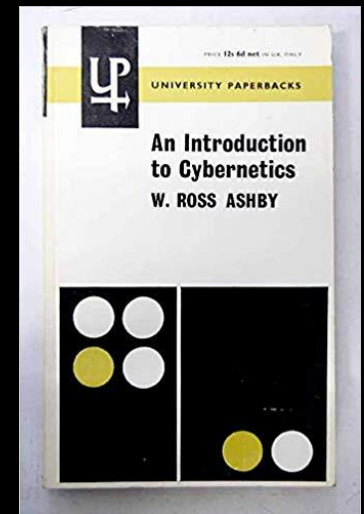
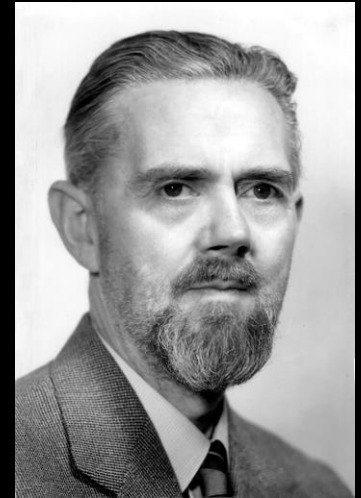
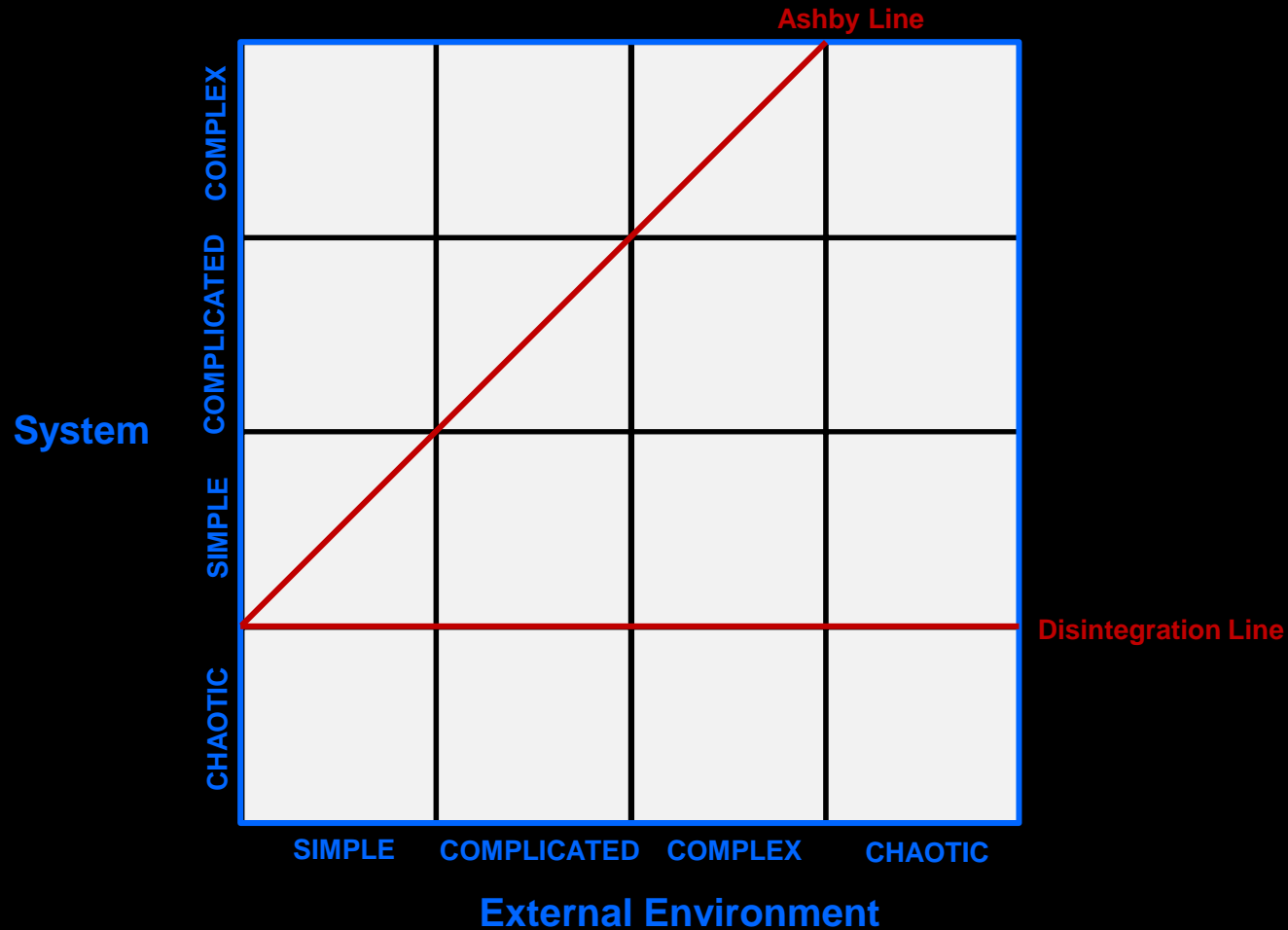
# Complexity Landscape Model



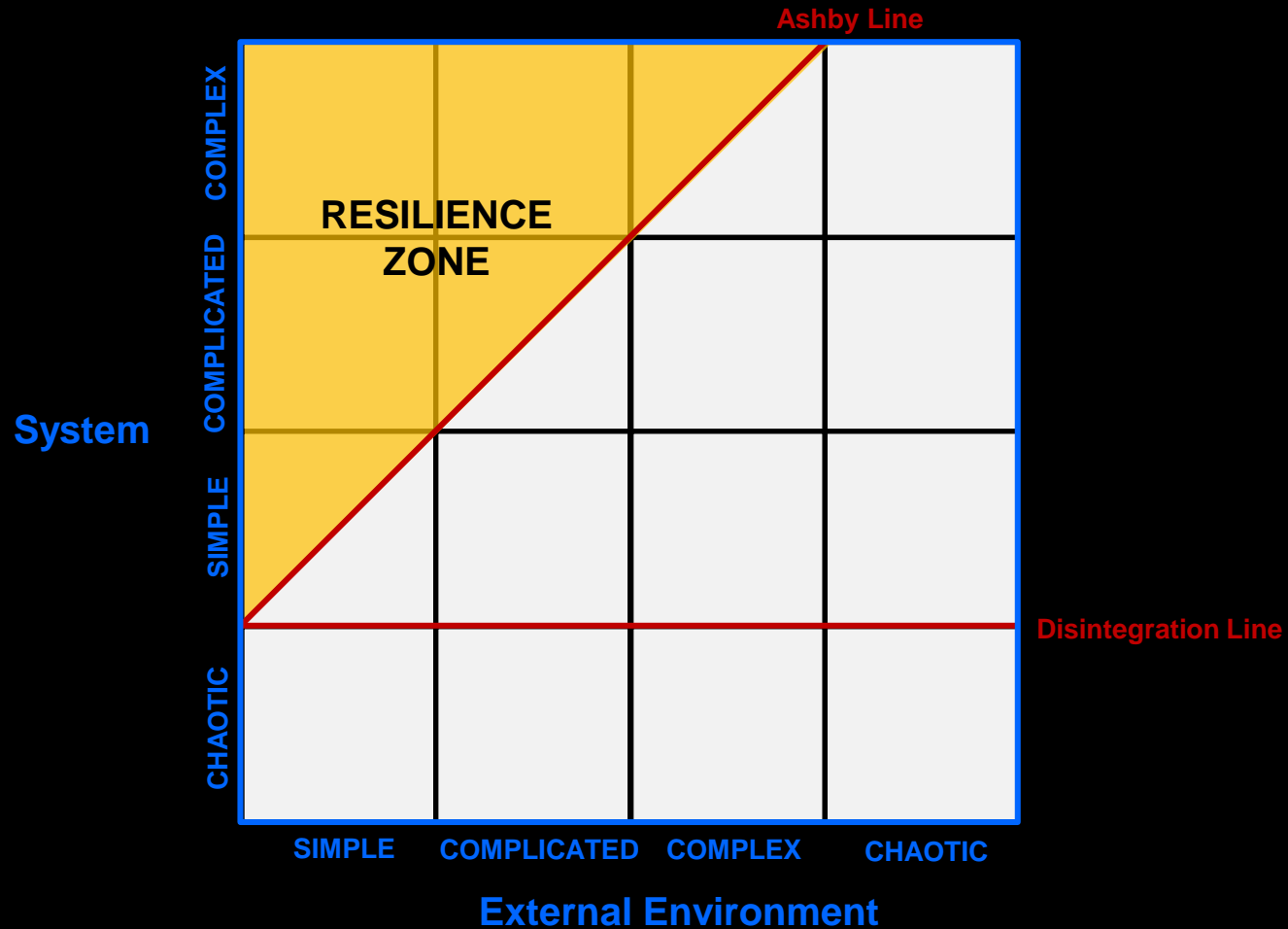
<http://www.darrellmann.com/a-complexity-landscape/>



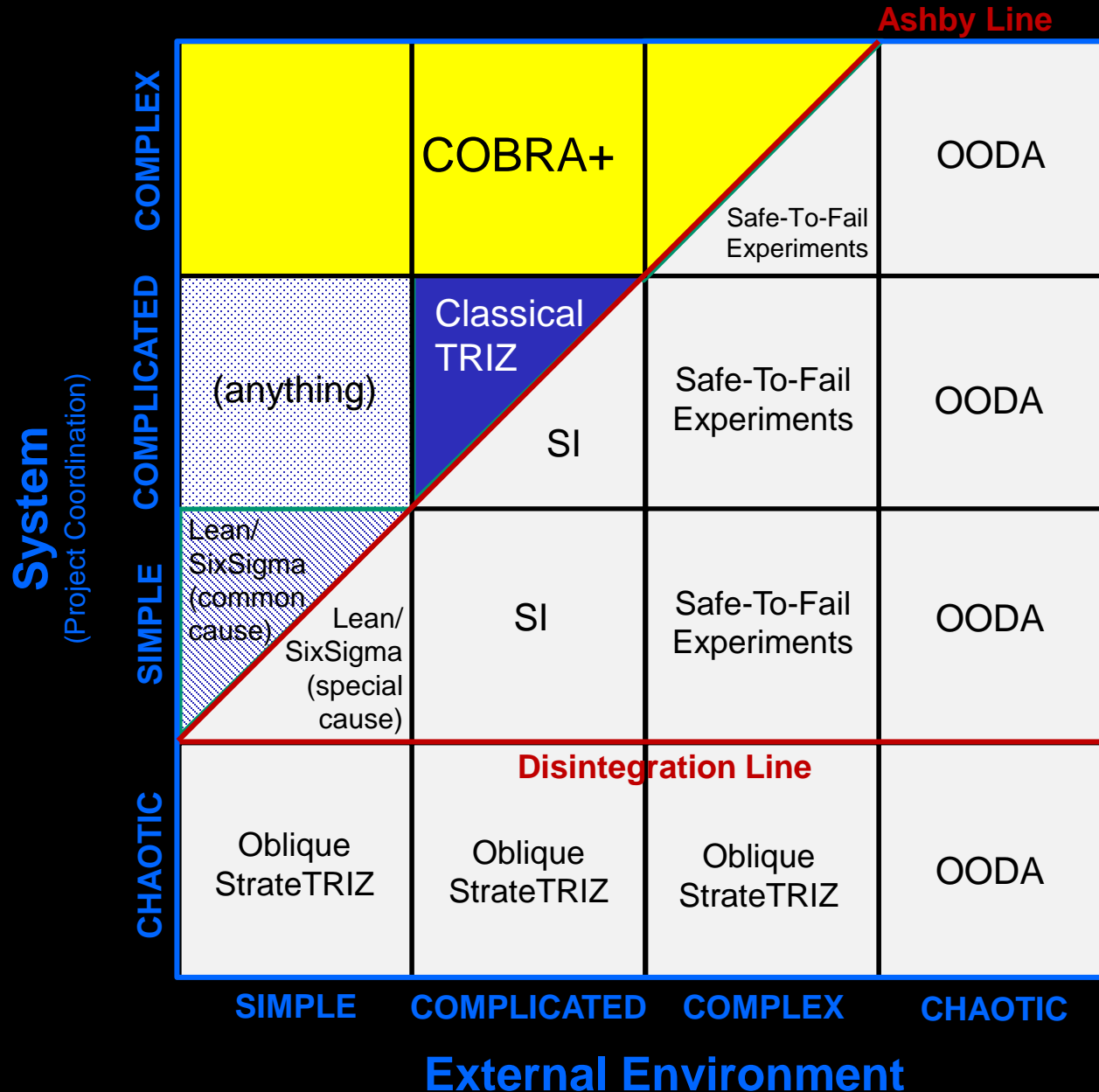
# Complexity Landscape & W. Ross Ashby

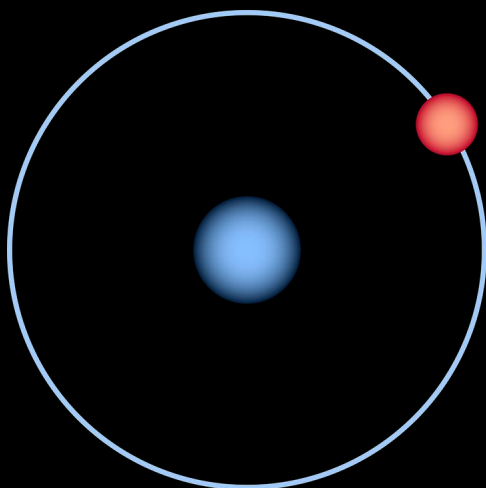


# Complexity Landscape - Resilience Zone



# Complexity & Appropriate Change Methods





1 H																	2 He
3 Li	4 Be											5 B	6 C	7 N	8 O	9 F	10 Ne
11 Na	12 Mg											13 Al	14 Si	15 P	16 S	17 Cl	18 Ar
19 K	20 Ca	21 Sc	22 Ti	23 V	24 Cr	25 Mn	26 Fe	27 Co	28 Ni	29 Cu	30 Zn	31 Ga	32 Ge	33 As	34 Se	35 Br	36 Kr
37 Rb	38 Sr	39 Y	40 Zr	41 Nb	42 Mo	43 Tc	44 Ru	45 Rh	46 Pd	47 Ag	48 Cd	49 In	50 Sn	51 Sb	52 Te	53 I	54 Xe
55 Cs	56 Ba	57 La	72 Hf	73 Ta	74 W	75 Re	76 Os	77 Ir	78 Pt	79 Au	80 Hg	81 Tl	82 Pb	83 Bi	84 Po	85 At	86 Rn
87 Fr	88 Ra	89 Ac	104 Rf	105 Db	106 Sg	107 Bh	108 Hs	109 Mt	110 Ds	111 Rg	112 Cn	113 Nh	114 Fl	115 Mc	116 Lv	117 Ts	118 Og
			58 Ce	59 Pr	60 Nd	61 Pm	62 Sm	63 Eu	64 Gd	65 Tb	66 Dy	67 Ho	68 Er	69 Tm	70 Yb	71 Lu	
			90 Th	91 Pa	92 U	93 Np	94 Pu	95 Am	96 Cm	97 Bk	98 Cf	99 Es	100 Fm	101 Md	102 No	103 Lr	





**Ae** Identifier  
An Aesop Trope name

Popularity in kilowicks  
(thousands of links to its page within the wiki)

Chart by ComputerSherpa

Special thanks to Elle, Micah, and the rest of the Troopers for inspiration  
Thanks to Madrugada, Jack Alsworth, —fourwills, and KikiSotherSon for corrections  
Permalink for this chart: [goo.gl/yv5M4](http://goo.gl/yv5M4)

Metatropes

		Production		Fandom & Audience Reactions	
		<b>Can</b> .87	<b>Fan</b> 1.3		
		Canon	Fanon		
		<b>Sho</b> .10	<b>Sus</b> .67		
		Shout Out	Willing Suspension of Disbelief		
		<b>Tt</b> .4.4	<b>Fri</b> .5.8		
		Take That	Fridge Logic		
		<b>Ls</b> .12	<b>Tru</b> .4.4		
		Lampshade Hanging	Reality Is Unavoidable		
		<b>T</b> .20	<b>Rur</b> .74		
		Trope	Did Not Do The Research		
		<b>Jt</b> .4.2	<b>Res</b> .3.9		
		Justified Trope	Epileptic Trees		
		<b>Av</b> .2.0	<b>Dlp</b> 1.3		
		Anti Villain	Like Reality Unless Noted		
		<b>Sv</b> .3.2	<b>Vam</b> .0.8		
		Subverted Trope	Viewers Are Morons		
		<b>Old</b> .2.1	<b>Anp</b> .0.7		
		Oldest Ones In The Book	Anarchic Principle		
		<b>Vp</b> .1.8	<b>Wob</b> .6.8		
		Villain Protagonist	Written On Board		
		<b>4te</b> .1.9	<b>Xm</b> .8.8		
		For The Evulz	Executive Meddling		
		<b>Roc</b> .4.1	<b>Wog</b> .7.4		
		Rule of Cool	Word of God		
		<b>Lah</b> .4.6	<b>Rad</b> .2.5		
		Literary Age Hypothesis	Getting Cock With The Reader		
		<b>Rif</b> .3.1	<b>Mst</b> .9.2		
		Rule of Funny	MSTJK Mantra		
		<b>Sod</b> .7.1	<b>Dh</b> .5.7		
		Moral Dissonance	Development Hell		
		<b>Md</b> .7.2	<b>Sqi</b> .5.7		
		Rule of Drama	Squick		
		<b>4wl</b> .3.8	<b>Fwr</b> 1.3		
		The Fourth Wall	Fruad Was Right		
		<b>Tb1</b> .0.1	<b>Sbn</b> .7.8		
		Parodic Takes of the Elements	Screamed By The Network		

Archetypes Villains

<b>Wes</b> .90	<b>Sci</b> .77	<b>Bad</b> .13	<b>Etw</b> .1.6	<b>Rch</b> .1.1	<b>Emp</b> .1.9	<b>Jt</b> .4.2	<b>Rur</b> .74	<b>Res</b> .3.9	<b>Et</b> .1.9
The Wesley	Star-Crossed Lovers	Big Bad	Evil Twin	Archenemy	The Empire	Justified Trope	Reality Is Unavoidable	Did Not Do The Research	Epileptic Trees
<b>Tsu</b> .7	<b>St</b> .3.8	<b>Mgb</b> .5.1	<b>Ewi</b> .4.2	<b>Dra</b> .4.6	<b>Av</b> .2.0	<b>Sv</b> .3.2	<b>Vam</b> .0.8	<b>Dlp</b> 1.3	
Tsunadee	The Storybringer	Magnificent Bastard	Energy Within	The Dragon	Anti Villain	Subverted Trope	Viewers Are Morons	Like Reality Unless Noted	
<b>Dbd</b> .19	<b>Lei</b> .36	<b>Mpb</b> .2.9	<b>Law</b> .3.2	<b>Mol</b> .1.9	<b>Vp</b> .1.8	<b>Old</b> .2.1	<b>Anp</b> .0.7	<b>Wob</b> .6.8	
The Dumbdiele	Rebel Leader	Manipulative Bastard	Amoral Attorney	The Mole	Villain Protagonist	Oldest Ones In The Book	Anarchic Principle	Written On Board	
<b>M</b> .12	<b>Mus</b> .21	<b>Chs</b> .2.8	<b>Ob</b> .80	<b>Vir</b> 1.2	<b>4te</b> .1.9	<b>Roc</b> .4.1	<b>Con</b> .30	<b>Xm</b> .8.8	
Dumb Muscle	Rebellious Spirit	The Chessmaster	Obstructive Bureaucrat	The Virgo	For The Evulz	Rule of Cool	Law of Conservation of Detail	Executive Meddling	
<b>Gia</b> .90	<b>Kz</b> .27	<b>Mon</b> .7.5	<b>Ws</b> .26	<b>Eld</b> .5.6	<b>Lol</b> 1.9	<b>Rif</b> .3.1	<b>Lah</b> .4.6	<b>Rad</b> .2.5	
The Klutz	Complete Muncher	Wicked Stepmother	Eldritch Abomination	Evil Laugh	Rule of Funny	Rule of Funny	Literary Age Hypothesis	Getting Cock With The Reader	
<b>Foo</b> .1.8	<b>Lrg</b> .44	<b>Om</b> 1.7	<b>Bru</b> .96	<b>1wa</b> 1.9	<b>Fai</b> .85	<b>Rod</b> .5.1	<b>Md</b> .7.1	<b>Dh</b> .7.2	
The Fool	Lovable Rogue	Omniscient Maniac	The Brute	One Winged Angel	You Have Failed Me	Rule of Drama	Moral Dissonance	Development Hell	
<b>Tc</b> .10	<b>Pnd</b> .13	<b>Kt</b> .2.4	<b>Chi</b> 1.5	<b>Cce</b> 2.2	<b>Cat</b> .23	<b>4wl</b> .3.8	<b>Tb1</b> .0.1	<b>Sbn</b> .7.8	
Turncoat	Person of Mass Destruction	Knight Templar	Creepy Child	Corrupt Corporate Executive	Right Hand Cat	The Fourth Wall	Parodic Takes of the Elements	Screamed By The Network	

**The Fourth Wall subtypes:**

Audience What Audience	Fourth Wall Mail Slot	Leaning on the Fourth Wall	Noticing The Fourth Wall
Breaking The Reviewers Wall	Fourth Wall Observer	Logging Onto The Fourth Wall	Painting The Fourth Wall
	Fourth Wall Portrait	No Fourth Wall	Sliding Scale Of Fourth Wall Hardness
	Fourth Wall Psych	No Inner Fourth Wall	The Fourth Wall Will Not Protect You

Structure

C<sup>04</sup>

Conflict

Setting, laws, plots

3as<sup>.03</sup>

Three Act Structure

Ae<sup>2.0</sup>

An Aesop

Story modifiers

Plot devices

Re<sup>2.5</sup>

The Reveal

Srs<sup>2.7</sup>

Serious Business

Anv<sup>2.0</sup>

Anxious

Phl<sup>2.3</sup>

Applied Pheobism

Cmx<sup>.03</sup>

The Climax

Msq<sup>1.1</sup>

The Misqu Coast

Bti<sup>5.1</sup>

Beyond The Impossible

Tb<sup>.25</sup>

Techno/Babble

Den<sup>.05</sup>

The Denouement

Rcy<sup>1.7</sup>

Recycled IN SPACE

Cl2<sup>1.5</sup>

Crosses the Line Twice

Wav<sup>2.4</sup>

Ward Wave

End<sup>.06</sup>

The End

X<sup>1.2</sup>

X Meets Y

Ria<sup>2.1</sup>

Refuge In Audacity

Dx<sup>1.6</sup>

Dress Ex Machina

Chk<sup>2.4</sup>

Chekhov's Gun

Aa<sup>.53</sup>

Magic A Is Magic A

Dae<sup>3.5</sup>

Darker And Edgier

Ass<sup>1.1</sup>

Ass Pull

McG<sup>2.7</sup>

MacGuffin

Ivc<sup>1.4</sup>

Sliding Scale of Ideology vs. Cynicism

Scw<sup>3.8</sup>

Mind Screw

Iac<sup>2.1</sup>

Sealed Evil In A Can

H<sup>4.9</sup>

The Hero

Kni<sup>1.1</sup>

Knight In Shining Apron

Bbw<sup>1.7</sup>

Badass Broomwore

Ib<sup>1.9</sup>

Idiot Ball

Wb<sup>5.5</sup>

Woobie

Mad<sup>4.0</sup>

Mad Scientist

Wes<sup>1.7</sup>

The Wesley

Scf<sup>.77</sup>

Star-Crossed Lovers

Bad<sup>13</sup>

Big Bad

Etw<sup>1.6</sup>

Evil Twin

Rch<sup>1.1</sup>

Archenemy

Emp<sup>1.9</sup>

The Empire

Jt<sup>4.2</sup>

Justified Trope

Rur<sup>.74</sup>

Reality Is Unrealistic

Res<sup>3.9</sup>

Did Not Do The Research

Et<sup>1.7</sup>

Epitaphic Tree

Bks<sup>1.5</sup>

Backstory

Sq<sup>1.2</sup>

Status Quo Is God

Aws<sup>2.1</sup>

What Do You Mean, It's Not Aesop?

Aod<sup>2.1</sup>

Artifact of Doom

Ah<sup>3.2</sup>

Anti Hero

Neo<sup>1.7</sup>

The Chosen One

Tp<sup>.28</sup>

Technical Proficiency

Fln<sup>1.6</sup>

Flanderization

Ccl<sup>6.1</sup>

Cloud CuckooLand

Sue<sup>1.7</sup>

Mary Sue

Tsd<sup>3.8</sup>

Turdface

St<sup>.68</sup>

The Storyteller

Mgb<sup>5.1</sup>

Magnificent Bastard

Ewi<sup>.42</sup>

Enemy Within

Dra<sup>4.6</sup>

The Dragon

Av<sup>2.0</sup>

Anti-Villain

Sv<sup>3.2</sup>

Subverted Trope

Lr<sup>.08</sup>

Like Reality Unless Noted

Vam<sup>1.1</sup>

Villains Are Morons

Dlp<sup>6.5</sup>

Drama In Leather Pants

Ret<sup>2.6</sup>

Retcon

Cal<sup>.29</sup>

Call To Adventure

Fbw<sup>4.1</sup>

Farservice

Xan<sup>3.2</sup>

Xanatos Gambit

Ih<sup>1.4</sup>

Idiot Hero

Ag<sup>5.0</sup>

Action Girl

Ace<sup>1.1</sup>

The Ace

Bda<sup>.79</sup>

Badass

Ham<sup>5.1</sup>

Large Ham

Moo<sup>3.9</sup>

Mooks

Ddb<sup>.33</sup>

The Dumbdumb

Lei<sup>.16</sup>

Rebel Leader

Mpb<sup>.29</sup>

Manipulative Bastard

Law<sup>.32</sup>

Amoral Attorney

Mol<sup>1.9</sup>

The Mole

Vp<sup>1.8</sup>

Villain Protagonist

Old<sup>3.1</sup>

Older Ones In The Book

Anp<sup>.07</sup>

Antiheroic Principle

Wob<sup>6.0</sup>

Written On Board

Mem<sup>6.5</sup>

Memetic Mutation

Arc<sup>1.1</sup>

Story Arc

Rq<sup>.30</sup>

Redemption Quest

Cry<sup>7.4</sup>

Tear Jerker

Bdh<sup>2.9</sup>

Big Damn Heroes

Sh<sup>.95</sup>

Super Hero

Pg<sup>.95</sup>

Picky Girl

Cap<sup>.88</sup>

The Captain

Bb<sup>5.8</sup>

Berserk Button

Rnd<sup>.06</sup>

Rounded Character

Red<sup>1.2</sup>

Redheads

Mus<sup>.83</sup>

Dumb Muscle

Mal<sup>.33</sup>

The Maelstrom

Obs<sup>2.8</sup>

Obnoxious Bureaucrat

Vir<sup>1.2</sup>

The Virus

4te<sup>1.9</sup>

For The Evilz

Roc<sup>4.1</sup>

Rule of Cool

Con<sup>.30</sup>

Con Law Conservation of Detail

Xm<sup>3.0</sup>

Executive Misconduct

Wog<sup>.74</sup>

Word of God

Rar<sup>.05</sup>

Romance Arc

Hj<sup>1.6</sup>

The Hero's Journey

Ang<sup>1.4</sup>

Wangst

Pet<sup>1.9</sup>

Pet The Dog

Kh<sup>.77</sup>

Kid Hero

Det<sup>3.1</sup>

Determinator

Gun<sup>.67</sup>

The Gunlinger

Jhg<sup>3.7</sup>

Jerk With a Heart of Gold

Fla<sup>.34</sup>

Flat Character

Mug<sup>.90</sup>

Muggles

Gia<sup>.32</sup>

Gentle Giant

Kz<sup>.27</sup>

The Klutz

Mon<sup>7.5</sup>

Complete Monster

Ws<sup>.26</sup>

Wicked Stepmonster

Eld<sup>5.6</sup>

Eldritch Abomination

Lol<sup>1.9</sup>

Evil Laugh

Rof<sup>3.1</sup>

Rule of Funny

Lah<sup>.46</sup>

Library Agent Hypothesis

Mad<sup>2.5</sup>

Getting Crap Past The Radar

Mst<sup>.92</sup>

MST3K

Tri<sup>.15</sup>

Love Triangle

Stw<sup>.26</sup>

Saving the World

Jts<sup>7.4</sup>

Jumping the Shark

Kik<sup>3.1</sup>

Kick The Dog

Gh<sup>.69</sup>

Guile Hero

Gb<sup>1.1</sup>

Genius Btw

Ir<sup>.57</sup>

Interpreting Reporter

Ja<sup>9.0</sup>

Jerkass

Dyn<sup>.04</sup>

Dynamic Character

Scr<sup>.44</sup>

The Scrappy

Foo<sup>1.7</sup>

The Fool

Lrg<sup>.09</sup>

Loveable Rogue

Om<sup>.36</sup>

Omniscient Mutt

Bru<sup>.36</sup>

The Brute

1wa<sup>.19</sup>

One Winged Angel

Fai<sup>.85</sup>

You Have Failed Me

Rod<sup>.51</sup>

Rule of Drama

Md<sup>.72</sup>

Moral Dilemma

Dh<sup>.72</sup>

Development Hell

Sqi<sup>.52</sup>

Squick

Hil<sup>.43</sup>

Humor Issues

Tfc<sup>.45</sup>

They Fight Crime

Gtb<sup>.86</sup>

Growing the Beard

Hzr<sup>4.0</sup>

Moral Event Horizon

Th<sup>.30</sup>

Toxic Hero

Sma<sup>2.4</sup>

Five Man Band

Ind<sup>.39</sup>

Indivisible Archaeologist

Sav<sup>4.9</sup>

Genie Savvy

Sta<sup>.96</sup>

Static Character

Edh<sup>4.0</sup>

Ensemble Darkhorse

Tc<sup>.08</sup>

Turncoat

Pmd<sup>.24</sup>

Person of Mass Destruction

Kt<sup>1.5</sup>

Knight Templar

Chi<sup>2.2</sup>

Creepy Child

Cce<sup>.23</sup>

Corporate Executive

Cat<sup>.23</sup>

Right Hand Cat

4wl<sup>.38</sup>

The Fourth Wall

Tbl<sup>.01</sup>

Familiar Table of the Elements

Sbn<sup>.28</sup>

Screened By The Network

Fwr<sup>1.2</sup>

Fried Was Right

Identifier

Trope name

Popularity in kilowicks  
(thousands of links to its page within the wiki)

Ae<sup>2.0</sup>

An Aesop

Chart by Computersherpa

Special thanks to Elle, Micah, and the rest of the Troppers for inspiration

Thanks to Madrugada, Jack Alsworth, -fourwills, and KirkoOtherSon for corrections

Permalink for this chart: [goo.gl/yv5M4](https://goo.gl/yv5M4)

Metatropes

T<sup>20</sup>  
Trope

Ls<sup>12</sup>  
Lampshade Hanging

Tru<sup>4.4</sup>  
Truth In Television

Tt<sup>4.1</sup>  
Take That

Fri<sup>5.1</sup>  
Fridge Logic

Character Modifiers

P<sup>.13</sup>  
Protagonist

A<sup>.01</sup>  
Antagonist

Archetypes

Villains

Heroes

H<sup>4.9</sup>

The Hero

Kni<sup>1.1</sup>

Knight In Shining Apron

Bbw<sup>1.7</sup>

Badass Broomwore

Ib<sup>1.9</sup>

Idiot Ball

Wb<sup>5.5</sup>

Woobie

Mad<sup>4.0</sup>

Mad Scientist

Wes<sup>1.7</sup>

The Wesley

Scf<sup>.77</sup>

Star-Crossed Lovers

Bad<sup>13</sup>

Big Bad

Etw<sup>1.6</sup>

Evil Twin

Rch<sup>1.1</sup>

Archenemy

Emp<sup>1.9</sup>

The Empire

Jt<sup>4.2</sup>

Justified Trope

Rur<sup>.74</sup>

Reality Is Unrealistic

Res<sup>3.9</sup>

Did Not Do The Research

Et<sup>1.7</sup>

Epitaphic Tree

Ah<sup>3.2</sup>

Anti Hero

Neo<sup>1.7</sup>

The Chosen One

Tp<sup>.28</sup>

Technical Proficiency

Fln<sup>1.6</sup>

Flanderization

Ccl<sup>6.1</sup>

Cloud CuckooLand

Sue<sup>1.7</sup>

Mary Sue

Tsd<sup>3.8</sup>

Turdface

St<sup>.68</sup>

The Storyteller

Mgb<sup>5.1</sup>

Magnificent Bastard

Ewi<sup>.42</sup>

Enemy Within

Dra<sup>4.6</sup>

The Dragon

Av<sup>2.0</sup>

Anti-Villain

Sv<sup>3.2</sup>

Subverted Trope

Lr<sup>.08</sup>

Like Reality Unless Noted

Vam<sup>1.1</sup>

Villains Are Morons

Dlp<sup>6.5</sup>

Drama In Leather Pants

Ih<sup>1.4</sup>

Idiot Hero

Ag<sup>5.0</sup>

Action Girl

Ace<sup>1.1</sup>

The Ace

Bda<sup>.79</sup>

Badass

Ham<sup>5.1</sup>

Large Ham

Moo<sup>3.9</sup>

Mooks

Ddb<sup>.33</sup>

The Dumbdumb

Lei<sup>.16</sup>

Rebel Leader

Mpb<sup>.29</sup>

Manipulative Bastard

Law<sup>.32</sup>

Amoral Attorney

Mol<sup>1.9</sup>

The Mole

Vp<sup>1.8</sup>

Villain Protagonist

Old<sup>3.1</sup>

Older Ones In The Book

Anp<sup>.07</sup>

Antiheroic Principle

Wob<sup>6.0</sup>

Written On Board

Mem<sup>6.5</sup>

Memetic Mutation

Sh<sup>.95</sup>

Super Hero

Pg<sup>.95</sup>

Picky Girl

Cap<sup>.88</sup>

The Captain

Bb<sup>5.8</sup>

Berserk Button

Rnd<sup>.06</sup>

Rounded Character

Red<sup>1.2</sup>

Redheads

Mus<sup>.83</sup>

Dumb Muscle

Mal<sup>.33</sup>

The Maelstrom

Obs<sup>2.8</sup>

Obnoxious Bureaucrat

Vir<sup>1.2</sup>

The Virus

4te<sup>1.9</sup>

For The Evilz

Roc<sup>4.1</sup>

Rule of Cool

Con<sup>.30</sup>

Con Law Conservation of Detail

Xm<sup>3.0</sup>

Executive Misconduct

Wog<sup>.74</sup>

Word of God

Kh<sup>.77</sup>

Kid Hero

Det<sup>3.1</sup>

Determinator

Gun<sup>.67</sup>

The Gunlinger

Jhg<sup>3.7</sup>

Jerk With a Heart of Gold

Fla<sup>.34</sup>

Flat Character

Mug<sup>.90</sup>

Muggles

Gia<sup>.32</sup>

Gentle Giant

Kz<sup>.27</sup>

The Klutz

Mon<sup>7.5</sup>

Complete Monster

Ws<sup>.26</sup>

Wicked Stepmonster

Eld<sup>5.6</sup>

Eldritch Abomination

Lol<sup>1.9</sup>

Evil Laugh

Rof<sup>3.1</sup>

Rule of Funny

Lah<sup>.46</sup>

Library Agent Hypothesis

Mad<sup>2.5</sup>

Getting Crap Past The Radar

Mst<sup>.92</sup>

MST3K

Gb<sup>1.1</sup>

Genius Btw

Ir<sup>.57</sup>

Interpreting Reporter

Ja<sup>9.0</sup>

Jerkass

Dyn<sup>.04</sup>

Dynamic Character

Scr<sup>.44</sup>

The Scrappy

Foo<sup>1.7</sup>

The Fool

Lrg<sup>.09</sup>

Loveable Rogue

Om<sup>.36</sup>

Omniscient Mutt

Bru<sup>.36</sup>

The Brute

1wa<sup>.19</sup>

One Winged Angel

Fai<sup>.85</sup>

You Have Failed Me

Rod<sup>.51</sup>

Rule of Drama

Md<sup>.72</sup>

Moral Dilemma

Dh<sup>.72</sup>

Development Hell

Sqi<sup>.52</sup>

Squick

Gh<sup>.69</sup>

Guile Hero

Th<sup>.30</sup>

Toxic Hero

Sma<sup>2.4</sup>

Five Man Band

Ind<sup>.39</sup>

Indivisible Archaeologist

Sav<sup>4.9</sup>

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Sta<sup>.96</sup>

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Right Hand Cat

4wl<sup>.38</sup>

The Fourth Wall

Tbl<sup>.01</sup>

Familiar Table of the Elements

Sbn<sup>.28</sup>

Screened By The Network

Fwr<sup>1.2</sup>

Fried Was Right

The Fourth Wall subtropes:

Audience What Audience Breaking the Fourth Wall Breaking The Reviewers Wall

Fourth Wall Mail Slot Fourth Wall Observer Fourth Wall Portrait No Fourth Wall No Inner Fourth Wall

Leaning on the Fourth Wall Logging Onto The Fourth Wall Sliding Scale Of Fourth Wall Hardness The Fourth Wall Will Not Protect You

Noticing The Fourth Wall Painting The Fourth Wall Sliding Scale Of Fourth Wall Hardness The Fourth Wall Will Not Protect You

H<sup>4.9</sup>

The Hero

L<sup>3.1</sup>

The Lancer

S<sup>3.1</sup>

The Smart Guy

B<sup>3.1</sup>

The Big Guy

Ch<sup>2.8</sup>

The Chick

Hft<sup>5.0</sup>

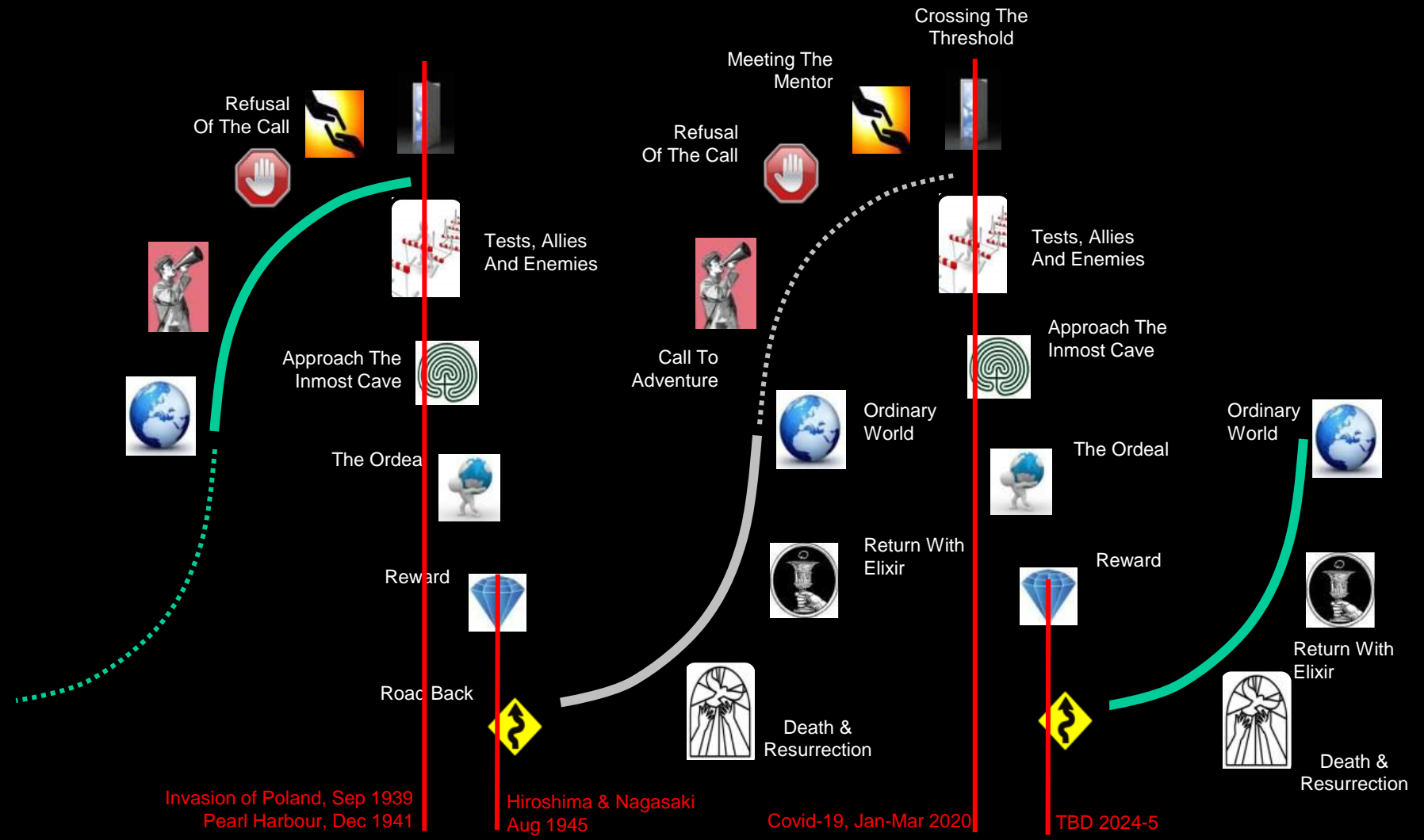
Heel Face Turn

Fht<sup>3.2</sup>

Face Heel Turn

# CONFLICT

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

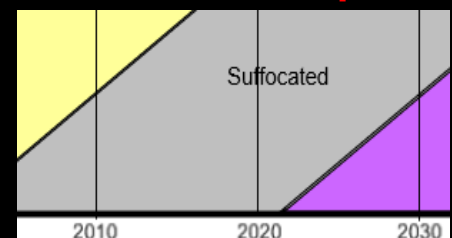
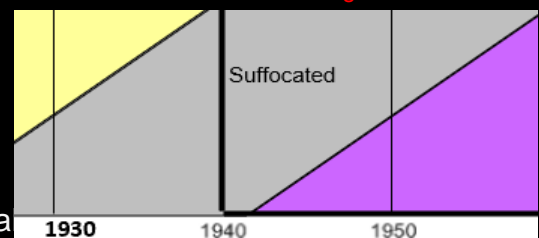


Invasion of Poland, Sep 1939  
Pearl Harbour, Dec 1941

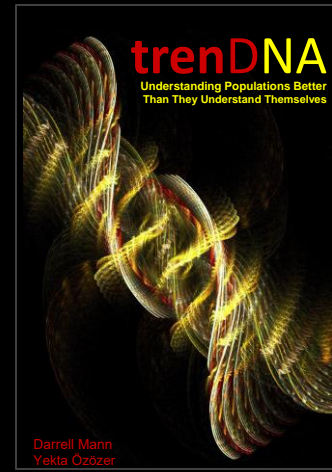
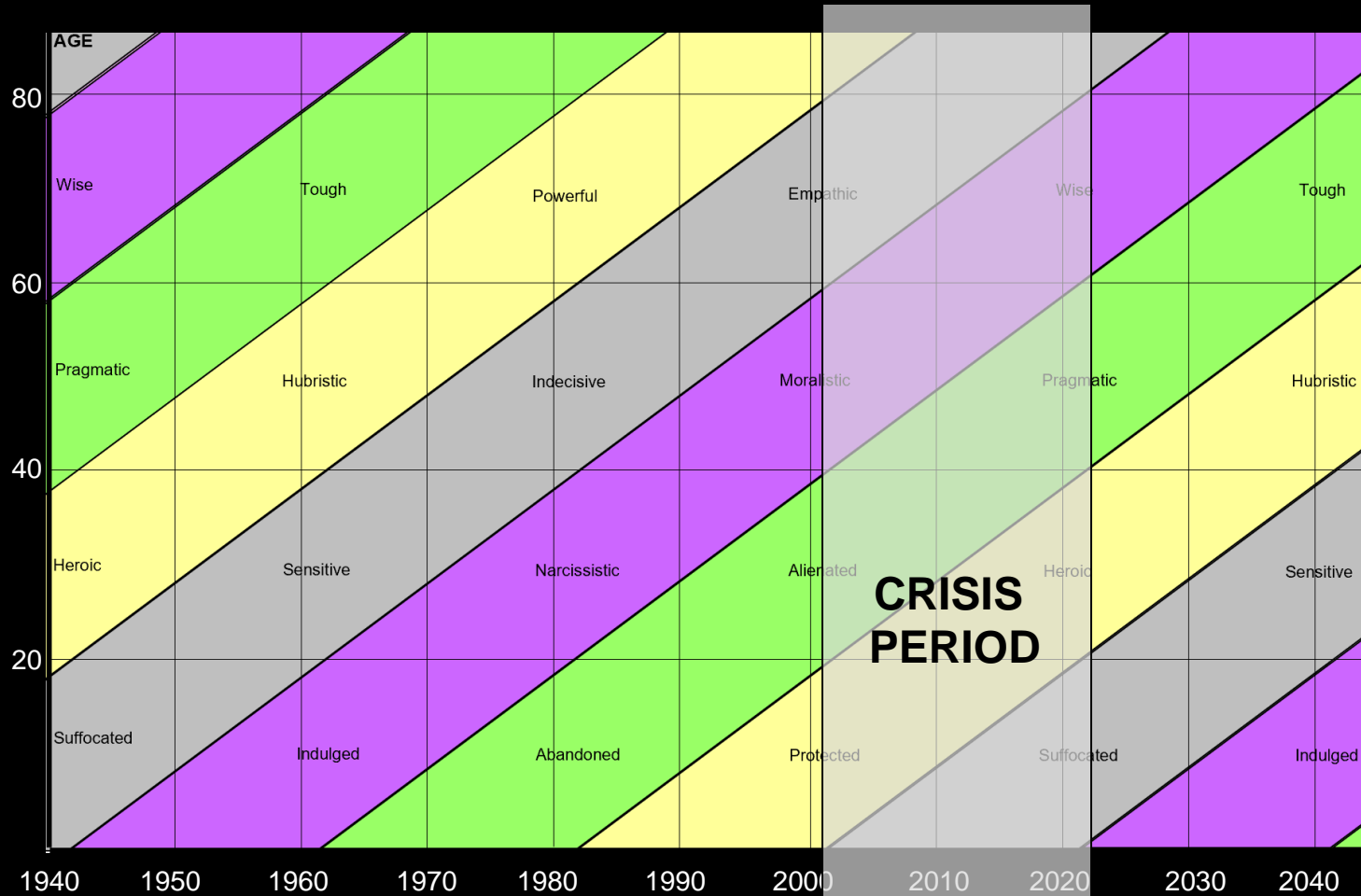
Hiroshima & Nagasaki  
Aug 1945

Covid-19, Jan-Mar 2020

TBD 2024-5



# Societal First Principles

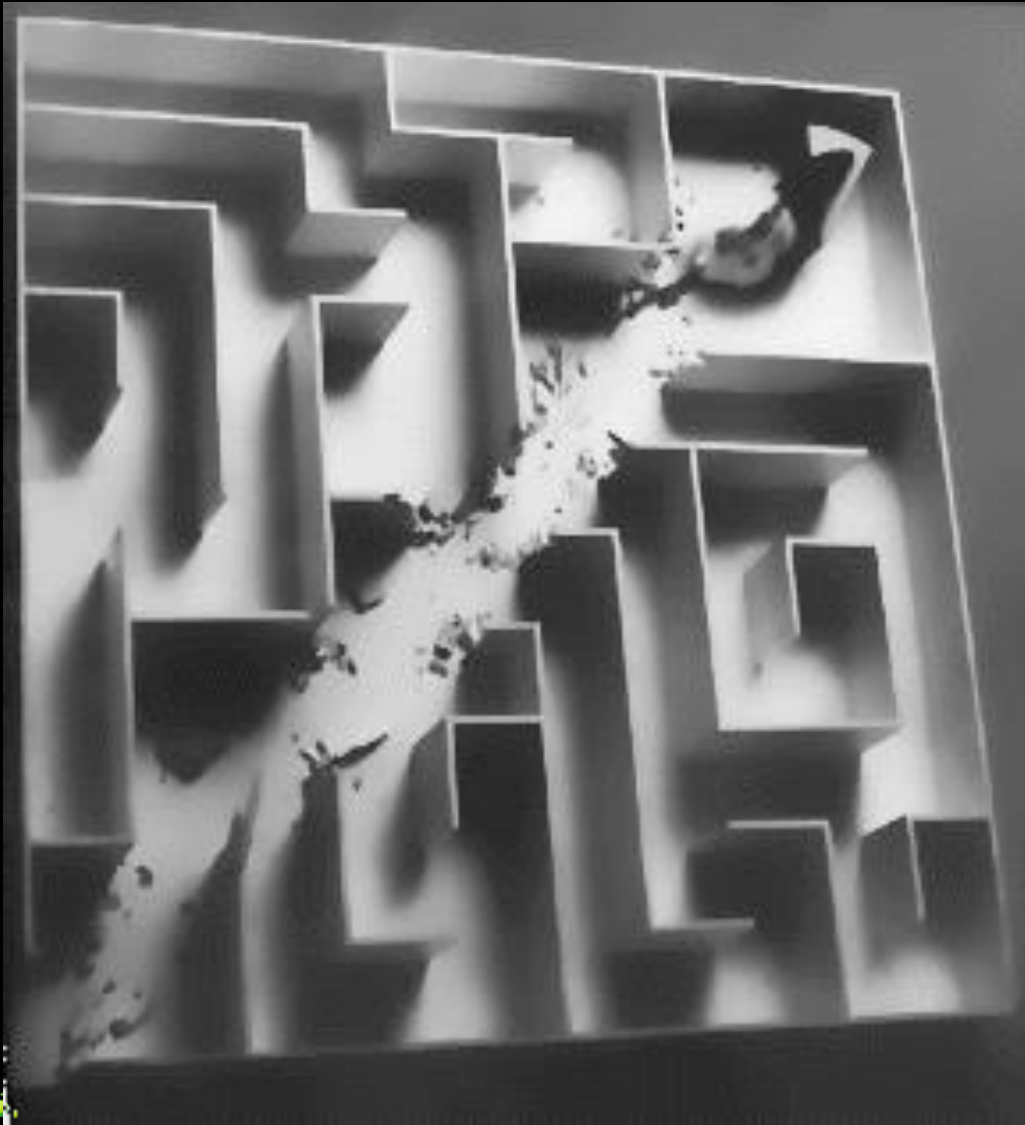


The way you were raised by your parents will influence the way you raise your own children.

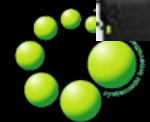
“over the period 2020-2025 the current Crisis will reach its climax”



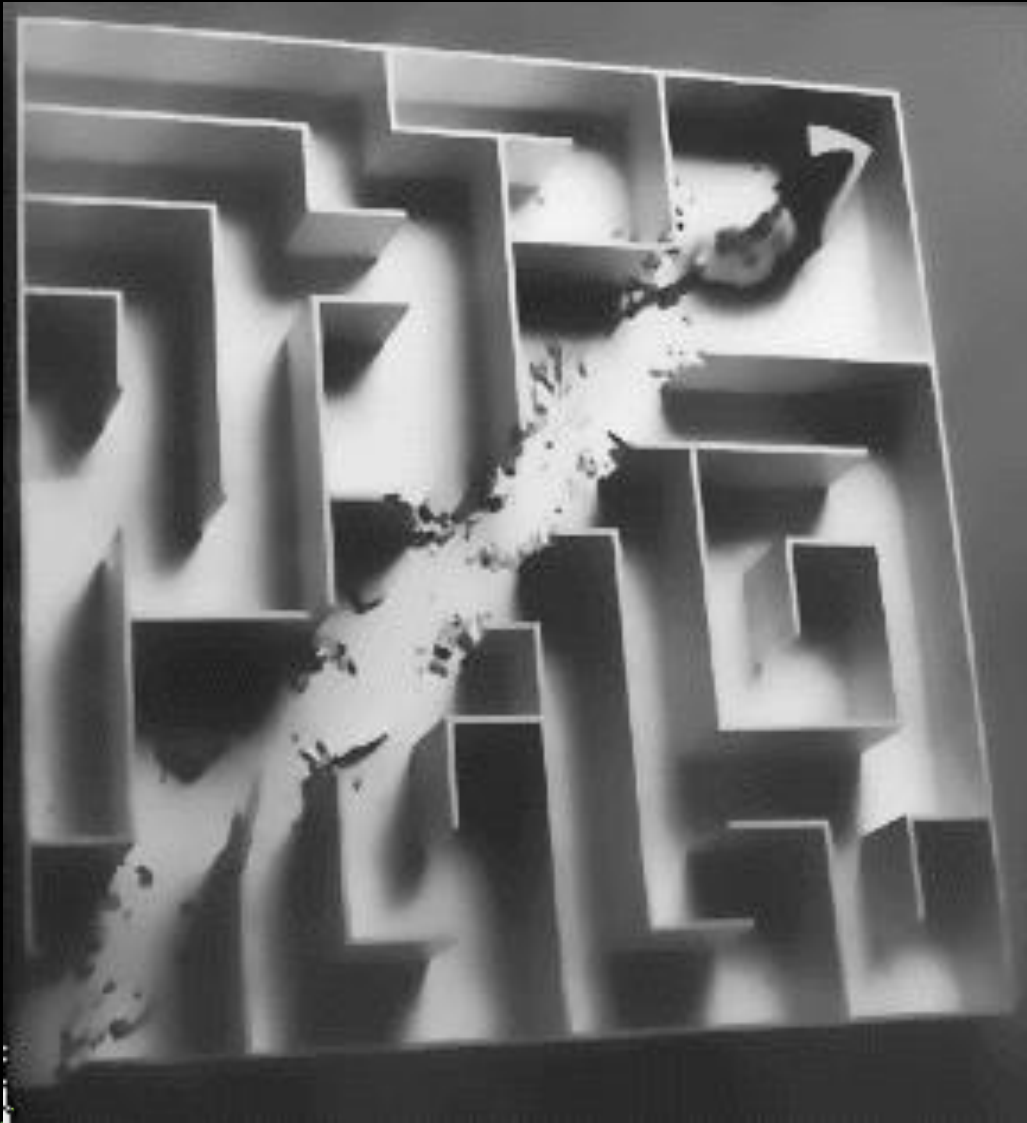
# TRIZ Foundation #1



Everything evolves  
to a '**perfect**'  
end-state



# TRIZ Foundation #2



Two Ways To Get There:

Add new  
(self) functions

Solve a  
contradiction

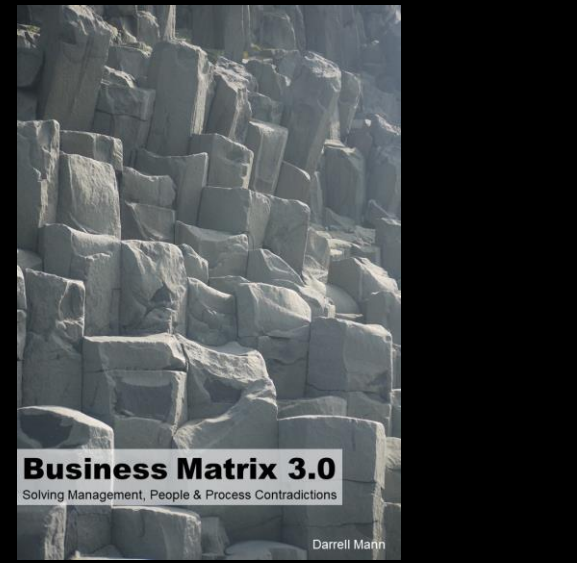




# Transformation #3

	Improving Feature	Worsening Feature	Design					Production					Supply					Support					Customer					Systems					Intangibles					Measure	Harm								
			Design Capabilities	Design Time	Design Cost	Design Risk	Design Interface	Production Capabilities	Production Time	Production Cost	Production Risk	Production Interface	Supply Capabilities	Supply Time	Supply Cost	Supply Risk	Supply Interface	Support Capabilities	Support Time	Support Cost	Support Risk	Support Interface	Customer Capabilities	Customer Time	Customer Cost	Customer Risk	Customer Interface	Systems Capabilities	Systems Time	Systems Cost	Systems Risk	Systems Interface	Intangibles Capabilities	Intangibles Time	Intangibles Cost	Intangibles Risk	Intangibles Interface										
Design	1	Design Spec/ Capability/Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
	2	Design Time	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	
	3	Design Cost	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45		
	4	Design Risk	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45			
	5	Design Interface	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45				
Production	6	Production Spec/ Capability/Measure	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45					
	7	Production Time	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45						
	8	Production Cost	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45							
	9	Production Risk	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45								
	10	Production Interface	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45									
Supply	11	Supply Spec/ Capability/Measure	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45										
	12	Supply Time	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45											
	13	Supply Cost	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45												
	14	Supply Risk	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45													
	15	Supply Interface	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45														
Support	16	Support Spec/ Capability/Measure	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45															
	17	Support Time	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																
	18	Support Cost	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																	
	19	Support Risk	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																		
	20	Support Interface	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																			
Customer	21	Customer Spec/ Capability/Measure	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																				
	22	Customer Time	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																					
	23	Customer Cost	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																						
	24	Customer Risk	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																							
	25	Customer Interface	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																								
Systems	26	System Spec/ Capability/Measure	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																									
	27	System Time	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																										
	28	System Cost	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																											
	29	System Risk	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																												
	30	System Interface	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																													
Intangibles	31	Intangible Spec/ Capability/Measure	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																														
	32	Intangible Time	32	33	34	35	36	37	38	39	40	41	42	43	44	45																															
	33	Intangible Cost	33	34	35	36	37	38	39	40	41	42	43	44	45																																
	34	Intangible Risk	34	35	36	37	38	39	40	41	42	43	44	45																																	
	35	Intangible Interface	35	36	37	38	39	40	41	42	43	44	45																																		
Measure	36	Measure Spec/ Capability/Measure	36	37	38	39	40	41	42	43	44	45																																			
	37	Measure Time	37	38	39	40	41	42	43	44	45																																				
	38	Measure Cost	38	39	40	41	42	43	44	45																																					
	39	Measure Risk	39	40	41	42	43	44	45																																						
	40	Measure Interface	40	41	42	43	44	45																																							
Harm	41	Harm Spec/ Capability/Measure	41	42	43	44	45																																								
	42	Harm Time	42	43	44	45																																									
	43	Harm Cost	43	44	45																																										
	44	Harm Risk	44	45																																											
	45	Harm Interface	45																																												

Someone, somewhere already solved your problem

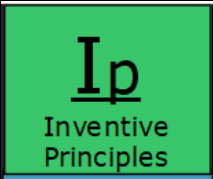


Darrell Mann

Business Matrix 3.0  
Solving Management, People & Process Contradictions

Business Matrix 2016

# 40 Inventive (Business) Principles



- |                                 |                               |
|---------------------------------|-------------------------------|
| 1. Segmentation                 | 21. Hurrying                  |
| 2. Taking Out                   | 22. 'Blessing in Disguise'    |
| 3. Local Quality                | 23. Feedback                  |
| 4. Asymmetry                    | 24. Intermediary              |
| 5. Merging                      | 25. Self-Service              |
| 6. Universality                 | 26. Copying                   |
| 7. 'Nested Doll'                | 27. Cheap/Short Living        |
| 8. Counterweight                | 28. Another Sense             |
| 9. Prior Counter-Action         | 29. Fluidity                  |
| 10. Prior Action                | 30. Thin & Flexible           |
| 11. Prior Cushioning            | 31. Holes                     |
| 12. Remove Tension              | 32. Transparency              |
| 13. 'The Other Way Round'       | 33. Homogeneity               |
| 14. Loops                       | 34. Discarding and Recovering |
| 15. Dynamics                    | 35. Parameter Changes         |
| 16. Slightly Less/Slightly More | 36. Phase Transitions         |
| 17. Another Dimension           | 37. Relative Change           |
| 18. Vibration                   | 38. Enriched Atmosphere       |
| 19. Periodic Action             | 39. Calmed Atmosphere         |
| 20. Continuity of Useful Action | 40. Composite Structures      |



# Seven Pillars of TRIZ... 20 First Principles

**IDEALITY**

**RESOURCES**

**EMERGENCE**

**RECURSION**

**FUNCTION**

**CONTRA-  
DICTION**

**SPACE  
TIME  
INTERFACE**

Self-  
Service

Blessing  
In  
Disguise

Phase  
Transition

Nest

Change  
Function

Space

Time

Interface

Segment

Magnify

Re-shape

Modify

Substitute



Systematic Innovation E-Zine, 'First Principle Principles', Issue 224, November 2020.

# Seven Pillars of TRIZ... 20 First Principles

Self-Service	Blessing In Disguise	Phase Transition	Nest	Change Function
--------------	----------------------	------------------	------	-----------------

	Space	Time	Interface	
Segment	1	18, 19	2	Number
Magnify	16	20, 21	38	Size
Re-shape	3, 4, 14, 17	15	12, 16	External Shape
Modify	30, 31, 32, 40	9, 10, 11	8, 37	Internal Structure
Substitute	26, 28, 29, 35a	27, 34	23, 24	Content



# Patterns Of Principles



## CUSTOMER EXPECTATION



**Commodity**



**Product**



**Service**

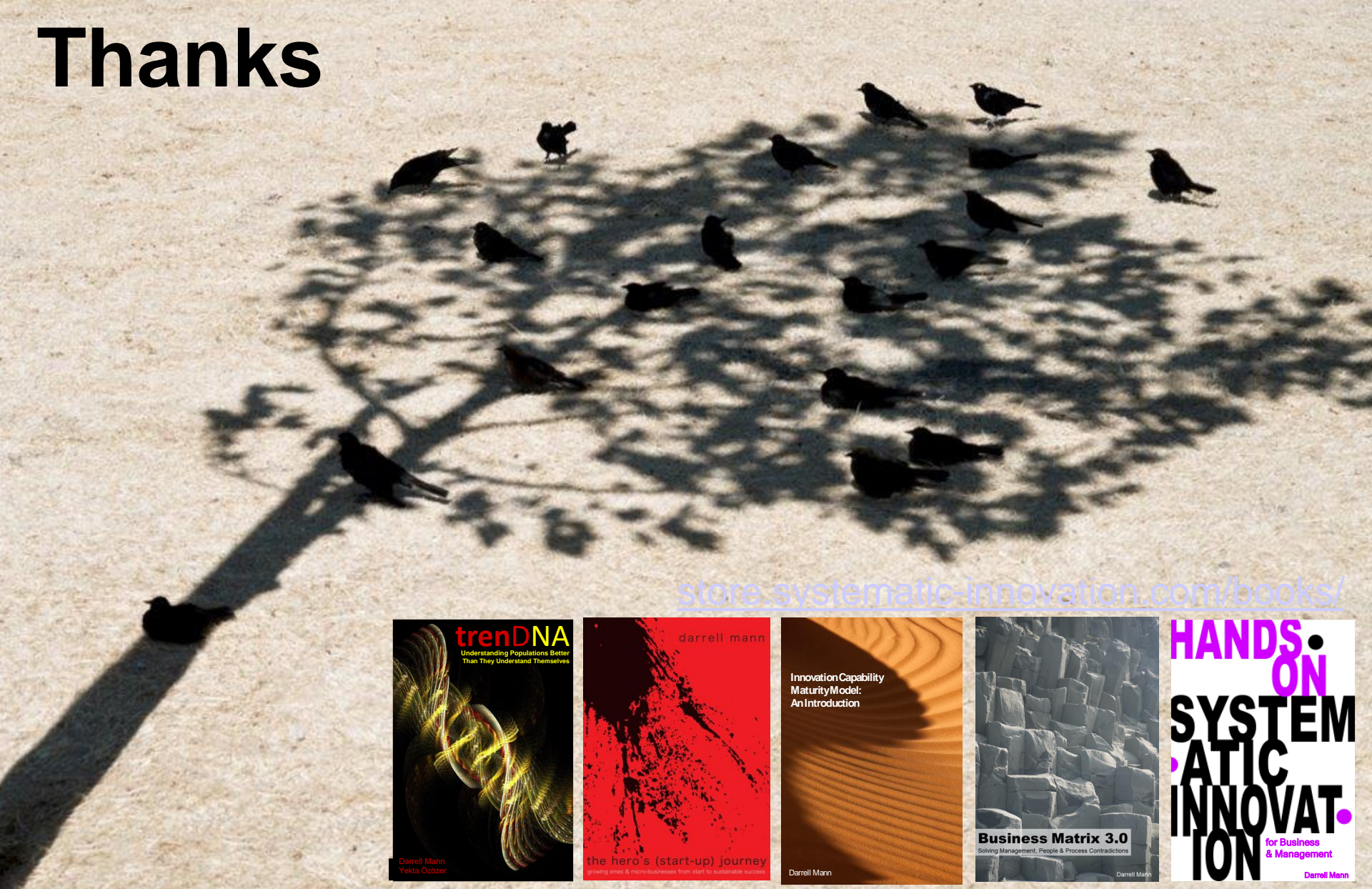


**Experience Transformation**





# Thanks



[store.systematic-innovation.com/books/](http://store.systematic-innovation.com/books/)



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@darrellmann

