Beyond the Selfish Gene: Layered Intelligence, Cooperation, and the Logic of Reality

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Podcast: https://clarafutura-andorra.world/adjacent-possible-podcast (Explore how our work challenges the selfish gene narrative, integrating multilevel selection and emergent cooperation to reshape our understanding of evolution, culture, and leadership)

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Abstract

This essay challenges the "selfish gene" as a master-story for evolution, human nature, and leadership. It argues that gene-centric imagery, while once a useful heuristic, has hardened into a cultural meme that systematically underplays cooperation, top-down causation, and consciousness. Drawing on the Extended Evolutionary Synthesis, multilevel selection, niche construction, gene–culture coevolution, and Michael Levin's work on bioelectric morphogenesis, the essay shows that contemporary biology already treats evolution as a multi-level, feedback-rich process rather than a one-way flow from genes upward. Layered Intelligence Theory (LIT), combined with Brenner's Logic in Reality (LIR), is then proposed as a framework for integrating biological, psychological, and organisational layers of intelligence. Evidence from psychosocial risk research in deep mining, leadership and safety culture in high-hazard industries, addiction neuroscience, and an anonymised case study of iterative executive coaching in construction leadership illustrates how cooperative, emotionally intelligent structures outperform purely competitive, task-centric ones in real organisations. The essay concludes that clinging to the selfish gene meme now obscures more than it explains, and that a layered, cooperation-centred, consciousness-inclusive model better reflects current science and offers more effective guidance for leadership, governance, and collective survival.

Authors Note

Introduction

The "selfish gene" began as a clever modelling tool; it has since hardened into a cultural story about what life is. In that story, competition is fundamental, cooperation is derivative, and consciousness and culture are decorative by-products.

This essay argues that the "selfish gene" is no longer an adequate master-story for evolution, human nature, or leadership. It shows how contemporary biology—via the Extended Evolutionary Synthesis, multilevel selection, niche construction, gene–culture coevolution, and Michael Levin's work on bioelectric morphogenesis—already treats cooperation, top-down causation, and emergent intelligence as central rather than marginal. It then extends this layered, cooperation-centred view into the domains of consciousness, culture, and organisational life, using Layered Intelligence Theory (LIT) and Logic in Reality (LIR) to

integrate evidence from evolutionary biology, process philosophy, psychosocial risk research in mining, and live executive coaching case studies in construction leadership.

What this contributes to the discourse is threefold. First, it reframes the selfish gene as a limiting cultural meme rather than a definitive map. Second, it offers a coherent logical framework (LIR) for thinking about multi-level, bidirectional causation. Third, it demonstrates—using real-world organisational data—that treating intelligence as layered and participatory is not just philosophically attractive but practically necessary for health, safety, and adaptive leadership in complex organisations.

1. Why This Debate Still Matters

For nearly fifty years, the "selfish gene" has shaped how many people think about evolution, human nature, and even ethics. The basic idea — that genes are the fundamental units of selection and organisms are their temporary vehicles — has been immensely influential (**Dawkins, 1976).**

My concern is not that this view is simply "wrong," but that it has become a toxic meme: a powerful but narrowing slogan that no longer reflects what we know about evolution, cooperation, and consciousness. It constrains what many people can even imagine about how life works.

In this essay, I argue three things:

The selfish gene framework has escaped its technical context and now functions as a misleading cultural meme about human nature.

Contemporary evolutionary biology — via the **Extended Evolutionary Synthesis (EES),** multilevel selection, niche construction, gene–culture coevolution, and bioelectric morphogenesis — has already moved beyond that paradigm (**Laland et al., 2015; Nowak, 2006; Levin, 2023**).

Consciousness, culture, and cooperation are not decorative extras on a genetic base; they are active participants in evolutionary dynamics, and they fit naturally within a Layered Intelligence and Logic in Reality (LIT/LIR) framework (**Dobson, 2025; Brenner, 2008**).

I close by inviting anyone who thinks the selfish gene remains the best master-framework to falsify these claims and to show why LIT/LIR is not needed.

2. Part I — The Selfish Gene as a Meme, not a Map

This is no longer just a model; it is a meme in the strong sense: a compact, emotionally charged idea that spreads because it is rhetorically powerful, not because it is the most accurate picture available. The meme version of the thesis is routinely invoked to support:

Competitive individualism ("we're wired to be selfish").

Cynicism about cooperation ("it's all genes trying to win").

Reductionist views of mind and culture ("just vehicles for replicators").

The meme persists even as the science has moved on. The Extended Evolutionary Synthesis explicitly emphasises multilevel selection, epigenetic inheritance, developmental bias, and niche construction (Laland et al., 2015; Pigliucci & Müller, 2010). These are not minor details; they change what counts as a good explanation in evolution.

Dawkins (2006) himself later conceded that "selfish" was a misleading label, suggesting he might have preferred The Immortal Gene. That concession is telling. If the originator of a meme recognises its distorting power, those who continue to treat it as an adequate description of life have some explaining to do.

My first claim is therefore modest but important: the public "selfish gene" meme no longer matches the best current scientific map. It remains culturally powerful largely because it resonates with pre-existing assumptions about competition and egoism, not because it captures the full richness of evolutionary dynamics

3. Part II — What the Selfish Gene Cannot See

The classical gene-centric picture rests on several background assumptions that have been progressively undermined.

3.1. Heredity Is More Than DNA Sequence

We now know that heritable variation is not limited to changes in DNA sequence. Epigenetic mechanisms — heritable patterns of gene expression influenced by parental environment, nutrition, and stress — play a non-trivial role in evolution (Jablonka & Lamb, 2005). The "germline" is not as insulated from experience as the Modern Synthesis assumed.

The EES explicitly includes transgenerational epigenetic inheritance, developmental plasticity, and niche construction as core components (Laland et al., 2015; Pigliucci & Müller, 2010). Evolutionary change emerges from a system involving genes, developmental processes, behaviours, and environmental modifications — not from a single privileged level of replicator.

3.2. Bioelectric Morphogenesis: Top-Down Causation Made Visible

Systems biology and developmental systems theory show that causation in living systems is not strictly bottom-up. Tissue-level, organ-level, and organism-level structures constrain and direct lower-level processes (Noble, 2016). What genes "do" depend on regulatory networks, cellular contexts, and environmental inputs.

Michael Levin's work at Tufts University on bioelectric morphogenesis makes this strikingly concrete. Levin's lab has shown that networks of cells use bioelectric gradients to store and process pattern-level information guiding regeneration and development (Levin, 2023; Levin, 2014). By modulating these bioelectric fields, Levin's team can reliably change large-scale

anatomical outcomes — inducing, for example, two-headed planaria or altering craniofacial patterning — without editing DNA.

Crucially, Levin has demonstrated that this is not a one-off manipulation. A single brief bioelectric intervention is enough to make regenerating planaria continue to produce two-headed worms in subsequent rounds of regeneration, without any further treatment. The bioelectric pattern, not the genome, carries the morphogenetic "memory." Levin's lab has even shown that manipulating bioelectric signals can cause planaria to regenerate head shapes resembling those of ancestral species that existed millions of years ago — forms encoded not in the worm's DNA but in the bioelectric network's pattern-memory.

This work provides photographic, experimentally reproducible evidence of mechanistic cooperation among cells during embryonic morphogenesis. The cooperation is driven by a field dynamic that has memory and therefore a kind of learning intelligence within the field itself. Levin can alter morphogenesis by altering the bioelectric field. As Levin and colleagues

frame it, bioelectric networks constitute "cognitive layer" above genetics: cells form electrical networks that store target morphologies, detect deviations, and coordinate collective action to restore or achieve anatomical goals (**Levin, 2023; Levin, 2019**).

This discovery may prove as meaningful as the discovery that mitochondria originated from previously competing bacteria — that is, from endosymbiosis. In both cases, cooperation and integration at a higher-level produce outcome that gene-level competition alone cannot explain. The selfish gene metaphor has no natural place for this kind of field-mediated, top-down organisation.

As Richard Ott has noted in discussion, Levin's findings lend empirical substance to the decades-long assertions of Rupert Sheldrake (1981) about morphogenetic fields. Sheldrake proposed that morphogenetic fields play a causal role in the development and maintenance of form at all levels of complexity, and that nature is governed by habits rather than fixed laws (**Sheldrake, 1981**). Levin's work does not vindicate every claim Sheldrake made — particularly the more speculative aspects of "morphic resonance" across space and time — but it makes the core intuition empirically serious: that form-generating information is not reducible to DNA sequence, and that field-level organisation with memory-like properties is a real and measurable feature of living systems.

3.3. Major Transitions and Neoteny: Irreversible Cooperation

The "major transitions" in evolution — endosymbiosis and the origin of eukaryotic cells, multicellularity, complex sociality — are not merely stories of clever competition; they are stories of irreversible integration (**Szathmáry & Maynard Smith, 1995).**

Formerly independent cells became organelles (e.g., mitochondria) and lost autonomy.

Most cells in multicellular organisms permanently forgo reproduction.

Social insects form "superorganisms" where individual reproduction is tightly regulated.

Multilevel selection theory formalises this by showing how selection operates on groups and higher-level units, not only on individuals or genes (**Nowak, 2006; Wilson & Wilson, 2007**). Cooperation becomes not a by-product but a driver of new levels of individuality and complexity.

There is a powerful general principle at work: systems of dependent agents tend toward altruism. The evolution of human neoteny provides a compelling illustration. As the hominin brain expanded, fetal development slowed — a process known as neoteny — to allow the large skull to pass through the birth canal (**Gould, 1977; Bogin, 1997**). The cranial sutures remain unfused at birth, permitting further brain growth, but this also means that human infants are born in an extraordinarily helpless state compared to other mammals.

This increasing helplessness had cascading cooperative consequences. Mothers required longer and more intensive periods of care for each infant. That intensified dependency, in turn, selected for stronger pair bonds: males who invested more in provisioning survived more offspring than those who did not. Nuclear families that strengthened the cooperative bond between partners —the pull toward greater mutual dependence — outcompeted those that failed to do so (**Hrdy, 2009**).

The neoteny case illustrates a broader evolutionary logic: increased dependency does not merely require cooperation; it actively selects for deeper, more structured forms of it. This is not selfishness in disguise. The family unit becomes more altruistic because its members are more dependent on each other. The same logic scales up: groups whose members are more systems-dependent develop more cooperative strategies, because individual survival increasingly depends on group-level coordination rather than individual competitive advantage (**Tomasello, 2014**).

The selfish gene framework can, of course, redescribe pair bonding and parental investment in terms of inclusive fitness. But the redescription misses what is most interesting: that neoteny created an irreversible ratchet toward deeper cooperation. Once infants are born helpless and brains require years of post-natal development, there is no going back. The cooperative structure is locked in — not as a temporary alliance of selfish interests, but as a new level of social organisation on which all subsequent human evolution depends.

3.4. Computational Irreducibility and the Adjacent Possible

Ott has further drawn attention to an important link between Levin's work and the concept of computational irreducibility, a notion most systematically developed by Stephen Wolfram in his work on cellular automata. In a computationally irreducible system, emergent outcomes cannot be predicted from initial conditions without running the process; there is no shortcut that allows you to "look ahead" without simulating each step. This is a direct challenge to the kind of "in principle" reductionism that says: if we knew all the genes, we could predict all the

outcomes. We cannot — and that is not merely a gap in current knowledge; it is a structural feature of how complex systems work. Pattern-formation models in developmental biology (such as Hans Meinhardt's reaction–diffusion work) illustrate how relatively simple local rules can generate rich emergent structure, but Wolfram's formalisation shows that, beyond a certain threshold, the only way to know what the system will do is to let it do it.

Stuart Kauffman's concept of the adjacent possible captures this at the evolutionary scale: each innovation — each new form of cooperation, each new level of integration — opens a space of possibilities that did not previously exist and could not have been predicted in advance (Kauffman, 2000). Evolution does not search a fixed landscape; it creates the landscape as it proceeds, and cooperation is one of the primary mechanisms by which new adjacent possibles are opened.

Ott notes that the same principle — the reconciliation of opposites generating emergent complexity — appears in the phase transitions observed in large language models of AI, where qualitative jumps in pattern recognition emerge unpredictably from the interaction of simple binary states. This convergence across biological, computational, and physical domains suggests something structurally deep: that irreducible emergence through the interaction of opposing dynamics is a fundamental feature of reality, not a peculiarity of any single domain. This is also consistent with Alfred North Whitehead's process philosophy, which describes evolution as driven by a "creative advance into novelty.".

3.5. A Note on Reductionism

I want to be precise about what I am and am not rejecting. Reductionism as a methodological tool — analysing complex systems by studying their parts — is indispensable. Levin's own experiments are reductionist in method: they isolate bioelectric variables and measure outcomes. No serious person disputes the value of this.

What I reject is reductionism as a total ontology: the claim that the gene level is the only "real" level of causation and that everything else is epiphenomenal decoration. This is not an extreme position; it is the mainstream view in systems biology, developmental biology, and the EES (Noble, 2016; Laland et al., 2015). To call this view "extremist" is to mischaracterise the current state of the science.

4. Part III — Consciousness, Culture, and Self-Transcendence

If evolution is multi-level and bidirectional, then consciousness and culture cannot be treated as mere epiphenomenal decorations.

4.1. Consciousness as a Causal Factor

Conscious organisms do not simply react; they represent, learn, anticipate, and choose. Their behaviour, shaped by meanings and experiences, alters fitness landscapes. For niche-constructing species like ours, collective practices — agriculture, urbanisation, technology —

reshape the environment and therefore the conditions of selection (**Odling-Smee et al., 2003**).

Levin's work again offers a bridge: he explicitly frames developmental systems as exhibiting goal-directed behaviour across scales, with bioelectric networks defining "cognitive light cones" that specify what patterns can be maintained or restored (**Levin, 2023; Levin, 2019**). Cellular collectives exhibit proto-cognitive properties: they store "memories" of target morphology and act to reduce error when perturbed. While this is not consciousness in the human sense, it strongly suggests that information-bearing, goal-directed dynamics are basic to living systems. The sharp divide between "dumb genes" and "mysterious consciousness" breaks down. Cognition is not something that appears suddenly with brains; it is a continuum rooted in the regulatory logic of living matter itself.

Kauffman's adjacent possible reinforces this: in a computationally irreducible universe, consciousness may represent one of evolution's most powerful mechanisms for navigating unpredictable possibility space — not by calculating outcomes in advance, but by exploring, improvising, and integrating feedback in real time (**Kauffman, 2000**).

4.2. Dependency, Neoteny, and the Cooperative Family

The neoteny argument connects directly to consciousness and culture. The prolonged helplessness of human infants did not merely select for pair bonding; it created the conditions for extended learning. A brain that continues developing outside the womb for years is a brain shaped by social interaction, language, imitation, and culture from the very beginning (**Hrdy, 2009; Tomasello, 2014**).

In this sense, neoteny is not only a biological fact but an evolutionary bridge between cooperation and consciousness. The dependent infant requires a cooperative social world; that cooperative world, in turn, provides the environment in which the most complex forms of learning, meaning making, and self-awareness develop. Dependency and intelligence co-evolved: the more helpless the infant, the richer the social and cognitive world needed to raise it, and the richer that world, the more complex the intelligence it could produce.

This is general principle made concrete: systems of dependent agents tend toward altruism — and toward intelligence. The two are not separate evolutionary achievements; they are two faces of the same process.

4.3. Culture as Co-Evolutionary Driver

Gene–culture coevolution shows how cultural practices can drive genetic change and vice versa (**Richerson & Boyd, 2005**). Lactase persistence following dairy farming, disease resistance in urban populations, and norm-regulated mating patterns are well-documented examples. Culture is not a thin overlay on biology; it is a powerful co-driver of evolutionary trajectories.

In humans, culture mediates large-scale cooperation, regulates conflict, and encodes values and norms. It creates new niches and new selection pressures. The selfish gene meme, when taken as a master story, tends to trivialise this, treating culture as "gene propaganda." But contemporary work shows that culture has its own dynamics and feedback loops that cannot be reduced to gene frequencies alone (**Richerson & Boyd, 2005; Henrich, 2016**).

4.4. Self-Transcendence as Evolutionary Possibility

By self-transcendence, I do not mean floating off into a disembodied realm. I mean the capacity of a system to recognise its inherited patterns — genetic, developmental, cultural — and to step beyond them in ways that alter future possibilities. This can take many forms:

An individual recognising an inherited behavioural script and choosing differently.

A community revising its norms considering new knowledge or ethical insight.

A civilisation re-orienting its economic or technological practices when they prove destructive.

In a multi-level, feedback-rich evolutionary world, these are not miracles; they are expressions of what evolution itself has produced: systems capable of representing, evaluating, and re-shaping their own conditions. The selfish gene meme, taken literally, offers us little conceptual room for this. A layered, integrative view makes self-transcendence a natural (if fragile) achievement of complex living systems — precisely the kind of creative advance Whitehead described as the engine of cosmic evolution (**Whitehead, 1929/1978**).

Dunbar's social brain hypothesis provides independent confirmation of this layered architecture. Hunter-gatherer societies universally organise into nested layers — bands of 30–50, communities of 150, tribes of 1,500+ — each requiring progressively more sophisticated cooperative and cultural mechanisms to sustain cohesion (**Dunbar, 1993; 1998**). The 150 community threshold, beyond which formal institutions become necessary, marks precisely the point where biological cognitive capacity must be extended by cultural scaffolding: shared stories, rituals, norms, and institutions. In LIT terms, this is the boundary where the syntactic and semantic layers of intelligence must expand to sustain the resonant layer — the felt cooperative bond — at scales that exceed what any individual brain can manage alone.

5. LIT: Intelligence as Layered, Evolving Process

LIT starts from a simple observation: real-world intelligence is multi-layered. It includes cognitive (analytic), emotional, symbolic, strategic, and ethical dimensions, all interacting over time in recursive feedback loops (**Dobson, 2025**).

Structurally, this mirrors what we see in extended evolutionary theory and in Levin's work: systems organised into layers (genetic, biochemical, bioelectric, anatomical, behavioural, cultural), each layer both constraining and enabling the others (**Levin, 2023; Noble, 2016; Laland et al., 2015**). Intelligence, on this view, is not located at a single level; it is an emergent

property of interacting layers — just as morphogenetic form is not located in the genome alone but emerges from the interaction of genetic, bioelectric, and environmental layers.

The practical implications of this are not abstract. Annex C presents a worked example of LIT and LIR in a live construction-sector engagement, showing how treating intelligence as layered and contradictions as real, interacting dynamics can change leadership behaviour, culture, and strategic outcomes in ways that a single-level, reductionist model cannot.

5.1 Problem-Based Learning and the Limits of Technical Competence

Akerjordet and Severinsson's (2007) review of the empirical and epistemological literature on emotional intelligence in nursing found that, regardless of the theoretical framework used, researchers consistently agree that EI embraces emotional awareness in relation to self and others, professional efficiency, and emotional management. Their review revealed that emotional learning and maturation — personal growth in the domain of emotional intelligence — are central to professional competence, not supplementary to it. This has direct implications for how professionals are trained. Problem-based learning (PBL) in clinical nursing education has been shown to develop empathy, critical thinking, and self-directed learning precisely because it places students in situations where technical protocols alone are insufficient and relational, adaptive intelligence must be activated in real time. The convergence of this evidence with LIT is striking: PBL works because it forces learners to operate across all three layers simultaneously — applying rules (syntactic), constructing meaning from ambiguous clinical situations (semantic), and developing the felt capacity to be present with patients under stress (resonant). If technical competence were enough, traditional didactic training would produce better outcomes than PBL. It does not. The evidence consistently shows that learning environments which engage emotional and relational intelligence alongside technical skill produce professionals who are more adaptable, more empathic, and more resilient under pressure — precisely the qualities the selfish gene meme, taken as a management philosophy, tends to devalue.

6. What I Am — and Am Not — Claiming

It may help to state explicitly what this argument does not depend upon.

I am not claiming:

1. That genes do not exist or are unimportant.
2. That selection is an illusion.
3. That cooperation is always benign, or that conflict can be abolished.
4. That consciousness is magic or exempt from physical explanation.
5. That reductionist methods are useless.

I am claiming:

1. That the selfish gene metaphor is now an obstacle to understanding the full richness of evolutionary dynamics.
2. That contemporary biology already offers more adequate frameworks — epigenetics, systems biology, multilevel selection, niche construction, gene–culture coevolution, major transitions theory, bioelectric morphogenesis — that centre cooperation, integration, and feedback (**Laland et al., 2015; Noble, 2016; Nowak, 2006; Levin, 2023**).
3. That consciousness and culture have become causally real factors in evolution (**Richerson & Boyd, 2005; Odling-Smee et al., 2003**).
4. That, within this expanded picture, there is a legitimate space for talk of self-transcendence without smuggling in supernaturalism.
5. That LIT and LIR offer a coherent, practical framework that integrates these developments into a usable model for intelligence, leadership, and collaboration (**Dobson, 2025; Brenner, 2008**).

7. Invitation to Critique

I have tried to state the argument clearly enough to attack. There are at least three obvious lines of counterargument:

Defend the selfish gene as still central. Show that the gene-centric view can accommodate epigenetics, multilevel selection, bioelectric morphogenesis, computational irreducibility, and major transitions without significant revision. If so, what non-trivial predictions does the selfish gene language still provide that alternative framings cannot match?

Deny the causal significance of consciousness and culture. Maintain that consciousness is an epiphenomenon and that culture is ultimately reducible to genetic dynamics. If so, provide a clear account of how this reduction earns its keep in explaining observed phenomena — rather than merely re-asserting a prior commitment.

Accept the biology, reject LIT/LIR. Agree that cooperation, epigenetics, and gene–culture coevolution are real, but insist that LIT/LIR adds nothing necessary. If so, show that a single-level, reductionist view of intelligence does at least as well in accounting for real-world leadership, team dynamics, and organisational adaptation.

8. Open Forum

This essay is posted as an open forum. I cannot and will not control what others contribute to response.

I welcome serious engagement — supportive, sceptical, or hostile — with any part of what I have set out. If you believe the selfish gene still provides a more adequate framework than this layered, cooperative, consciousness-inclusive picture, show your working. If you think LIT

overstates the role of cooperation or consciousness in leadership and team development, identify where the evidence breaks down.

Acknowledgements

Glossary of Key Terms

Adjacent Possible. A concept developed by Stuart Kauffman (2000) describing the set of possibilities that become available at each step of an evolutionary or creative process. Each innovation opens new possibilities that did not previously exist and could not have been predicted in advance. Evolution creates the landscape as it proceeds, rather than searching a fixed one.

Bioelectric Morphogenesis. The process by which networks of cells use endogenous bioelectric gradients — voltage patterns across cell membranes — to store pattern-level information and guide large-scale anatomical development and regeneration, without changes to DNA sequence (Levin, 2014; 2023). Demonstrates top-down causation in living systems.

Cognitive Light Cone. Levin's term for the space of possible morphological states that a biological system can detect, represent, and act upon (Levin, 2019; 2023). Analogous to a "problem-solving horizon" — the range of goals a system can pursue.

Computational Irreducibility. A property of complex systems, formalised by Wolfram (2002), in which the outcome of a process cannot be predicted without actually running it step by step. No shortcut or formula can substitute for the process itself. Challenges "in principle" reductionism.

Default Mode Network (DMN). A network of brain regions active during self-referential thought, narrative identity, and internal monitoring. Its temporary disruption — through psychedelics, meditation, or other interventions — is associated with ego-dissolution and shifts in value orientation.

Ego-Dissolution. The temporary loosening or loss of the ordinary sense of a bounded, separate self, typically induced by psychedelics, deep meditation, or related interventions (Dobson & Meijer, 2025). Neurobiologically associated with reduced default mode network

activity. Relevant to addiction treatment and shifts from narrow self-interest toward empathy and connection.

Emotional Intelligence (EI / EQ). The capacity to perceive, understand, manage, and use emotions effectively in oneself and in interactions with others (Salovey & Mayer, 1990; Bar-On, 1997). Measured in this essay primarily via the Bar-On EQ-i. Distinct from cognitive intelligence (IQ).

Endosymbiosis. The evolutionary process by which formerly independent organisms (e.g., bacteria) became integrated as organelles (e.g., mitochondria) within host cells, giving rise to eukaryotic life (Szathmáry & Maynard Smith, 1995). A paradigm case of irreversible cooperation producing a new level of biological individuality.

Epigenetics. Heritable changes in gene expression that do not involve changes to the DNA sequence itself, influenced by environment, nutrition, stress, and parental experience (Jablonka & Lamb, 2005). A key component of the Extended Evolutionary Synthesis.

Extended Evolutionary Synthesis (EES). A broadened framework for evolutionary theory that incorporates epigenetic inheritance, developmental plasticity, niche construction, and multilevel selection alongside classical gene-centric mechanisms (Laland et al., 2015; Pigliucci & Müller, 2010).

Gene–Culture Coevolution. The process by which cultural practices (e.g., dairy farming, tool use, social norms) alter selection pressures on genes, and genetic changes in turn shape cultural possibilities (Richerson & Boyd, 2005; Henrich, 2016). Culture is a co-driver of evolution, not merely its product.

Inclusive Fitness. A measure of evolutionary success that accounts for an organism's own reproductive output plus its effects on the reproduction of genetic relatives. The standard gene-centric framework for explaining cooperative behaviours such as altruism.

Layered Intelligence Theory (LIT). A framework developed by Dobson (2025) that models intelligence as a multi-layered, recursive process encompassing cognitive, emotional, symbolic, strategic, and ethical dimensions, all interacting over time through feedback loops. Applied primarily in leadership and organisational development contexts.

Logic in Reality (LIR). A non-binary, process-based logic developed by Joseph Brenner (2008) designed to describe dynamic systems in which opposites (e.g., competition and cooperation, constraint and freedom) coexist and interact. Provides the philosophical underpinning for LIT.

Major Transitions in Evolution. Key events in evolutionary history — including the origin of eukaryotic cells, multicellularity, and complex sociality — in which previously independent units became irreversibly integrated into higher-level wholes (Szathmáry & Maynard Smith, 1995).

Meme. A unit of cultural transmission — an idea, slogan, or behaviour pattern — that spreads through imitation and repetition (Dawkins, 1976). In this essay, the "selfish gene" is treated as a meme that has escaped its technical origins and distorted public understanding of evolution.

Morphogenetic Field. A concept proposed by Sheldrake (1981) describing field-level organisation that guides the development and maintenance of biological form. Levin's bioelectric research provides empirical evidence for field-mediated pattern memory, though not for the more speculative aspects of Sheldrake's "morphic resonance."

Multilevel Selection. The view that natural selection operates not only on genes and individuals but also on groups and higher-level units, formalised by Nowak (2006) and Wilson & Wilson (2007). Cooperation can be selected for at the group level even when it is costly to individuals.

Neoteny. The retention of juvenile features into adulthood; in humans, the slowing of fetal development to allow the large brain to pass through the birth canal, resulting in extraordinarily helpless infants that require extended cooperative care (Gould, 1977; Bogin, 1997).

Niche Construction. The process by which organisms actively modify their own environments, thereby altering the selection pressures acting on themselves and other species (Odling-Smee et al., 2003). Challenges the view that organisms are passive recipients of environmental selection.

Participatory Ontology. The philosophical position, supported by LIT and LIR, that reality is not a static mechanism observed from outside but a layered, evolving process in which observers themselves participate (Dobson, 2025; Brenner, 2008).

Psychosocial Hazard. A workplace factor — including leadership culture, organisational norms, job design, and interpersonal dynamics — that has the potential to cause psychological or physical harm to workers (HSE, 2004). In this essay, the selfish gene meme is argued to function as a psychosocial hazard when internalised as a management philosophy.

Resonant Layer. In LIT's three-layer model (syntactic, semantic, resonant), the deepest layer: the felt, measurable impact of a person's presence on others and systems over time (Dobson, 2025; Dobson & Meijer, 2025). Exposed when habitual selfhood (syntactic and semantic layers) is loosened through ego-dissolution or deep reflection.

Self-Transcendence. The capacity of a system to recognise its inherited patterns — genetic, developmental, cultural — and to step beyond them in ways that alter future possibilities. Not used here in a supernatural sense, but as a natural (if fragile) achievement of complex living systems.

Semantic Layer. In LIT's three-layer model, the layer of meaning-making: the narratives, interpretations, and value frameworks through which individuals and organisations make sense of experience (Dobson, 2025).

Syntactic Layer. In LIT's three-layer model, the surface layer of rules, procedures, habits, and formal structures that govern routine behaviour (Dobson, 2025).

Top-Down Causation. Causation in which higher-level structures (tissues, organs, organisms, cultures) constrain and direct lower-level processes (gene expression, cellular behaviour), rather than causation flowing exclusively from genes upward (Noble, 2016).

VUCA. An acronym for Volatility, Uncertainty, Complexity, and Ambiguity — a framework used to describe challenging operating environments, originally from military strategy and now widely applied in leadership and organisational development

References

Akerjordet, K., & Severinsson, E. (2007). Emotional intelligence: A review of the literature with specific focus on empirical and epistemological perspectives. Journal of Clinical Nursing

Bar-On, R. (1997). Bar-On Emotional Quotient Inventory (EQ-i): A measure of emotional intelligence. Multi-Health Systems.

Bar-On, R. (2004). Bar-On Emotional Quotient Inventory (EQ-i): Technical manual. Multi-Health Systems.

Bogin, B. (1997). Evolutionary hypotheses for human childhood. Yearbook of Physical Anthropology, 40(25), 63–89.

Brenner, J. E. (2008). Logic in reality. Springer. https://doi.org/10.1007/978-1-4020-8375-4

Brown, D. R. (2011). An experiential approach to organizational development (8th ed.). Pearson.

Burke, W. W. (2008). Organization change: Theory and practice (2nd ed.).

Butler, C. J., & Chinowsky, P. S. (2006). Emotional intelligence and leadership behaviour in construction executives. Journal of Management in Engineering, 22(3), 119–125. https://doi.org/10.1061/(ASCE)0742-597X(2006)22:3(119)

Cameron, K. S., & Quinn, R. E. (2011). Diagnosing and changing organizational culture: Based on the competing values framework (3rd ed.). Jossey-Bass.

Clarke, N. (2000). The impact of a training programme designed to target the emotional intelligence abilities of project managers. Project Management Journal, 31(2), 5–12.

Cleveland Potash Ltd absenteeism and EI study: McDougall, A. J. (2005). An exploratory research project to establish if there is an identifiable link between low levels of emotional

intelligence and high levels of stress related absenteeism (Undergraduate dissertation). University of Sunderland.

Cox, T. (1978). Stress. Macmillan.

Dawkins, R. (1976). The selfish gene. Oxford University Press.

Dawkins, R. (2006). The selfish gene (30th anniversary ed.). Oxford University Press.

Dobson, R. (2023). Case study: Iterative executive coaching and strategy facilitation in construction leadership (R&D feedback document, anonymised). Original on file.

Dobson, R. (2025). Layered intelligence and logic in reality: Toward transformative leadership and collaboration. In Layered intelligence and logic in reality: Toward transformative leadership and collaboration. https://www.academia.edu/127795672/Layered_Intelligence_and_Logic_in_Reality_Toward_Transformative_Leadership_and_Collaboration

Dobson, R., & Meijer, D. K. F. (2025). Brain reward and life-threatening addictions: From driving the highways to hell to wandering the healing cross-roads of deep meditation, mystical experience and ego-dissolution. RINHUMAI Working Paper

Doyle, E. (2003). Work and organizational psychology. Psychology Press.

Dunbar, R. I. M. (1993). Coevolution of neocortex size, group size and language in humans. Behavioural and Brain Sciences

Dunbar, R. I. M. (1998). The social brain hypothesis. Evolutionary Anthropology.

Earnshaw, J., & Cooper, C. L. (1996). Stress and employer liability. Institute of Personnel and Development.

Ezuz, Y. (2018). Moving from training/taming to independent creative learning based on research of the brain. In Y. Ezrahi & J. Ben-David (Eds.), Reimagining new approaches in teacher professional development (pp. 63–73). Intech Open.

Flin, R., O'Connor, P., & Crichton, M. (2008). Safety at the sharp end: A guide to non-technical skills. Ashgate.

Goleman, D. (1995). Emotional intelligence. Bantam Books.

Goleman, D. (1998). Working with emotional intelligence. Bantam Books.

Gould, S. J. (1977). Ontogeny and phylogeny. Harvard University Press.

Henrich, J. (2016). The secret of our success: How culture is driving human evolution, domesticating our species, and making us smarter. Princeton University Press.

Hrdy, S. B. (2009). Mothers and others: The evolutionary origins of mutual understanding. Harvard University Press.

HSE. (2001). Tackling work-related stress: A manager's guide to improving and maintaining employee health and well-being. Health and Safety Executive.

HSE. (2004). Managing the causes of work-related stress: A step-by-step approach using the Management Standards. Health and Safety Executive.

Huy, Q. N. (2002). Emotional balancing of organizational continuity and radical change: The contribution of middle managers. Administrative Science Quarterly, 47(1), 31–69. https://doi.org/10.2307/3094890

Jablonka, E., & Lamb, M. J. (2005). Evolution in four dimensions: Genetic, epigenetic, behavioral, and symbolic variation in the history of life. MIT Press.

Jex, S. M. (2002). Organizational psychology: A scientist–practitioner approach. Wiley.

Kauffman, S. A. (2000). Investigations. Oxford University Press.

Laland, K. N., Uller, T., Feldman, M. W., Sterelny, K., Müller, G. B., Moczek, A., Jablonka, E., & Odling-Smee, J. (2015). The extended evolutionary synthesis: Its structure, assumptions and predictions. Proceedings of the Royal Society B: Biological Sciences, 282(1813), 20151019. https://doi.org/10.1098/rspb.2015.1019

Lazarus, R. S. (1976). Patterns of adjustment (3rd ed.). McGraw-Hill.

Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. Springer.

Levin, M. (2014). Molecular bioelectricity: How endogenous voltage potentials control cell behaviour and instruct pattern regulation in vivo. Molecular Biology of the Cell, 25(24), 3835–3850. https://doi.org/10.1091/mbc.E13-12-0708

Levin, M. (2019). The computational boundary of a "self": Developmental bioelectricity drives multicellularity and scale-free cognition. Frontiers in Psychology, 10, 2688. https://doi.org/10.3389/fpsyg.2019.02688

Levin, M. (2023). Bioelectric networks: The cognitive glue enabling evolutionary scaling from physiology to mind. Animal Cognition, 26(5), 1865–1891. https://doi.org/10.1007/s10071-023-01780-3

Marsh, T. (2011). Talking safety. Ryder-Marsh.

McDougall, A. J. (2015). Managing the organisational sword of change – Without getting your head cut off! Paper presented at a safety and leadership conference, Sheffield, UK.

Newman, M. (2009). Emotional capitalists: The new leaders. John Wiley & Sons.

Noble, D. (2016). Dance to the tune of life: Biological relativity. Cambridge University Press.

Nowak, M. A. (2006). Five rules for the evolution of cooperation. Science, 314(5805), 1560–1563. https://doi.org/10.1126/science.1133755

Odling-Smee, F. J., Laland, K. N., & Feldman, M. W. (2003). Niche construction: The neglected process in evolution. Princeton University Press.

Pigliucci, M., & Müller, G. B. (Eds.). (2010). Evolution: The extended synthesis. MIT Press.

Reason, J. (2008). The human contribution: Unsafe acts, accidents and heroic recoveries. Ashgate.

Richerson, P. J., & Boyd, R. (2005). Not by genes alone: How culture transformed human evolution. University of Chicago Press.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. Imagination, Cognition and Personality, 9(3), 185–211. https://doi.org/10.2190/DUGG-P24E-52WK-6CDG

Sheldrake, R. (1981). A new science of life: The hypothesis of formative causation. Blond & Briggs.

Slaski, M., & Cartwright, S. (2002). Health, performance and emotional intelligence: An exploratory study of retail managers. Stress and Health, 18(2), 63–68. https://doi.org/10.1002/smi.926

Szathmáry, E., & Maynard Smith, J. (1995). The major transitions in evolution. Nature, 374(6519), 227–232. https://doi.org/10.1038/374227a0

Tomasello, M. (2014). A natural history of human thinking. Harvard University Press.

Walker v Northumberland County Council, 1 All ER 737 (Q.B.).

Wechsler, D. (1958). The measurement and appraisal of adult intelligence (4th ed.). Williams & Wilkins.

Whitehead, A. N. (1978). Process and reality: An essay in cosmology (D. R. Griffin & D. W. Sherburne, Eds.). Free Press. (Original work published 1929)

Wilson, D. S., & Wilson, E. O. (2007). Rethinking the theoretical foundation of sociobiology. The Quarterly Review of Biology, 82(4), 327–348. https://doi.org/10.1086/522809

Wolfram, S. (2002). A new kind of science. Wolfram Media.

Annex: The Debate That Catalysed This Essay

This essay did not begin as an essay. It began as a comment thread on Academia.edu, sparked by a post from Mike Ferguson inviting discussion on love's relation to self-sacrifice,

What followed was a long exchange involving multiple contributors with very different perspectives: evolutionary biology, systems theory, process philosophy, leadership science, theology, ancient mythology, and practical business experience. It was messy, occasionally heated, and — in the way that the best arguments are — genuinely generative.

The provocation

The central tension in the thread was between two positions:

The selfish gene as settled science. One line of argument, most vigorously advanced by Adrian Grant, held that the selfish gene framework remains essentially correct; that its core claims have been vindicated by subsequent research; that criticisms of it amount to misunderstanding, sentimentality, or ideological bias; and that reductionism, properly understood, is a principle rather than a dogma and is not seriously challenged by developments in epigenetics, systems biology, or bioelectric morphogenesis.

The selfish gene as an outdated paradigm. My position, developed across a series of posts, was that the selfish gene is not flatly wrong but has become a toxic meme — a culturally powerful slogan that now obscures more than it reveals — and that contemporary biology (the Extended Evolutionary Synthesis, multilevel selection, niche construction, gene–culture coevolution, bioelectric morphogenesis) has already moved beyond it in ways that demand a new integrative framework.

What the debate revealed

Several things became clear as the exchange progressed:

The selfish gene meme is remarkably resilient. Even when confronted with specific sources — Noble (2016), Nowak (2006), Laland et al. (2015), Levin (2023) — defenders of the classical view tended to respond with rhetorical moves (redescription, dismissal, ad hominem) rather than substantive engagement with the cited literature. This is itself evidence for the meme's power: it functions less as a testable hypothesis and more as a prior commitment that shapes how new evidence is received.

The debate exposed a recurring logical pattern. When pressed on specific claims, the defence of the selfish gene tended to retreat from strong positions (Baker's specific sperm morphotype hypotheses, for example) to weaker ones (the general principle of sperm competition) while framing each retreat as a correction of my misunderstanding. Concessions were made — including that Baker's findings have not been replicated, that "selfish" was a problematic label, and that feedback and bidirectional causation are real — but these were delivered as clarifications rather than acknowledged as shifts. This pattern is diagnostically interesting: it suggests that the selfish gene meme is defended not primarily on empirical grounds but as an identity commitment, making genuine falsification difficult within the frame of informal debate.

Why the essay became necessary

The thread convinced me that the argument needed to be stated in a form that could not be fragmented, redirected, or drowned in noise. A structured essay, with clearly numbered

claims, cited sources, and an explicit invitation to falsification, offers something that a comment thread cannot: a stable target.

If the selfish gene framework is as robust as its defenders claim, this essay should be easy to dismantle. The claims are specific. The sources are cited. The logic is laid out step by step. I have tried to be precise about what I am and am not arguing, and I have explicitly identified the three strongest lines of counterargument I can think of.

If, on the other hand, the responses to this essay follow the same pattern as the thread — rhetorical dismissal, ad hominem, retreat dressed as correction, and refusal to engage the cited literature — then that pattern will itself be informative.".

Annex B: Psychosocial Hazards, Emotional Intelligence, and Industrial Safety

This essay began as a debate about evolutionary theory, but its implications are not confined to biology or philosophy. The way we think about competition, cooperation, and intelligence has direct consequences for how we manage psychosocial risks, health, and safety in high-hazard industries such as mining, oil and gas, and construction.

B.1. When a Meme Becomes a Management Philosophy

Taken as a cultural meme, "the selfish gene" encourages leaders and organisations to treat self-interest and competition as the default reality, and to regard cooperation, trust, and emotional life as secondary or soft. In practice, this often means:

Prioritising narrow technical competence over emotional and relational capability.

Treating stress and mental health as individual weakness rather than systemic risk.

Viewing culture as an HR issue rather than a structural determinant of safety and performance.

Alexander McDougall's 2005 study at Cleveland Potash Ltd (CPL) — Europe's deepest and hottest working mine, operating at 1,250 metres below ground with temperatures more than 40°C — shows how costly this mindset can be. At the time of his research, CPL's absenteeism rate stood at 6.4%, more than double the 3% average for the UK oil and mining sector, with 1,420 production shifts lost to stress-related absenteeism in 2004 alone.

In a macho, male-dominated culture was admitting to stress was seen as weakness, miners frequently concealed the psychological causes of absence, and management largely treated stress as an individual problem rather than an organisational responsibility. This is the lived organisational analogue of the selfish gene meme: a world in which individuals are expected to endure, compete, and cope alone

B.2. Emotional Intelligence as a Structural Safety Factor

McDougall's dissertation used the Bar-On Emotional Quotient Inventory (EQ-i) to measure emotional intelligence (EI) among blue-collar workers and compared those with stress-related absence (SRA) to those without (non-SRA). The results were unambiguous:

Total EQ scores were on average over 27 points lower in the SRA group than in the non-SRA group.

Intrapersonal, Stress Management, Adaptability, and General Mood scales all showed large, statistically significant differences.

Interpersonal EQ showed the smallest difference, suggesting that the critical deficits lay in self-awareness, self-regulation, and adaptive coping rather than in superficial social skills.

In other words, low EI was strongly associated with stress-related absenteeism in one of the most physically and psychologically demanding work environments in Europe. Psychosocial risk here was not a vague concept; it translated directly into lost shifts, lost production, and increased legal exposure under the UK duty of care and HSE expectations.

This finding aligns with broader research showing that emotional intelligence is closely linked to how individuals cope with stress and how stress, in turn, affects safety and performance. It is precisely the intrapersonal and regulatory layers of intelligence — the layers most easily trivialised by a "hard" competitive view of human nature — that turn out to matter most for whether people can sustain safe, effective functioning under pressure.

B.3. Leadership, Culture, and the Human Contribution to Accidents

In a later paper presented in Sheffield (2015), McDougall extended this analysis to leadership and organisational culture in high-risk sectors. Drawing on James Reason's work on human factors and on Flin, O'Connor, and Crichton's research into non-technical skills, he noted that up to 80% of accident causes across sectors are now routinely attributed to human factors, and that the acts, behaviours, and omissions of leaders are increasingly recognised as part of the causal chain in major incidents.

This paper argued that:

Technical expertise, though essential, does not provide adequate protection against human error.

Non-technical skills — situational awareness, decision-making, communication, teamworking, and stress coping — map closely onto emotional and social competencies.

Leaders' emotional intelligence shapes organisational culture, and culture in turn shapes safety performance.

The UK Health and Safety Executive (HSE) has reinforced this shift through its Management Standards for Stress, which explicitly frame stress as an organisational, not merely individual, issue and signal that employers have obligations to protect employees from psychological harm as part of their duty of care. The selfish gene meme, taken as a cultural story, is at odds with this regulatory reality: it encourages organisations to see stress as a matter of personal resilience rather than as a systemic property of the work environment and leadership culture.

B.4. A Multi-Level View of Intelligence and Risk

The CPL and Sheffield work exemplify the same multi-level, feedback-rich logic that the Extended Evolutionary Synthesis and bioelectric morphogenesis reveal in biology. At CPL, stress-related absenteeism emerged from interactions among:

Individual emotional capacities (intrapersonal EQ, stress management, adaptability).

Organisational culture (macho norms, stigma around emotions, authoritarian leadership styles).

Structural pressures (production targets, geological constraints, heat and depth).

In leadership contexts, the same pattern appears at a different scale: accidents and failed change programmes emerge from the interplay of individual non-technical skills, group dynamics, and wider organisational and regulatory environments. A single-level, reductionist view of intelligence — one that equates competence with technical IQ — cannot adequately describe or manage these risk dynamics.

Layered Intelligence Theory (LIT) offers a way to model this: it treats intelligence as a layered, evolving process that includes cognitive, emotional, social, symbolic, and ethical dimensions, all interacting over time. In an industrial context, this means:

Recognising that psychosocial hazards are structurally embedded in culture and leadership, not merely in individual weaknesses.

Treating emotional intelligence development and non-technical skills training as core safety interventions, not optional extras.

Designing leadership and team structures that explicitly account for the multi-layered nature of human performance under pressure.

From this standpoint, the selfish gene meme is not only scientifically incomplete; it is practically dangerous. It underwrites cultures and leadership models that systematically underinvest in the very layers of intelligence that keep people safe and organisations adaptive in volatile, complex, and hazardous environments.

Annex C: Layered Intelligence in Practice — Executive Coaching and Strategy Facilitation in Construction Leadership (Anonymised)

Note: This case study is drawn from a documented R&D feedback engagement in the UK construction sector. The participating organisation and individual have been anonymised to protect commercial and personal confidentiality. The original feedback document is held on file.

This annex presents a concrete worked example of Layered Intelligence Theory (LIT) and Logic in Reality (LIR) in practice: a live executive coaching engagement in construction where improvements in safety, trust, and performance emerged only when we treated intelligence as layered and contradictions as real, interacting dynamics

C.1. Background

Company X is a UK construction firm that grew from entrepreneurial origins into a mid-sized business with national operations. Leadership teams had historically been developed through time-served promotions and occasional external hires to plug structural gaps, producing growth that was, in the Group Director's own words, "*ad-hoc and circumstantial*" rather than systematically designed. Relationships with clients and the supply chain had become imbalanced, and the business was over-exposed to a single construction sub-sector, creating strategic and risk-management vulnerabilities.

By 2021, the Group Director of the Build Division — a senior executive with over 40 years' experience in construction, including 25 years at management and executive level — was actively considering leaving the business. The combination of internal politics, structural ambiguity, and cultural inertia had created a situation in which both individual career prospects and organisational resilience were at risk.

C.2. The Intervention

I began working with the Group Director in August 2021, initially as an executive search recruiter. Instead of treating the engagement transactionally, we used the first meeting to explore not only his personal drivers and aspirations but also the deeper organisational dynamics at Company X and the reasons he felt compelled to leave. That conversation opened an alternative: staying and taking a fundamentally different approach to shaping his role and the wider leadership culture.

From November 2022, this relationship evolved into a formal performance coaching and strategy facilitation engagement. The methods were deliberately iterative and experimental:

Active observation and diagnosis of leadership behaviour and team dynamics within the material, social, and organisational environment.

Psychological assessment and emotional intelligence analysis to understand individual personality traits, strengths, and limiting factors within the senior team.

Facilitation of group strategy sessions using different psychological approaches that took individuals beyond their habitual thinking patterns.

Daily or near-daily iterative debriefs after meetings and events, analysing how preconceptions had shaped outcomes and how new information should be assimilated into evolving strategies.

The approach was theory-agnostic but structurally coherent, drawing on Lean Six Sigma, Management by Objectives, and other frameworks where appropriate, but selecting tools case by case considering the specific people, context, and strategic aims involved.

As the Group Director described it:

"Traditional management methods look to use singular techniques throughout the implementation of an initiative, whereas we have constantly adapted to the current circumstance at hand and chosen the appropriate method of approach".

C.3. EI and Navigating VUCA

The Group Director described the utilisation of emotional intelligence techniques as

"invaluable" for both his own career development and for understanding the interactions within the executive group. By analysing the Build Strategy and the roles required for its implementation, we were able to:

Identify mismatches between individuals' personality types, emotional capacities, and the demands of specific leadership roles.

Manage expectations and reposition individuals into roles better suited to their abilities and dispositions.

Begin developing competency matrices that explicitly include psychological and emotional intelligence dimensions, rather than focusing solely on technical track records.

We operated in an explicitly VUCA context — volatile markets, post-Covid conditions, regulatory pressures, and the shifting risk profile associated with diversifying away from single sub-sector dependence.

C.4. Innovation Relative to Traditional Consultancy

From the Group Director's perspective, the principal difference was the embedded, iterative nature of the engagement. Rather than deploying a fixed methodology and producing a static report, we adapted at every opportunity, using each interaction as data and adjusting methods dynamically based on what was happening.

His assessment:

"I have worked in construction for 40 years, at least 25 of which has been in management and executive capacities. I have never experienced this type of consultancy approach before. This approach fundamentally interacts with the ongoing running of the business and seeks to develop not only the systems of operation but also the key individuals within it".

C.5. Why This Could Not Have Been Achieved Internally

The Group Director's view was that Company X's entrepreneurial culture, while a historic strength, meant there was no tradition of psychologically informed leadership development. The purely quantitative, process-driven approach common in larger organisations "does not work in a privately run business that has gained its past success on an entrepreneurial basis".

As he put it:

"The level of critical thinking that has been required can only have been achieved by external observation and translation into a context that could be understood by team members who are predominantly construction-centric".

The company was in the process of preparing for an ownership transition, which made the scalability of leadership capability an urgent strategic concern rather than a luxury.

C.6. Key Outcomes (August 2021 – July 2023)

Strategic achievements:

Retention of a key executive who would otherwise have left in autumn 2021

Publication of a coherent Build Division business strategy in early 2023.

Systematic restructuring of the leadership team based on EQ-informed competency matching.

Improved risk management enabling diversification from single sub-sector dependence.

Methodological innovations:

Daily iterative coaching and an embedded consultation model.

Integration of psychological assessment and EI analysis into leadership development.

Theory-agnostic, context-sensitive use of multiple management frameworks.

Competency matrices incorporating emotional intelligence and psychological dimensions.

Cultural transformation:

Shift from time-served promotions to values-vision-competency alignment.

Movement from task-based management to EQ-informed leadership.

A developing bridge between entrepreneurial agility and scalable process.

C.7. Connecting the Evidence

This case completes a three-level evidence chain:

Level-Sector-Evidence

Quantitative — EI predicts stress outcomes   Mining (deep underground)   Low EI scores strongly predict stress-related absenteeism (**McDougall, 2005**)

Theoretical — EI, non-technical skills, and safety culture   Oil & Gas, Construction, General Industry   Leaders' EI shapes culture; 80% of accident causes attributed to human factors (**McDougall, 2015**)

Applied — LIT-informed coaching transforms leadership   Construction (Company X) Executive retention, strategy publication, EQ-based restructuring, sector diversification (**Dobson, 2023**)

The selfish gene meme, taken as an organisational philosophy, underwrites cultures that systematically underinvest in the layers of intelligence that keep people safe and organisations adaptive. This case study demonstrates what becomes possible when those layers are taken seriously.