Systematic Innovation



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The Systematic Innovation e-zine is a monthly, subscription only, publication. Each month will feature articles and features aimed at advancing the state of the art in TRIZ and related problem-solving methodologies.

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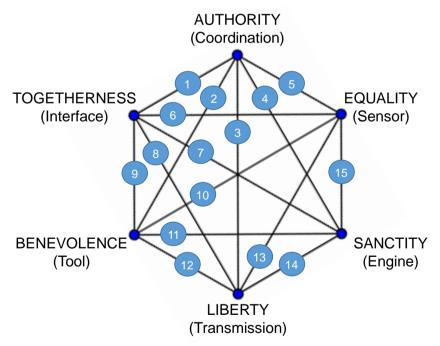


Solving Ethical Contradictions (With Robert Pirsig)

'Aoife's signature is needed on the planning consent sign-off forms. She has acknowledged the task is a simple one and that she doesn't expect any complications. She has also apologised for the fact that her job-list is long, and your sign-off is not high up her priority list. She has now missed the second promise date, and is now jeopardising several of your downstream Tasks.'

Here's an adapted version of a real-life case study we've been using in workshops recently. One of its attractions is that there are many approaches that can be taken to find resolutions. We could jump straight into the contradiction tool, we could construct a perception map, or we could do some Outcome Mapping for example. All will no doubt unlock some kind of insight and opportunity to generate a solution worth trying. The point here being that when we're dealing with a complex situation (two human beings!), there is no such thing as 'the right answer'. Rather what we need to be finding is something in the adjacent possible. We need something that will take Aoife from where she is to where we need her to be. Stated like that, it quickly becomes apparent that – like almost all human challenges – at its core this is a moral dilemma.

We first wrote about these kinds of situation in the May 2023 ezine (Reference 1). There we introduced the 'STABLE' taxonomy of moral and ethical dimensions. Here's the basic model:



One of the background research programmes we've been conducting since the publication of that article – thanks in large part to A!! – has involved the creation of a 'Contradiction Matrix' (actually, with only 15 pairs to consider, it is more of a 'table' than a 'matrix') examining how others have already 'solved' each of the 15 pairs of moral/ethical parameter. The richest source of responses, not surprisingly, comes from the world of literature. I say 'not surprisingly' because ever since we realised that 'subjective truth' and



'objective reality' were two orthogonal dimensions (Reference 2), it became apparent that the former lays within the realm of the Humanities/Arts.

Anyway, back to Aoife, of the fifteen dilemmas the most pertinent seems to be Liberty (Aoife's autonomy over her priorities) versus Equality (your expectation that all contributors' time is respected equally). This type of moral tension is explored in many rich literary moments. Here are two well-known examples:

1. Les Misérables by Victor Hugo

Dilemma: Jean Valjean (formerly prisoner 24601) lives under a false identity to do good in the world (liberty). However, when another man is mistakenly accused of being him and faces imprisonment (equality before the law), Valjean must choose.

Resolution: Valjean surrenders his freedom by confessing his identity to the court, prioritising the equality and dignity of the wrongly accused man.

2. The Crucible by Arthur Miller

Dilemma: John Proctor is given the liberty to save his own life by falsely confessing to witchcraft. But doing so would imply moral equivalence – that all accused are guilty – destroying fairness and integrity (equality in justice).

Resolution: He refuses to sign a false confession, preserving the principle that moral truth must apply equally to all.

Both characters tackle the Liberty vs. Equality dilemmas by choosing actions that restore structural balance, even at personal cost. On the one hand, we could say they didn't 'solve' the dilemma at all. The author in both cases made the dilemma clear, but also, in choosing the resolution they did, in effect made a moral judgement that they hoped would influence readers to 'do the right thing' should they ever face a similar problem in their lives. The problem here is that who are Hugo and Miller to decide what is 'right'? On the other hand, we could also say that in both cases, their resolution strategy is not compromise but rather 'managing' the dilemma – they reveal or construct a higher-order ideal where both liberty and equality are respected in principle, if not simultaneously. In other words they manage the dilemma through separation in time strategies.

In terms of constructing our Contradiction Matrix, both cases are relevant, but we would probably have to classify them at the weaker end of the impact spectrum.

Let's have let's look at literary cases where Liberty and Equality appear to conflict, yet the resolution reaches a clearer win-win outcome. Stories offering useful analogies for situations like Aoife's, where individual autonomy and collective interdependence must be honoured simultaneously.

3. To Kill a Mockingbird by Harper Lee

Characters: Atticus Finch and Scout Finch

Dilemma: Scout doesn't want to return to school after being reprimanded for being literate: her liberty to read and learn at her own pace is constrained by a system that enforces equal treatment through rigid conformity.

Resolution: Atticus encourages Scout to follow the rules publicly (go to school) but promises they'll continue reading together at home – preserving both her freedom to learn and the school's need for structure.

Win-Win Strategy:

Principle 24, Intermediary: Private home education is a bridge between Scout's liberty and the teacher's mandate for equality.



Principle 2, Separation: Freedom at home, conformity at school.

(Lesson: Respecting the institution while preserving the individual spirit often requires a third space.)

4. The Dispossessed by Ursula K. Le Guin

Character: Shevek, a physicist living in a society built on radical equality

Dilemma: He wishes to share his groundbreaking theory with another planet. But doing so violates the collectivist norms of his anarchist society, which sees personal ambition as a betrayal of equality.

Resolution: Shevek bypasses the institutional gatekeepers and uses interplanetary communication to share his work freely, both honouring the communal ethos (by refusing profit) and exercising his liberty to exchange ideas.

Win-Win Strategy:

Principle 2, Taking out: He removes his innovation from both systems (his own society and the capitalist one) to enable a more ideal outcome.

Principle 6, Universality: tapping into a 'universal' communication medium

Principle 7, Nested Doll: creating a higher-order synthesis: Sharing the idea universally enacts equality *through* liberty.

5. The Lord of the Rings by J.R.R. Tolkien

(by the way, I really not a big fan of Tolkien's work so I'm loathed to use it in most situations. When it comes to moral and ethical dilemma resolution, however, he's often difficult to beat.)

Character: Frodo Baggins

Dilemma: As ring-bearer, Frodo alone holds the fate of the world, yet bearing this burden isolates him and denies others participation in the struggle (liberty vs. equality).

Resolution: Frodo insists on taking the Ring alone to Mount Doom, but is quietly followed and supported by Sam. In turn, Frodo cannot complete the task without Gollum's interference – a strange kind of equality from a reviled character.

Win-Win Strategy:

TRIZ Principle 25 – Self-service: Sam's support allows Frodo autonomy while still distributing the emotional and logistical burden.

Principle 12 – Equipotentiality: Frodo's liberty to act is balanced by giving others scope to contribute differently.

These literary moments show that the Liberty-Equality dilemma doesn't require one to lose. Instead, the key to higher impact solutions lies in designing a higher-level solution – often by introducing a new element, context shift, or model that preserves the integrity of both values.

If I find myself referencing Tolkien begrudgingly, I'm always more than happy to listen to what Robert Pirsig has to say, Zen and the Art of Motorcycle Maintenance and its follow-up, Lila, are two of my favourite books of all time. Both Zen and the Art of Motorcycle Maintenance and Lila explore Liberty-Equality dilemmas in subtle but powerful ways. In fact, Pirsig's entire metaphysical system – the Metaphysics of Quality (MOQ) – can be read as a sustained meditation on how to balance individual freedom (Dynamic Quality / liberty) and social cohesion (Static Quality / equality). Here are a couple of key moments and ideas where this tension becomes central:

Zen and the Art of Motorcycle Maintenance

Core Dilemma: Phaedrus vs. the Academic Institution



Liberty: Phaedrus (the narrator's past self) pursues radical intellectual independence, questioning foundational concepts like "Quality" and refusing to conform to academic orthodoxy.

Equality: The university (and broader society) demands standardised curricula, agreedupon definitions, and collective norms for how knowledge is validated and shared. The Conflict:

Phaedrus' liberty to think freely threatens the integrity of a system built on shared understanding. Conversely, the system's demand for conformity threatens his pursuit of truth.

Resolution (or at least insight):

The breakdown of Phaedrus can be seen as a failure to resolve this tension. But the narrator's later insights point toward the need to (Principle 12) balance Dynamic and Static Quality – where liberty (Dynamic) and equality (Static) are not enemies but (Principle 40) interdependent, and 'Quality' serves as the (Principle 7) higher-level driver ("Quality is the parent, the source of all subjects and objects.")

Interpretation: Liberty (innovation, individuality) must be grounded in equality (shared norms) to be sustainable – but equality must be updated by liberty to remain alive.

Lila: An Inquiry into Morals

Core Dilemma: Individual Moral Evolution versus Cultural Norms

Liberty: Lila, the woman Pirsig meets on his boat journey, is portrayed as a free-spirited, dynamically unstable character, someone living by her own rules.

Equality: Society, as understood through social and biological Static Quality patterns, tries to impose moral boundaries for the common good.

The Conflict:

Pirsig explores how Lila's behaviour – while chaotic – might actually represent a challenge to overly rigid norms. But he also sees the danger of unchecked liberty leading to disintegration of useful structures.

Resolution (in MOQ terms):

Pirsig proposes that morality is (Principle 7) layered, and that liberty (Dynamic Quality) must evolve *through*, not outside of, the static patterns of society ("Morality is not a simple set of rules. It is a hierarchy of patterns.")

Interpretation:

True freedom is not rebellion for its own sake, rather it's an upward push that respects the framework of equality while offering new possibilities.

Pirsig doesn't dismiss either liberty or equality. He suggests that:

Liberty without equality becomes anarchy or breakdown.

Equality without liberty becomes stagnation or tyranny.

Win-win is achieved through evolutionary nested tension — Dynamic quality constantly testing and improving Static patterns. Which all sounds a little bit like s-curves and Hero's Journeys.

I'm not sure Aoife will be up for either of those, but I think I might at least ask her out for a (third place) lunch to see where her head is at. Call that the 'adjacent possible' again.

References

- 1) SIEZ, 'The 15 (STABLE) Moral And Ethical Contradictions', Issue 254, May 2023.
- 2) 'Yes, That Is Correct. But Is It True?' www.darrellmann.com, 27 January 2019.



Value Collisions on the Open Road – A Gravesian Reading of Zen and the Art of Motorcycle Maintenance

"The truth knocks on the door and you say,
'Go away, I'm looking for the truth,' and so it goes away.
Puzzling."
Robert M. Pirsig,
Zen and the Art of Motorcycle Maintenance

In the wake of this month's first workout for our new 'Robert Pirsig In The 21st Century' workshop, we thought it would be useful to share the prior work we did to map Pirsig's work onto the Clare Graves/Everythink values-system framework. Thanks to our PanSensic tools, we have enough narrative and philosophical evidence from both of Pirsig's classic tomes to make a reasoned interpretation of where the narrator – and, in the case of the 1974 classic Zen & The Art Of Motorcycle Maintenance (ZMM), his alter ego, Phaedrus – sits within Clare W. Graves' value systems model.

For those unfamiliar with our Everythink updating of Graves' pioneering work, here's a quick refresher on Graves/Spiral Dynamics Levels in the form of a simplified outline of the value systems relevant to this analysis:

Graves Level	Spiral	Core Values	
	Dynamics		
Level 4 (DQ)	Blue	Order, truth, discipline, higher purpose (e.g. religion,	
		bureaucracy)	
Level 5 (ER)	Orange	Achievement, rationality, success, science, autonomy	
Level 6 (FS)	Green	Community, equality, humanism, ecological concern	
Level 7 (GT)	Yellow	systems thinking, integrative, non-linear complexity	
Level 8 (HU)	Turquoise	Holistic, spiritual, cosmic, unity-of-everything (rare)	

Here's how the various character within ZMM map onto these Levels, starting with Pirsig himself, the Narrator of the book, as he looks back on his former self, 'Phaedrus':

The Narrator: Post-Crisis Reconstructed Self

The narrator we follow throughout most of the book is a reconstituted version of Phaedrus following his mental breakdown and electroshock therapy. He's quiet, methodical, emotionally restrained, and seeks balance between the romantic and classical worldviews.

He is aware of both scientific method and romantic intuition.

He constantly tries to mediate between rationality and emotion, quality and quantity.

He often criticises rigid institutional thinking (Level 4/Blue) and pure rational materialism (Level 5/Orange).

He is motivated by deeper, integrative philosophical questions — particularly around the metaphysics of quality.



These traits strongly places the narrator in Level 6 (Green) moving toward Level 7 (Yellow).

He appreciates the emotional, intuitive world (Green), but, the book's journey is in effect the narrator's striving for meta-cognitive synthesis — a Yellow trait.

Phaedrus: The Pre-Breakdown Self

Phaedrus, the narrator's earlier self, was:

A hyper-rational, penetrating intellect obsessed with classical definitions and logical clarity. Driven by the pursuit of ultimate "truth" through reason, even at the cost of human connection.

Willing to deconstruct academic orthodoxy and challenge institutional paradigms.

Eventually consumed by the contradictions inherent in purely Orange/Level 5 thought.

Phaedrus represents Level 5 (Orange) taken to a dangerous, unstable extreme — an existential overreach in pursuit of a rational Ideal.

The primary thrust of the book, in terms of values is really about Pirsig's transformation from Orange to Yellow:

Character Phase	Graves Level	Description	
Phaedrus	Level 5 (Orange)	Rational, iconoclastic, obsessed with	
(pre-breakdown)		systems and truth.	
Narrator (post-	Level 6-7 (Green-	Seeks emotional wholeness, integrates	
breakdown)	Yellow)	intuition and reason.	
"Quality" as meta-	Level 7+ (Yellow-	Attempts a trans-rational synthesis	
theme	Turquoise)	beyond binaries.	

So, is ZMM a book about a Yellow Value System? The Transcender on Two Wheels?

In the book, to wind back a little, Robert Pirsig's narrator embarks on a literal and philosophical journey through the American landscape and the internal landscape of his own psyche. What begins as a road trip gradually reveals itself to be a deep exploration of a fundamental contradiction: the rift between the classical, rational worldview and the romantic, intuitive one.

Most thinkers choose sides. The narrator – and the earlier version of himself known as Phaedrus – refuses. His journey is one of transcendence. The philosophical breakthrough he calls "Quality" isn't a middle-ground compromise between logic and emotion; it is a higher synthesis that renders the conflict obsolete. That is the true essence of Transcender thinking.

Rather than patch over tensions, the narrator digs into them. He treats contradiction not as a problem to be managed, but as a signal, a sign that there's a deeper truth yet to be uncovered. At his best, he operates exactly as a Level 7, Yellow, Transcender should: recognising 'right-versus-right' conflicts in culture, academia, and human psychology, and navigating through them with relentless inquiry and philosophical clarity.

There are costs, of course. Phaedrus lost his position, his family, and eventually his sanity in pursuit of a worldview that refused to compromise. But the narrator who returns from that abyss brings back something immensely valuable: a map for how to resolve



contradictions without reductionism, and how to build meaning into systems that have forgotten what meaning looks like.

Innovation projects may not carry the existential weight of metaphysics, but they too are full of apparent contradictions. The Transcender sees these not as dead ends, but as creative springboards. And like Pirsig's narrator, they understand that to solve the biggest challenges of our time, we'll need more than clever trade-offs, we'll need to invent entirely new ways of seeing.

Ultimately, the entire journey in Zen and the Art of Motorcycle Maintenance can be read as:

A movement from rational fragmentation \rightarrow toward systemic integration.

A moral and intellectual pilgrimage from either/or \rightarrow to both/and.

A rejection of dogma (Blue) and atomised success (Orange) in favour of inner coherence and contextual truth (Yellow).

The narrator becomes someone who is comfortable living with paradox, reconciling classical and romantic, East and West. Again, classic Yellow traits.

So, what about the book's other characters? How do they help the flow of Pirsig's thinking?

Chris (the 11 year old son)

Chris represents innocent presence, a kind of pre-conceptual or trans-conceptual awareness that confounds the narrator at times. Much like Lila in Pirsig's later work, Chris is a mirror and foil to the narrator's search for metaphysical clarity. He is:

Emotionally attuned but not always rational (Level 2, Tribal, Purple)

Prone to emotional instability, not because he's irrational, but because he senses the contradictions that adults paper over (offering the thought that the naivety associated with the Tribal mindset doesn't recognise the difficulties of resolving contradictions – this is a trait we've talked about several times elsewhere: youngsters haven't developed their trade-off thinking 'skills' yet).

Deeply curious about why things matter, not just what or how.

In Graves' terms, Chris may be seen as transcending Orange and Green values, intuitively rejecting rigid structures (Blue) and success metrics (Orange), while groping toward integrative, post-conventional Yellow — but without the scaffolding to support that transition. Like Lila, in Pirsig's follow-up book, Chris is not a systematiser but a signal. He draws attention to what is being excluded by overly rigid rationalism.

John Sutherland

John is the embodiment of conventional, stability-seeking consciousness. He is:

- Uncomfortable with Pirsig's rational probing.
- Resistant to over-intellectualisation.
- Loyal to received wisdom and established practice ("just take it to a mechanic").
- Distressed by questioning that threatens the social equilibrium.



In Gravesian terms, John is very clearly centred in Level 4 (Blue) — the stage that values authority, truth, rules, and societal roles. He prefers certainty and predictability to inquiry and ambiguity.

However, John's discomfort with technology (despite being a technology user) signals a latent or frustrated transition into Level 5 (Orange) – the modern, achievement-oriented value system that wants to optimise and improve but is still within a materialist frame.

John rejects the narrator's self-reliance and deep dive into Quality because it undermines the external authority Blue depends on, and seems unnecessary from Orange's "pragmatic" rationalising lens.

Sylvia Sutherland

Sylvia, though more quietly present, represents emotional resonance and aesthetic sensibility. She:

- Senses Pirsig's intensity but cannot verbalise the disquiet it stirs.
- Supports John's emotional needs and preference for harmony.
- Resists the hyper-masculine rational dissection of experience.

She is empathetic and harmony-seeking, showing signs of Level 6 (Green), especially in her discomfort with hierarchy and alienation, but is still anchored in Blue, particularly in her trust in relational norms and traditional values.

She might also represent the difficulties of emergence of Green from Blue without wishing to go through the (essential) intervening Orange phase, especially as she expresses dissatisfaction with modern life but doesn't yet possess a coherent alternative framework.

The narrator's struggle with John and Sylvia mirrors the evolutionary tension between worldviews:

- He sees John's Blue/early Orange rigidity as a dead-end.
- He fails to find companionship or recognition from Green empathy (e.g., Sylvia).
- He senses Chris as a bridge to something higher but fragile and incomplete.

Zen and the Art of Motorcycle Maintenance becomes, when viewed through Clare Graves' lens, a microcosmic ecosystem of value systems:

John: Blue stabiliser (with flickers of Orange).

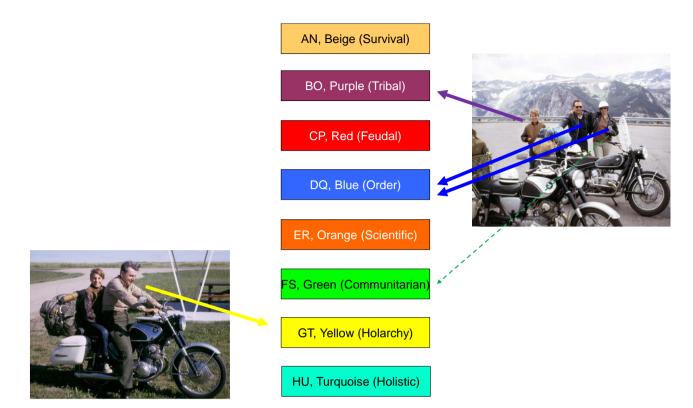
Sylvia: Blue-Green relational harmoniser.

Chris: Tribal/Feudal/Pre-articulate Yellow potential.

Narrator: Orange to Green/Yellow transformer (with a shadow of collapse as the price of transition).

The tragedy – and necessity – of the story is that true integration is elusive. Each character represents a partial truth, and only by seeing the contradictions between them clearly does Pirsig begin to articulate the philosophy of Quality – which, like Yellow consciousness, seeks to transcend and include rather than resolve through domination or avoidance.





Lila

Arriving seventeen years after ZMM, Lila: An Inquiry into Morals offers a Pullitzer prize nominated, richly textured companion. It offers even more fertile ground for examining Clare W. Graves' emergent value systems, and Pirsig's personal development between 1974 and 1991.

Here's a Gravesian mapping of the key characters in Lila, particularly through the lens of their value orientations and how they relate to Pirsig's Metaphysics of Quality (MOQ):

The Narrator/Phaedrus

Primary Graves Level: Yellow (Systemic/Integrative)

Also touches: Turquoise (Holistic/Global consciousness)

Phaedrus has clearly evolved since ZMM. In Lila, he embodies Yellow's hallmark traits: integration of complex systems, comfort with paradox, detachment from ego-based status structures, and a quest for elegant truths. His MOQ represents an attempt to reconcile subjective experience and objective understanding — a classic Yellow endeavour.

He also begins to see moral questions not as rigid binaries but as fluid dynamics (between static and dynamic quality), which aligns with Yellow's tendency to perceive moral landscapes as complex, evolving systems. There are flashes of Turquoise when he speaks of larger societal and ecological patterns, though they remain underdeveloped.

Lila

Primary Graves Level: Purple (Tribal/Animistic) or Red (Ego-centric/Impulsive) Lila is portrayed as emotionally raw, impulsive, and instinctual – driven by her immediate environment and needs. She seems to embody early-stage survivalist thinking (Red), mixed with Purple's yearning for protection and belonging.

Importantly, Phaedrus doesn't judge Lila from a superiority stance. Rather, he sees her as a mirror, a necessary counterpoint to his own over-rationalising tendencies. In much the



same role that his son, Chris, played in ZMM, Lila's simplicity challenges him to connect with pre-rational dynamics he may have dismissed. Ditto her sensuality.

Rigel (the anthropologist)

Rigel is deeply invested in traditional academic frameworks. He seeks fixed structures, objective truths, and cultural norms as moral anchors. He's sceptical of Phaedrus's MOQ and tends to see morality as rule-based and culturally defined. Rigel's primary Graves Level is Blue (Absolutist/Order) with elements of Orange (Strategic/Scientific). He exemplifies the tension between Blue's deference to authority and Orange's empiricism.

Like John Sutherland in ZMM, Rigel serves as the book's key antagonist in the moral inquiry – not in a villainous sense, but as the personification of conventional moral and academic systems that Pirsig wishes to transcend.

Supporting Characters (Boatsmen, Bar scenes, etc.)

Many of the background characters seem to live within Red, Blue, or Orange frameworks, they are driven by hierarchy, individual gain, or social order. These serve as foils to both Phaedrus and Lila, reflecting the wider cultural milieu that the MOQ attempts to critique and evolve beyond.

In summary:

Character	Primary Graves Level	Supporting Traits	
Phaedrus	Yellow (Integrative)	Systems, nuance, paradox	
Lila	Red/Purple	Instinctual, sensual	
Rigel	Blue/Orange	Institutional, rule-based	
Background Red-Orange spectrum		Societal inertia	

Robert Pirsig's ZMM cult classic isn't just a philosophical travelogue, it's also a masterclass in value system friction. When seen through the lens of Clare Graves' developmental model (and its later articulation in Everythink), the journey becomes a subtle exploration of moral and epistemic contradictions between worldviews:

John Sutherland (Blue)

Anchored in order, tradition, and external authority. He wants things to work, doesn't care why, and distrusts the narrator's probing.

➤ Moral Dilemma: Is questioning inherited norms destabilising or necessary?

Sylvia Sutherland (Blue-Green Transition)

Emotionally intelligent, harmony-seeking, uneasy with technocratic reductionism.

➤ Moral Dilemma: When does preserving interpersonal harmony override the drive for understanding?

Chris Pirsig (Emergent Yellow)

Intuitive, emotionally porous, and deeply sensitive to tensions adults gloss over.

➤ Moral Dilemma: How do we parent or teach when we don't fully understand the systems we're embedded in?

The Narrator (Orange → Yellow)

Once a rational absolutist, now scarred by collapse and reaching for integrative truth (Quality).

➤ Moral Dilemma: Is the pursuit of higher synthesis worth the interpersonal cost of alienation?



What Happens When Value Systems Collide?

Using the Graves model, we can reframe interpersonal breakdowns not as personal failings, but as inevitable friction points between different moral operating systems. Some examples:

Value System 1	Value System 2	Tension / Contradiction	Moral Interpretation
Blue (Order)	Orange (Rational mastery)	"Why fix it yourself when there are experts?" vs "Why trust experts if you don't understand them?"	Trust vs Autonomy
Orange (Success)	Green (Empathy/Equality)	"We should optimise this" vs "At what human cost?"	Efficiency vs Care
Green (Harmony)	Yellow (Integration)	"Let's make everyone feel heard" vs "We need to surface uncomfortable truths to evolve"	Comfort vs Growth
Blue	Yellow	"Tradition keeps us grounded" vs "Tradition may be the source of dysfunction"	Loyalty vs Transcendence

The key takeaway being that ethical contradictions are often developmental. The interpersonal conflicts in Zen are not just philosophical, they're also developmental in the Gravesian sense. Each character represents a worldview that is morally coherent within itself, yet incoherent when measured by the standards of another level.

This reveals a deeper insight: Many ethical dilemmas are not about good vs evil, but about partial truths in competition. The work of ethical progress is the work of transcending and integrating, not choosing sides.

Understanding the value systems beneath the surface of people's beliefs allows us to move from:

Trade-off thinking → Contradiction-transcending thinking

Blame → Perspective-taking

Moral deadlock → Meta-systemic design

This is the kind of moral insight Pirsig gestured toward when he wrote of Quality – a unifying concept that resists reduction and demands attention to the whole.



The Other Kind Of Funny - Not Zen & The Art Of Motorcycle Maintenance

Even at 60 miles an hour, the wind is warm as I weave the bike along the roads less travelled towards the Dakota mountains. I am channelling the universe, at one with my megalomania, as my 12-year-old son, Chris, hangs on for grim death.

"Why are we doing this?" he asks later that evening at the campsite.

"To showcase my brilliance," I reply.

"I'd rather go to Disneyworld."

"That's because you are driven by your ego."

I read a few pages of Thoreau out loud because it is so much more important for Chris to hear something he does not understand, before checking through my rucksack for the 17th time that day and tinkering with the spark-plugs. John and Sylvia, who arrived ahead of us, come over for a chat.

"My bike is making an odd noise," he says.

"You need to adjust the tappets, novice," I declare.

I am wasting my valuable breath, so I began the first of what I grandiosely call my Chautauqua - my philosophical digressions. John and Sylvia are romantics, terrified by modern technology and unwilling to engage with the dualism of the carburettor-points split. While I tend towards the more rational classical position, I have also learned to view the world through my all-seeing Middle Eye of the Buddha.

Sylvia nudges John awake and suggests we get something to eat.

"I don't feel well," Chris says.

"You will never feel well until you subsume your egotism to mine," I snap. "Now sod off while I amaze myself with my genius."

So begins the ZMM 'Digested Classics' spoof penned by the Guardian newspaper's longtime parliamentary sketch writer and acerbic satirist, John Crace, almost sixteen years ago. You can read the rest of it here:

https://www.theguardian.com/books/2009/jul/25/digested-classics-john-crace.

At the time, much as I love Crace's razor-sharp skewering of the pompous political and business figures of the day, I thought it was the least funny thing I'd ever read. We don't like it, I guess, when our hero's come in for criticism. Pirsig, I think, would tell me to get over it. Maybe he'd even tell me to turn my negative feelings into something positive.

Consequently, fictitious advice duly taken onboard, I now think it is the funniest thing Crace has ever written. Well, almost.

Crace offers a fascinating case study through a Gravesian lens. Publicly and in his writing, he shows traits that map strongly onto the Blue Levels of value development, with some brushstrokes of Orange. First and foremost is his obsession with black-or-white truth & accountability: Crace is driven to expose hypocrisy, misuse of power, and broken promises – all hallmarks of Blue's rule-based moral code. He describes his work as "a



form of truth-telling," focused on holding politicians accountable. At the same time, he conveys even more Blueness through his institutional loyalty. He shows respect for traditional structures – Parliament, the press – and critiques those who undermine rather than build on them. Then comes his absolutist discomfort with divisive rhetoric. He laments political "toxic inanity" and "sound and fury signifying nothing". There's a clear right or wrong way of looking at the world in Crace's eyes.

Albeit slightly tempered by one or two Orange traits. Firstly, the ability to perform under pressure: He thrives on tight deadlines and fast turnarounds – a typical Orange sign of capability and output. Then there's the clever storytelling, where his skill with metaphor and craft speaks to Orange's admiration for mastery and creativity.

Overall, then, he's both an absolutist 'truth'-teller, grounded in system-wide accountability, and a conscience-for-hire, unwilling to let either ideology go unchecked... until he comes up with a particularly funny line.

John Crace's 'playful' Blue-with-a-tinge-of-Orange spoof of Zen and the Art of Motorcycle Maintenance is a perfect example of a Blue-level thinker (order, tradition, applied norms) struggling to relate to Pirsig's Yellow-level narrator, who pursues integrative synthesis and transcends conventional moral/epistemic boundaries.

Crace caricatures the narrator as self-important and preachy – full of pompous "Chautauquas" and grand philosophical pronouncements. This echoes the Blue value system's discomfort with self-transcendence and its preference for "just doing it right" rather than plunging into fatuous existential inquiry

Whenever Pirsig's Narrator claims absolute truths ("Quality is self-evident, yet undefinable"), Crace positions him as pretentious and irrational. This reflects Blue's reliance on authority concepts that are socially verifiable, not introspective or systemic.

Crace's versions of John and Sylvia lean on conventional solutions – seek professional help, keep it simple, don't overthink. These are classic expressions of Blue's trust in hierarchy and established expertise over Yellow's search for personal synthesis. Crace clearly has his sympathies with 'fellow Blues'.

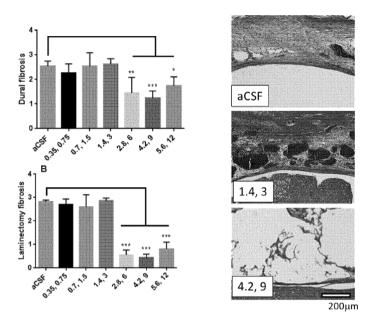
And that's why I can now see it is funny. Crace's Blue worldview inherently blocks him from grasping Pirsig's integrative, systems-level yellow thinking. It underlines how Yellow makes Blue uncomfortable by challenging social norms, destabilising comfort, and sidestepping conventional authority. Crace isn't dismissing inquiry, he simply treats it as a detour, not a destination. From Blue's lens, Pirsig's Narrator disrupts rather than solves. And, as we know from Innovation World, that's never going to go well. Even, in the moment, you realise that if you didn't laugh, you'd cry.

Crace's satire isn't a dig at depth, just a reflection of Blue's natural boundary. What the spoof highlights is the need for transcending value system mis-framing. And to appreciate Yellow's quest for synthesis without dismissing Blue's need for order and accountability.

The humour 'works', my pompous side says, because displacement of belief systems often leads to misunderstanding, not truth. And yet, in recognising this blind spot, we can, perhaps, just maybe, begin to see integrative thinking for the leap it truly is. I continue to live, sixteen years later, in (vain) hope.



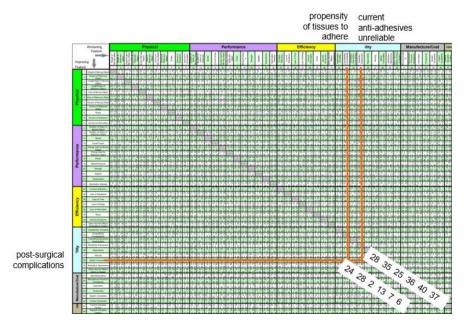
Patent of the Month – Anti-Adhesive Hydrogel



Over to Canada for our Patent of the Month this month and a pair of inventors at the University of Toronto, who were awarded patent number US12,343,916 on July 1. In a gloriously brief background description, the problem the patent seeks to solve is described as follows:

Following surgery, tissues can adhere to themselves and/or other tissues. This can cause post-surgical complications such as chronic pain. Anti-adhesive barriers can be applied to limit tissue adhesion; however, current barriers are difficult to deliver and/or do not sufficiently reduce or limit tissue adhesion. Alternative delivery strategies and compositions are needed to improve efficacy of these barriers.

The best way to map this conflict onto the Contradiction Matrix is probably as a Safety/Vulnerability versus Compatibility/Connectability problem. Here's what we get when we look up that box in the Matrix:





On several levels, the solution is a really simple nested (Principle 7), composite (Principle 40), biphasic (Principle 37), different material (Principle 35) intermediary (Principle 24). Here, more specifically, is the main inventive step of the patent as described in the first Claim:

A method of reducing or limiting tissue adhesion comprising contacting the tissue with an effective amount of a hydrogel composition comprising: 2% to 6% by weight hyaluronan, and 3% to 18% by weight methylcellulose, wherein the combined total amount of hyaluronan and methylcellulose in the hydrogel is between 8 and 24% by weight; and wherein the ratio of hyaluronan:methylcellulose is between 1:1 and 1:5 w/w.

This 'simplicity' might help explain why it took over five years for the Examiner to grant the original application. On the other hand, having been a big fan of aero- and hydrogels for what feels like several decades now, it's nice for a change to see an actual application. Perhaps intriguingly one that is effectively about creating the opposite of a function: most solutions want adhesion, here what's required is anti-adhesion.



Sean McFate





Why the West isn't winning.
And what we must do about it.

'Brilliant' Evening Standard

'Fascinating and disturbing' Economist

Here's another one that nearly slipped through the new. 'Goliath: Why the West Doesn't Win Wars and What We Need to Do About It' was published in 2019 by former US paratrooper turned private military contractor in Africa (aka 'mercenary'), Sean McFate. Over the course of 300 pages it delivers a bracing, iconoclastic assessment of modern conflict built on McFate's unique perspectives into the real mechanics of warfare in the 21st century. Now a professor of strategy at the National Defense University and Georgetown University, McFate argues that the West has failed to adapt to the era of what he calls "Durable Disorder," where war is no longer waged by nation-states with tanks and treaties, but by mercenaries, misinformation, and market incentives. In a lot of ways, it is a damning indictment of the current US military.

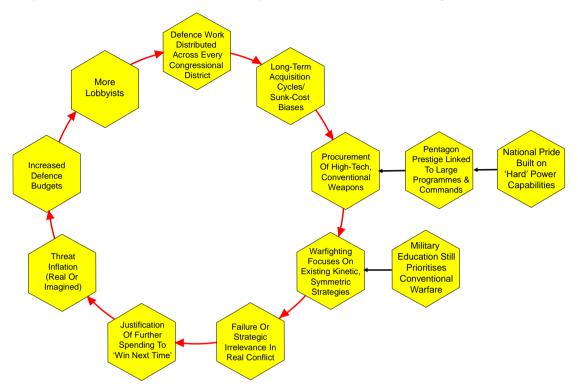
At the heart of the book is McFate's "10 New Rules of War", a stark manifesto that exposes how outdated the West's understanding of conflict has become. These rules are more than just a checklist; together, they form a closed loop, a strategic ecosystem that explains not only how modern wars are fought, but why traditional powers like the US continue to lose them. Although presented as a numerical list, taking a TRIZ Perception-Mapping perspective, it becomes clear that McFate's rules feed into one another: narrative supremacy undermines kinetic dominance, mercenaries bypass conventional force structures, and invisibility trumps firepower. Examined through this lens, Goliath doesn't just offer a theory of new war, it offers a contradiction-rich map of a paradigm in full collapse, and a warning to those still fighting the wrong kind of battle.

Ultimately, perhaps the book serves as a plea to the (US) Military to spend less time focusing on tactics and a lot more focusing on strategy. That said, reading through the utterly compelling story, I can't help feeling that the 'Military Industrial Complex' behind the failure of the US military to 'win' anything in the last eighty years, has done a genius job of building an intricate strategic cycle that looks almost impossible for the country to escape. Impossible because – here's the real genius – the Complex has seemingly pulled off a trick whereby the more the country fails to win wars, the more money the Complex makes.



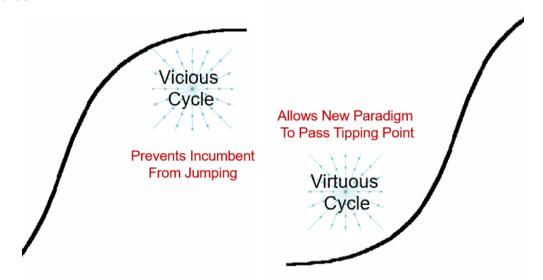
McFate alludes to this cycle, but doesn't formally present it – perhaps because he chose to focus on getting the New Rules list 'right' rather than trying to work out how different Rules relate to one another.

Here's my attempt to construct the Military Industrial Complex designed Gordian Knot:



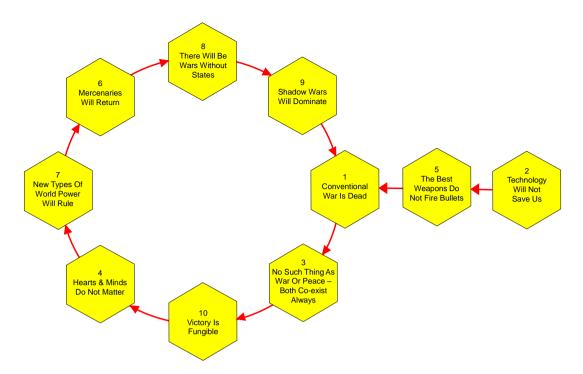
At its core, the contradiction here is something like: Victory in the 21st century requires a paradigm of strategic invisibility. But the US war machine is built for visibility. I don't envy the politician – Donald or anyone else – tasked with transcending that one. Too many (rich) people have got way too much to lose to go down without a fight.

Alas, until this vicious cycle is broken, the US/Western militaries don't even get to start getting strategic about the New paradigm described in Goliath's Ten Rules. Breaking the Military-Industrial-Complex cycle enables escape from the current war paradigm (s-curve). The next job is to re-design the system to exploit the ('virtuous') cycle formed from the New Rules:



And here's what that New cycle looks like after connecting all ten of McFate's Rules:





On the plus side (unless you're part of the Military Industrial Complex), playing this new (Sun Tzu inspired) game of rule-breaking cunning is massively cheaper than the (Clausewitzian conventional) war game. On the downside, it doesn't sound like the World becomes a more civilised place to live. At least in the short term. One contradiction at a time, I guess.

"All things are ready, if our minds be so," declared Shakespeare's Henry V prior to the English victory at the Battle Of Agincourt. "An agile, strategic mind is more important than smart bombs, gee-whiz technology, or numerical superiority," is what McFate says towards the end of Goliath. Which sounds like a plea for more Green World thinking. Quite likely preceded by a lot more Green World education. I think I know someone who can help with that.



Wow In Music - Savannah





If you want what looks like an iconic example of an artist tapping into the zeitgeist, you'd do well to go attend a Jensen McRae concert. Especially now she's just released her second album, "I Don't Know How But They Found Me!" I went to see her play a succinct, no encore, hour-long set in a packed room in Bristol last month. I was the oldest in the room by what felt like three decades. The majority of the audience were, by my reckoning, GenZ girls. The first thing to notice was they already knew all the words, even though the album was newly released. The second thing to notice was they all seemed to be watching McRae perform through their phones, many for the whole gig. To put a fine point on it, McRae has struck a chord with a specific slice of the Gen Z consciousness. Especially, given the lyrics that were being sung back to her the loudest, young women navigating identity, trauma, intimacy, and moral complexity in a post-#MeToo, climate-anxious, late-capitalist world. Her song "Savannah", the third single from the album, is, I think, a standout example of why her work resonates.

Lyrically, she's a storyteller in the Ray Carver tradition. 95% of the story being in the connections the listener makes to the words, rather than the words themselves.

There is an intersection in your college town With your name on it, with your name on it You always said you couldn't wait to tear it down I should been honest and called you out on it

[Chorus]

'Cause I see signs from God and I tread lightly on the wire You see him in the water and you try to start a fire Burned bridges east of Atlanta, well, no wonder you lost manna I'm in love with someone new and I'm going to Savannah, oh

There is a bar you're not allowed in on Bellevue A bloody-faced comet, you were a time bomb and You swore you'd raise our kids to end up just like you Well, you're a false prophet and that's a goddamn promise

[Chorus]

[Bridge]
I hear it's haunted



That the greatest writers ever lived just where you used to walk At twenty-one
You used to call those women bitches, didn't you?
It rolled off sweet like honeydew
But you will never know how to talk to ghosts

[Chorus]

I see signs from God, I tread lightly on the wire You see him in the water and you try to start a fire Burned bridges east of Atlanta, you lost me, so you lost manna I'm in love with someone new and I'm going to Savannah Going to Savannah Going to Savannah Going to Savannah, oh

The beauty of Jensen McRae's songwriting, especially in "Savannah", is that it allows for both literal and metaphorical readings – and that (Principle 29) ambiguity is part of its emotional power.

During her introduction to the song on the night, she talked about the coincidence of two 'boys' asking her to move with them to Savannah, implying the lyric is about the emotional recursion of romantic decision-making: how certain places, people, or choices can become charged through coincidence or fate. Taken in this light, Savannah becomes a metaphorical crossroads — the city standing in for a kind of emotional déjà vu, or even an archetype of "what might have been." The coincidence likely prompted self-reflection: Why do I keep getting asked the same question? What about me draws the same desire for domestication, relocation, commitment — or escape? Is the new boy going to let me down the way the old boyfriend did?

The wow moment – both at the gig and on the album – comes during the second half of the second verse. You hear it in the way her voice begins to crack as she delivers the heartbreaking lines about the first boy, now an ex-partner, and his betrayal. Let's call it a Principle 38 kind of crack. The kind of crack that puts a lump in your throat. Keeps putting a lump in your throat every time the song comes around again. Now you've been playing the album on repeat for the best part of a week.



Jensen McRae onstage at Bristol Exchange, 22 June 2025.



Investments - Reconfigurable Metamaterials



Engineers have long known that materials can't be simultaneously strong, lightweight, and reconfigurable. The real world tends to offer two out of three. Until, that is, you dive a few kilometres below the ocean's surface and bump into a sponge.

Yes, a sponge.

Specifically, the skeletons of deep-sea sponges, which manage to pull off the impossible: extreme strength and extreme lightness, while adapting to changing punishing pressures. Evolution seems to have solved a contradiction that engineers still struggle with.

Fast-forward to 2025. Researchers at the University of Illinois are now playing catch-up, This time using nanomaterials that can self-assemble and transmit phonons (quantised energy waves) with surgical precision. In other words, we've started to learn how to build materials that don't just exist, but do things: redirect energy, absorb shock, and maybe even think a little.

Using liquid-phase electron microscopy (a big-science way of saying "watching atoms dance in water"), scientists have managed to observe phonons moving through self-assembled nanoparticle structures for the first time. These structures aren't just materials, they're metamaterials that can adapt, reconfigure, and behave like miniaturised mechanical machines.

Traditional materials force choices between rigidity and adaptability. Phonon-directed metamaterials now mean we can have both.

Even better, these self-assembling systems can be programmed. Not through screws or glue, but through the geometry and physics of the building blocks themselves. You design the behaviour you want, then let the particles figure out the rest. (Nature does it all the time.)



"Using the liquid-phase electron microscopy technique developed in our lab at Illinois, the new study marks the first time we've been able to observe phonon dynamics in nanoparticle self-assemblies, acting as a new type of mechanical metamaterials," said Qian Chen, a professor of material science and engineering at the University of Illinois Urbana-Champaign.

The new capabilities opened up by the Illinois research include acoustic and optical waveguides (think: better computing and stealth tech), materials that dampen seismic or vibrational energy (think: earthquake-resilient cities) or self-healing or reconfigurable surfaces (think: robots that fix their own joints).

Quantum mechanics (phonons) meets classical design constraints (rigidity vs. flexibility), creating a whole new design space.

Hear more:

https://www.youtube.com/watch?v=82gcfl0Voig

Read more:

Chang Qian, Ethan Stanifer, Zhan Ma, Lehan Yao, Binbin Luo, Chang Liu, Jiahui Li, Puquan Pan, Wenxiao Pan, Xiaoming Mao, Qian Chen. Nanoscale phonon dynamics in self-assembled nanoparticle lattices. Nature Materials, 2025; DOI: 10.1038/s41563-025-02253-3



Generational Cycles - Robert Pirsig's Book Sales

Robert Pirisg, as mentioned earlier, the subject of one of our workshops earlier this month, is the author of two classic books. Zen and the Art of Motorcycle Maintenance (ZMM) has sold over 5 million copies since its 1974 release, hitting around 50,000 in its first three months, It remains one of the bestselling philosophy-infused books ever. In contrast, ZMMs follow-up, Lila: An Inquiry into Morals (1991) earned literary acclaim – it was a Pulitzer finalist – but is widely considered far less commercially impactful, failing to match Zen's cultural or sales footprint. There are no official figures detailing Lila's sales in the public domain, but by all accounts they are believed to be a tiny fraction of those of ZMM. This article is an attempt to try and understand the difference.

Born in 1928, Robert Pirsig belongs to the Silent Generation (b. ~1925–1943). This generation came of age during the conformity (e,g, prohibition, 'children should be seen and not heard') and Great Depression 'Crisis' period between the two World Wars in America. Silents are characterised in the Struss/Howe generations model as Artists. They are typically characterised by:

Cautiousness and deference to authority.

Deep inner lives, often privately non-conformist

Strong literary, philosophical, and analytical tendencies

Struggles with voice and visibility in public discourse (sandwiched between the dominant GI and Boomer generations)

Pirsig's life and work align closely with these traits: his introspective, deeply analytical writing and philosophical dissatisfaction with mainstream systems reflect the Silents' characteristic inwardness and quiet rebellion.

He is, in other words, an archetypal example of the Artist mindset.

Zen and the Awakening Mood

Pirsig's classic book, Zen and the Art of Motorcycle Maintenance (ZMM), was published in 1974, during the Consciousness Revolution — a cultural "Awakening" period (early 1960s to early 1980s), as defined by Strauss & Howe.

Archetypal traits of Awakening Periods include:

- Emphasis on inner authenticity and spiritual renewal
- Rejection of institutional authority in favour of personal truth
- Rise of counterculture, environmentalism, and alternative lifestyles

It is a period when Prophet generations (Baby Boomers) are coming of age and Artists are in their 'indecisive' period of mid-life reflection.

ZMM's success is tightly linked to this generational mood: It spoke to Boomers' search for meaning and mistrust of rigid systems; Its fusion of classical rationality and romantic intuition matched the time's hunger for holistic paradigms (a very Awakening-era trait).

It offered a slow, reflective challenge to hyper-industrialised culture, something Boomers were beginning to push against and Silents were quietly documenting.



Pirsig's Silent sensibility made him the ideal narrator: not a revolutionary firebrand, but a meticulous seeker, guiding the reader through difficult terrain with subtlety and self-doubt.

Lila and the Unravelling Shift

Lila was published in 1991, during the early stages of Strauss & Howe's Unravelling period (mid-1980s to 2001) This is a period archetypally marked by:

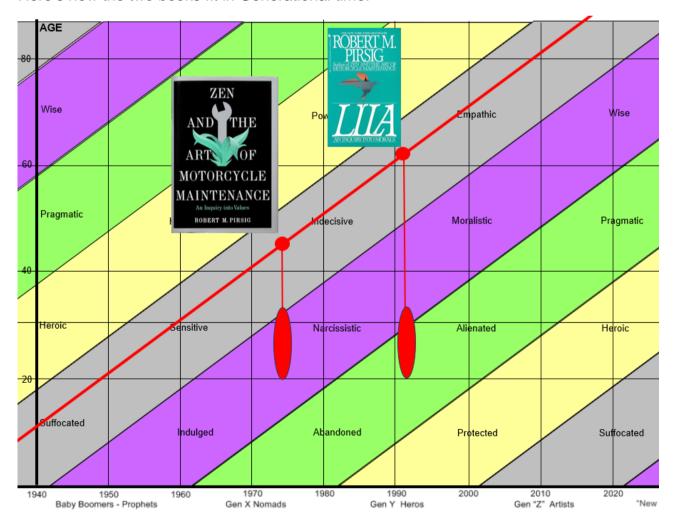
- Individualism, cynicism, and cultural fragmentation
- Decline in public trust and institutional coherence
- Rise of market logic and personal branding
- Generational fatigue with introspection and ambiguity

In this cultural moment, Lila's long, discursive philosophical narrative likely felt too dense and too esoteric for a public shifting toward shorter attention spans and sharper identity politics. Particularly for a cohort of 'alienated' Nomad, GenXers.

The book's more explicit metaphysical system (the Metaphysics of Quality) was less openended and poetic than ZMM, and thus less resonant with readers seeking immediacy and clarity.

Gen X readers, now the emerging adult cohort, often favoured irony, deconstruction, and scepticism and hence likely to clash with Lila's earnest moral theorising.

Here's how the two books fit in Generational time:





Right Book, Right Time:

ZMM succeeded in large part because it arrived during a generational Awakening where its core themes matched the zeitgeist. Pirsig translated Silent-generation anxieties into Boomer-era transformation.

Lila – published during Pirsig's latter 'empathic' years – reads more like a capstone, the culmination of a solitary life of thinking. It's brilliant, but it missed the cultural mood of the 1990s, which favoured immediacy, identity assertion, and postmodern fragmentation. Lila as a Silent-generation epilogue.

Pirsig's philosophical legacy is reflective and systemic — characteristics that feel more aligned with today's newly emerging Artist generation, GenZ. A generation, thanks to their arrival during the current Crisis phase, that are 'suffocated', highly anxious, interested in mental health and meta-awareness. As they enter their 'Sensitive' years, who knows, Lila's themes of moral coherence, interconnectedness, and dynamic values may resonate more than they did in the 1990s. Lila may yet, Generational Cycles-wise, find a second life.

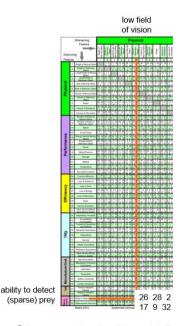


Biology - Barreleye Fish



Only seen alive eight times in 30 years, it turns out, the barreleye fish—a deep-ocean oddity with a transparent, jet-fighter-like canopy and glow-filtering, rotating eyeballs — solves a contradiction nature rarely bothers with: how to look up and eat forward. Living 800m down in a world where everything glows to disappear, these fish evolved bioluminescence-filtering eyes that can track drifting prey, rotate like turrets, and stay protected behind a clear dome as they swipe snacks from venomous siphonophores. For decades, scientists thought its eyes were fixed; one ROV later and we learn the eyes move, the head's a dome, and nature's solution is weirdly elegant.

Specifically, the contradiction to be solved involves the simultaneous need to be able to detect prey but, given the 'traditional' drag-reducing position of eyes, it can't create a large field of view. Here's how we can best that contradiction onto the Contradiction Matrix:

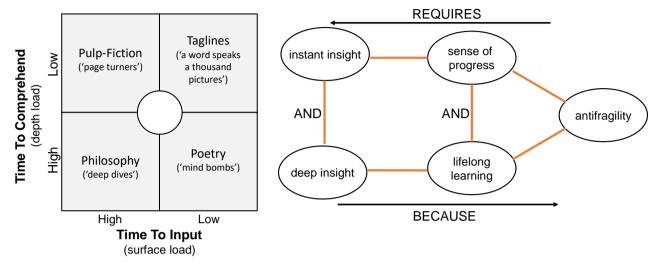


And there it is, Principle 32, Colour Change, including 32B 'change the transparency of an object or its surroundings'. Easy when you know how – ask fighter-jet designers.



Short Thort

Ideal Final Result: I want deep insight ('wisdom') without having to spend time inputting or comprehending?



v's

"I'm not a melodramatic type. But I know my own songs.
I wrote those songs, and I know what I was thinking when I wrote them.
And I know when I go back to them, I find new meanings.
I see things I didn't see before.
Some of the songs are like that — I didn't understand them myself at the time."
Bob Dylan (mind-bomber)

News

Copenhagen

Darrell has been invited to do his 'innovation weekend' session at the DTU EMBA programme again. It will be happening at the end of the third week of September. If anyone wants him to come and do something in or around Copenhagen before or after the DTU visit, please get in touch with him directly to see what might be possible.

TRIZ Mastery Hub

After this month's 'Solving Ethical Contradictions' session on the rapidly-growing TRIZ Master Hub, Darrell will be back again on 6 October to do a session on TRIZ and Software... the half-life of a typical 'software book' seems to be about six months, so its gratifying to know that 2007's 'Systematic (Software) Innovation' is currently selling more copies than it did in 2007.

Meanwhile, this month's session recording can be found at: https://triz-mastery-hub.circle.so/c/special-events-recordings/darrell-mann-solving-ethical-contradictions

DangerMouth

By the time you read this, the last two episodes of Season #2 of our podcast will have been recorded and released – both featuring top-notch guests that are making a real difference in the world. We'll be back again with more stellar guests when Season #3 begins in September.



TRIZ University

A little known fact is that we own the 'TRIZ University' name and URL. Little known very likely because we haven't really done anything with it. Imagine our surprise then, when we realised someone was illegally offering courses through the site. Worse, was the realisation that the course was illegally using videos of Darrell. Worst was that these videos were a tiny part of an actual online workshop series, and therefore couldn't have made any sense on their own. Over 150 people, sadly, had subscribed to these illegal courses before we became aware of the theft. We have now managed to take the TRIZ University site down. That, alas, hasn't prevented the thief from now offering the courses on a different site. A cease-and-desist order has been sent out so hopefully the annoyance will disappear permanently in the coming weeks. Meanwhile, if anyone accidentally discovers the 'offering' please be aware that it is not in any way endorsed by us and, without the missing 90% of the course material, is largely meaningless. The unfortunate incident does at least remind us that we need to make our 30hours of corporate client focused workshops available to individuals. More news on that front after the summer holidays...

New Projects

This month's new projects from around the Network:

FMCG - Innovation Strategy Workshops

Healthcare - Innovation Centre Design

Agriculture - PanSensic Dashboards

Process - Patent Bulletproofing Project

Retail - Patent Design-Around Project

IT – Innovation Ethics Workshops

NGO – Digital Modelling Project

NGO – Ecosystem Cooperation Project

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