The system within: Addressing the inner dimensions of sustainability and systems transformation

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Earth 4All

Abstract

Earth for All: A Survival Guide for Humanity, a Report to The Club of Rome, offers system change pathways to avoid ecological and societal collapse through 'extraordinary turnarounds' in key policy areas. While ambitious policy levers are much needed, sustainable change hinges on integrating material interventions with consideration of the human inner dimension: reckoning with the deep collective structures of thought foundational to failing systems, and nurturing the inner capacities necessary to overcome barriers to collective action and structural transformation. This Deep-Dive paper aims to complement *Earth for All* by highlighting the overlooked inner dimension of system change, and supplying systems thinkers with the language to advocate for psychological, social and spiritual factors crucial to sustainable solutions. It discusses worldviews, mindsets, values and identity as root drivers of cultural behaviour, their interaction with psychological and behavioural tendencies, and the transformative inner capacities that can be cultivated to intervene at deep leverage points; and introduces existing initiatives leading the way in integrating inner and outer dimensions of system change.

Acknowledgments

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Introduction

In the early 1970s, an iconic report to The Club of Rome, *The Limits to Growth*, sounded the alarm for unbridled economic expansion on a finite planet. Fifty years later is successor, *Earth for All: A Survival Guide for Humanity* outlines a global to-do list for averting ecological and societal breakdown within a vanishing timeframe.[1] Based on advanced computer modelling of system dynamics, the visionary report lays out five 'extraordinary turnarounds' in socioeconomic organisation necessary to avoid collapse and create an equitable world within planetary limits.

Earth for All outlines ambitious levers for system change in the policy areas of poverty, inequality, empowerment of women, energy and food. The report advises that: "only when we pull these bold levers early and strongly, [will] we see accelerated transformation towards a sufficiently fair, just and safe world...". The levers themselves receive detailed treatment – however, a more elusive factor in this important equation concerns the 'we' who must pull them. This paper seeks to catalyse *Earth for All's* call to action by asking, who are we? What qualities limit us, what strengths do we possess? In what ways are our human frailties fundamental within our failing systems? And who must we become, to exercise collective agency at the necessary, unprecedented scale?

The material aspects of the global crises we face are well understood.[2] Energy systems, dangerous emissions, biosphere destruction. Income, agriculture, food security. Less well understood is why, despite having the policy instruments, the technologies, and the resources available to address them, *we still aren't doing so* at anywhere near an appropriate rate.[3] To fill this stark gap in our understanding requires a perspective on system change that reaches beyond – or rather, *within* external structures and strategies, to the human mind that built and maintains them.[4] As such this deep-dive paper calls urgently for attention to the underexplored *inner* dimension of system change.

Defining the inner dimension

No verbal definition of the inner world could possibly be complete. Arguably the more precise, the less accurate we would be in naming the boundless, multifaceted arena of human thought and experience, and we mean purposefully to avoid limiting the reader in their conception of it. Generally however, when we say 'inner' we mean the domain of cognition, emotion, consciousness and culture; a complex interplay between individual subjective experience, unconscious processes and neurophysiology, interpersonal relationships, collective beliefs and social constructs. It is contrasted by the material 'outer' world of landscapes and objects, but neither realm is truly separate or distinct, and both exist in dynamic interdependence continuously influencing and informing one another.

That inner conditions have played a central role in creating and maintaining our current crises seems in one sense too obvious to mention, and yet this fact is too often absent from high-level solutions analysis.[5] The deep cultural narratives underpinning extractive and exploitative behaviours. The shifting values and evolutionary impulses underpinning escalating consumerism. The rise of individualism and fragmentation of collective identity. The biases and emotions that drive our political behaviour.[6] All are forever present and active, pulling the levers of our 'outer' world. And as vested interests are more than aware, they are susceptible to influence. As a matter of course we allow commercial and political forces to manipulate the human inner world in ways directly contributing to our polycrisis.[7] But as wisdom traditions and science unequivocally show, we are also capable of understanding, nurturing, transforming and maturing our views, qualities and capacities in ways that support the flourishing of the whole.[8]

> **As a matter of course we allow commercial and political forces to manipulate the human inner world in ways directly contributing to our polycrisis.**

The inner, then, is not simply an elective complement to system change approaches, but an inseparable, primordial and unavoidable aspect of human-made systems themselves.[9] It is written through every 'external' structure and interaction and as such, in the language of Donella Meadows, co-author of *The Limits to Growth*, represents a *deep leverage point* for change.[10] *

Indeed, while consideration of the inner has become lost amid more structural concerns in recent decades, it was integral to the founding vision of The Club of Rome. In *The Human Quality*, founder Aurelio Peccei emphasised that inner change is foundational to necessary structural transformation.[11]

Earth for All's analysis and recommendations do touch on aspects of the inner. For example, social trust is emphasised, albeit as a mediator between external factors such as financial equality and political effectiveness. Wellbeing, while treated as an end in itself, is largely reduced to a function of external variables such as disposable income and government services per capita.† Left unexplored are myriad other dependencies of structural dynamics upon hearts and minds; likewise the important ways in which inner conditions can meaningfully be addressed directly. This absence reflects a blind-spot in wider cultures of sensemaking – understandable at the time the report was published – yet just two years on, pioneering initiatives have begun a significant shift.[12] Consideration of the inner dimension of systems is entering the mainstream.[13]

Here we aim to equip the reader with a very basic introduction to this critical, neglected dimension of the systems landscape. Readers may be familiar with some or all concepts – our intention is less to break new ground than to provide language and synthesis that can enable more confident discussion and inclusion of the inner in systems and complexity thinking and transformative approaches.

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* As outlined in the seminal work of Donella Meadows, co-author of *The Limits to Growth*, efforts at systems change can address 'leverage points' of different depths. Shallow leverage points may be easier to access, but the impact of intervention here is limited. Deep leverage points by contrast are places within complex systems where small shifts can lead to significant changes.[16]

† Within the Wellbeing Economy Alliance framework for core human needs, *Earth for All* reduces all inner qualities like connection / sense of belonging to economic variables.[17]

Section 1 provides some **historical context:** *how have we reached a situation where the inner dimension of systems is so widely deprioritised in public discourse?* Section 2 introduces some elements of **the essential inner** and their importance to sustainable transformation. 2.1 considers the profound changes in systems of thought and relationship with the world that are possible over the medium to long-term. 2.2 considers certain **inner states, traits and capacities** foundational to those changes and to societal wellbeing, which individuals and groups can be empowered to transform through evidence-based practices. Section 3 goes on to introduce **existing applications** that are putting these insights into practice, in the service of system transformation and sustainability.

The physical and psychological dimensions of systems are fundamentally inseparable, and effective approaches must integrate both.

We won't claim that inner factors alone are enough to summon the necessary turnarounds – but we will insist that external levers will never be sufficient either. The physical and psychological dimensions of systems are fundamentally inseparable, and effective approaches must integrate both.[14] In her own deep dive paper, Mamphela Ramphele, honorary president of The Club of Rome notes that "living systems change requires holistic rather than fragmented approaches".[15] In the coming pages we offer ways of including the inner that can support more holistic views, models and interventions; affording the psycho-socio-spiritual conditions for collective action due consideration in the complex picture of system change. Humanity's future wellbeing depends on restoring agency in this neglected inner domain.

1 – **Historical context:** beyond the 'Enlightenment' way of looking.

In expanding perspectives on system change beyond the 'external' world, it's helpful to understand the forces that led dominant cultures to deprioritise and oversimplify the 'inner' – forces that were themselves an inner phenomenon, and which shaped the complex crises we face today.

The **'Enlightenment' worldview**, rooted in the embrace of empiricism, reductionism and rationalism, allowed its 18th Century European proponents to comprehend and manipulate the material world with remarkable success, undeniably propelling human progress.***** Consequently, from vaccines and antibiotics to hot showers and holidays, the average person in high income countries now enjoys standards of living that even royalty of bygone eras could not have imagined. However, the most powerful ideas of that time have also given rise to the existential threats that we now grapple with.[18] While this worldview is far from universal, it's no coincidence that it is foundational in those cultures of **modernity** that bear most responsibility for our current crises.[19]

While acknowledging the achievements of the Enlightenment then, we are also beginning to confront its legacy of **reductionism**. This paradigm – that treats complex systems merely as the sum of their parts, and moreover, the smallest parts as most *real* – still shapes our siloed societal structures today, with dire consequences for complex and emergent living systems best understood in terms of relationship.[20] The associated quest for human dominance over nature, establishing an "empire of man over creation" in the words of Francis Bacon, has encouraged us to exploit the web of life that we belong to as if it were something **separate** to ourselves.[21] The long-term outcomes of this deep cultural story of **disconnection** are now starkly apparent in a globalised society beset by alienation from self, others and nature, doggedly pursuing separate interests even as our inescapably **interconnected** world falls apart around us.[22]

Blindness to the whole is a root cause of many current crises. Closely related is the **materialist** tendency, native to empiricism, to treat that which we (traditionally) cannot isolate and measure – such as mental states – as unreal or inconsequential. Matters of the heart and mind are thus habitually deprioritised in analysis of material concerns.**†**

The Enlightenment worldview remains influential in political, economic and education systems; not least in its **rationalist** conception of human nature.[23] This view reduces humans to the mythical 'Homo Economicus'; a predictable being, making decisions based on facts and reason. However, burgeoning evidence from psychology, neuroscience and behavioural economics has dismantled this simplistic account.[24] Far from being purely rational, our decision- and meaning-making processes are influenced by complex factors from emotions, heuristics and adaptive impulses, to beliefs, identities and values.[25] And rather than simply being shaped by the facts of

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§ Many of these ideas have ancient roots – for instance in classical philosophies. Their rediscovery following Catholic suppression in Europe ushered in significant scientific and cultural progress, for example consolidated notions of the public sphere, cosmopolitanism, multiculturalism and deep time foundational to complex social order and collective action.[27]

† Influential upon this theoretical separation of mind and matter was the mind-body dualism of Rene Descartes, who sought to protect the soul from the de-sacralising influence of reductionism by insisting that the mental or conscious is non-spatial and non-corporeal.[28]

the structural world, *they shape* those facts and that world, in ways that systems solutions can ill afford to ignore.[26]

Any serious effort to confront the pressing issues we face as a species must, as the maxim goes, get beyond the kind of thinking that created them. Evaluation of 'external' systems is of limited value without pragmatic understanding of these ever-present inner foundations – and their potential for change.

> Any serious effort to confront the pressing issues we face as a species must, as the maxim goes, get beyond the kind of thinking that created them.

2 – Elements of the essential inner

Here we offer a rudimentary outline of inner-outer dynamics crucial to sustainable transformation and collective action. Section 2.1 introduces certain abstract systems of meaning – mental models with conceptual content that are typically co-created by groups, and propagated through culture, with formative implications for societal behaviour through time. Section 2.2 explores more 'direct' aspects of human experience. Transient **subjective states** and enduring **psychological traits** that drive behaviour and influence meaning-making at individual and collective levels; and **transformative capacities** of heart and mind that can be cultivated to support collective action *and* shift foundational attitudes over time.

For the purposes of explanation and academic relevance these elements are treated separately, however it must be stressed that in reality they are messy, interdependent and largely defiant of categorisation. The inner dimensions of systems are in every way as complex as the outer – a daunting thought perhaps, until we consider the extent of humanity's collective power to intervene in this territory.

2.1 Systems of meaning

2.1.1 Mindsets, worldviews and paradigms

"The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking."

– Albert Einstein

Arguably the deepest leverage points for change in human systems target the **core frameworks of meaning** that shape them; co-created over time and mutually maintained by cultural norms.[29]

Our **worldview** is commonly understood as an overarching belief structure or deep story that constitutes our sense-making about the world or perspective on life.[30]

Worldviews and other belief structures constellate according to **paradigms**: organising frameworks for modelling reality. These condition what can be considered true and important, how problems are approached, and even what can be perceived.[31]

Whereas some theorists treat (individual and collective) **mindset** as an umbrella term for aspects of the inner world such as worldviews, beliefs, values, and motivations, others treat mindsets more narrowly as established beliefs and attitudes towards particular domains of life, many of which may be operating in a particular worldview.[32]

Definition of all these terms varies and **blurs across disciplines** – and even the authors of this paper don't fully agree on their correct use! Colloquially they are often used interchangeably, and not without reason – they never operate separately. This paper largely treats 'mindset' as an umbrella term, whilst acknowledging that it can also be more context-specific – e.g. 'learning mindset'.

The power of these foundational frameworks of meaning lies partly in their invisibility to those 'within' them. They give form to the world as we perceive it, and so without intentional awareness are typically indistinguishable from '**the way things are**'. As such they also determine support or opposition to social change.[33]

Many different worldviews operate across diverse global cultures. These often reflect **foundational metaphors** of nature, with profound consequences for how nature is treated. For example, whereas some cultures have conceived of **nature as a giving parent**, Enlightenment thought reimagined **nature as a machine** – the resulting blindness to complexity contributing to the environmental destruction we face today.[34] As discussed in Section 1, the globalised culture of modernity, its politics, business, science, media, and entertainment are dominated by a reductionist paradigm expressed in an individualist, competitive, and anthropocentric worldview. At its core, a mistaken belief in humans' fundamental *separateness* from each other and the world both drives and validates exploitative and extractive behaviour.[35]

Collective mindsets and their constituents, including underlying paradigms, can and do change – particularly in the context of large-scale crisis. For example, the dependencies highlighted by the Covid19 pandemic accelerated an ongoing institutional shift towards thinking in systems.[36] Over time, scientific **paradigms can shift** when core principles are challenged by enough new evidence.[37] However, counter to rationalist conceptions of human nature, the same cannot always be said for individual mindsets. Emotionally conditioned bias towards existing beliefs (see 2.2.2) and their entanglement in identity (see 2.1.3) can habituate **rejection of uncomfortable truths**. In fact, confrontation with contradictory evidence may in some cases reinforce prior attitudes.[38]

Paradigms can be reinforced in culture through narrative devices such as **framing** – motivated choices in presentation that increase the salience of selected aspects of a story.[39] For example, the oil and gas lobby has proactively advanced a paradigm of individual responsibility for climate impacts through self-serving frames such as the 'carbon footprint'.[40] Accordingly, awareness of frames and intentional reframing are important in shifting mindsets and advocating new paradigms. At a personal level, the same trainable skills for **meta-cognition** and **cognitive flexibility** that support everyday **perspective-taking** (see 2.3.3) support our ability to comprehend and compare frames, and apply different paradigms.[41] Experts have begun to develop practices to help researchers, leaders and other individuals develop awareness of their own worldview and invite them to explore alternatives.[42]

> Ritual acts of contact, care and connection towards others and nature can lead to a greater sense of fundamental connectedness, underpinning more relational, regenerative mindsets – a wholesome feedback loop.

While it might intuitively seem like our mindsets determine our actions, the two in fact arise interdependently, meaning our **behaviour also shapes our mindsets**.[43] For example, ritual acts of contact, care and connection towards others and nature can lead to a greater sense of fundamental connectedness, underpinning more relational, regenerative mindsets – a wholesome feedback loop (see also 2.1.3 and 2.2.6).[44] Existing habits, however, can also *prevent* changes in mindset from translating into new behaviour, thus limiting mindset shift in turn.[45] This mutuality highlights the importance of approaches that support new ways of being and relating in the world, in addition to addressing attitudes and beliefs (see also 3.2 and 3.4).[46]

2.1.2 Values

"Your values become your destiny."

– M.K. Gandhi

Values are deeply held, often unconscious, beliefs about what is desirable, worthwhile and meaningful. They act as guiding principles for prioritisation, decision-making and action. While worldviews and paradigms vary greatly across time and geography, researchers identify ten categories of underlying values that are surprisingly consistent across cultures, and which most humans will be motivated by at some time, to some degree.* Values and behaviour can be mutually reinforcing, such that behaving in line with a particular value strengthens its influence.[47] Furthermore, some values contradict and inhibit each other, so that when one is temporarily or habitually engaged, others tend to be suppressed. '**Intrinsic**' values like affiliation to friends and family, connection with nature, justice, fairness and concern for others can be mutually inhibited by the '**extrinsic**' or 'materialistic' values, such as wealth, material success and concern for image, that are reinforced by dominant collective mindsets.[48]

Evidence links intrinsic values to greater personal wellbeing and sustainable attitudes and behaviours. Conversely, individuals who place high priority on extrinsic values have lower wellbeing, consume more, incur more debt, have poorer relationships and exhibit more ecologically destructive behaviour.[49] Everyday life within global capitalism powerfully **reinforces extrinsic values**. While across the world individuals still usually *report* intrinsic values as primary, people naturally re-orient their values toward what is rewarded – and accordingly values appear to be sliding towards the extrinsic.[50] Evidence suggests that we may also tend to underestimate the intrinsic motivation of other citizens, limiting appetite for civic engagement.[51] Threat and

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* Universalism (e.g. understanding, tolerance, protection of nature); Benevolence (enhancement of welfare of people with whom one is in frequent personal contact); Tradition (respect and acceptance of the customs and ideas that traditional culture provides); Conformity (restraint of actions, inclinations and impulses likely to violate norms or harm others); Security (e.g. safety, harmony, and stability of society); Power (e.g. social status and prestige, control over resources); Achievement (personal success according to social standards); hedonism (pleasure for oneself); stimulation (excitement, novelty and challenge); self-direction (independent thought and action). See The Common Cause Handbook.[58]

thoughts of death are associated with increases in extrinsic values and efforts to reinforce self-esteem.[52] Climate anxiety can thus become part of a vicious cycle of unsustainable consumer behaviour (see also Section 2.2.5).[53]

To choose and enact changes advocated in *Earth for All* would entail some **resurgence of shared, intrinsic values and inhibition of the extrinsic**. For example, a value implicit throughout the report's recommendations is *fairness* – of distribution, of responsibility, of status. In cultures fixated on winning and economic growth, how can the requisite leap in prioritisation of basic fairness be brought about?

Evidence recommends **interventions** for reducing extrinsic orientation, ranging from psycho-social practices to public policies, in three broad categories: encouraging intrinsic aims (e.g. connection to others, personal growth), reducing exposure or susceptibility to materialistic messages (e.g. removing advertising from the environment) and addressing insecurity and worry.[54]

Deployed at scale, such interventions may help to limit a slide towards the extrinsic, but more fundamental shifts in values likely depend on mainstream **cultural narratives** and institutionalisation. Media and entertainment and public figures are heavily implicated in shaping societal values, and their entanglement with vested interests exerts a powerful drag on needful change.[55] Individual and collective values are reciprocal, however, and scope exists for leaders and citizens alike to strengthen the '**inner compass**' that helps us orient aims and behaviour towards 'higher' values amid cultural inertia.[56] Some successful evidence-based lifestyle change programmes are predicated on orienting toward deeply held values.[57]

2.1.3 Individual and collective identity

"We belong to each other; we cannot cut reality into pieces... Every side is 'our side'"

– Thich Nhat Han

Implicit in the operation of values, **identity** is another key aspect of mindset; a collection of perceptions and stories about what it means to be 'me' or 'us.' These may concern our personalities and our bodies, encompass groups such as family, tribe, race or nation, or even all of life. Different structures of identity are predictors of individuals' sustainable attitudes, and can produce momentous differences in **collective behaviour**.[59] Historically for example, in a period when China identified with an interdependent, "harmonic web of life" and deployed its immense navy with restraint, a European imperative to dominate and exploit the world was strongly influenced by a biblical notion of human power over a hostile natural world, resurgent in Enlightenment thought.* Over centuries, this separate-ist concept of identity helped shape today's globalised modern society; underwriting its deepest inequalities and cementing the difficulties we now face in fairly addressing the consequences.[60]

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* Increasingly figures within the Roman Catholic church, including Pope Francis, point to a mistranslation of scripture at the root of this attitude: to rule in the name and in the manner of God implies not "tyrannical anthropocentrism" but rather stewardship of nature.[71]

The boundaries of group identity are fluid. Indeed throughout human history, the '**circle of empathy'**—the group of other beings to whom we typically extend care—has expanded as a condition of survival.[61] However, from systemic exploitation of nature to dehumanisation of others and the polarisation that corrodes essential social trust, barriers to *Earth for All's* extraordinary turnarounds remain rooted in stories of separateness. To collectively choose radical solutions on behalf of the whole conversely requires not only "the broadest coalition the world has ever seen" but a **deeper story of humanity** as identical with all of life.[62] *

The story we require is anything but 'new': societies rethinking separateness in the face of crisis have much to learn from cultures that more readily perceive identity beyond the individual. African **Ubuntu** philosophy, for example, identifies humanity as fundamentally relational, and morally obligated towards past, present and future generations.[63] **Indigenous wisdoms** are typically founded upon identity that is relationship-based and nature-connected, and compel earnest consultation in consideration of system change.[64] In addition to relationality, core values in '4R' or '5R' frameworks of Indigenous worldviews and pedagogy include reverence, respect, reciprocity, responsibility, and redistribution. These are considered "sciences and technologies... developed since time immemorial by communal relations between human and non-human beings".[65] This is not to imply that humanity's 'authentic' state is somehow one of straightforward nature-connectedness. Since our earliest history humans have tended to overstep environmental boundaries, and ecological thought within Indigenous societies represents hard-won lessons in sustainability. [66] In the current era however, widespread disidentification with nature contributes to a vicious circle with distracting technology and environmental degradation. [68]

In this context, practices of nature connection and those that cultivate '**self-expanding emotions**' such as gratitude, awe and compassion can broaden the sense of identity beyond a narrowly constructed 'self' and strengthen connection to the world we belong to.[69] Connection practices may prove key to climate action: in one study, for instance, individuals with high nature-connectedness were found to be roughly twice as likely to exhibit pro-environmental and conservation behaviours.[70] (See section 2.6 on embodying connection).

2.1.4 Religion, spiritual sensibility, and existential inquiry

"If we each offer the best of our respective traditions, we may yet see a way through our difficulties."

– Islamic Declaration on Global Climate Change

Religion remains a primary unifying force in collective identities across the world. Despite the rise of secular individualism, 85% of people globally still identify with a religion.[73] Throughout history, shared belief has enabled collectivism at increasing scales, supplying communities with meaning, cohesion and a sense of both the inner and the **self-transcendent** not easily replicated

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* A view described as "interbeing" by the Buddhist scholar Thich Nhat Hahn, and the "ecological self" by Joanna Macy. Both popularised the deep ecology paradigm of Arne Naess, who replaced the view of humans 'in' their environment with understanding of humans as 'knots in the biospherical net'.[72]

outside its container of shared narrative, worldview and ritual.[74] Without denying the complex role of religion in warfare and violence, and even the contribution of certain beliefs and practices to the environmental crisis, we may inquire into the role such a powerful inner dynamic has to play in supporting prosocial, pro-environmental behaviour change.[75]

Organised religions today convene powerful networks of communities; and their leaders occupy influential platforms at deep systemic leverage points. Many major religions hold life to be inherently sacred. Accordingly, some leaders are already working to influence their communities' response to global crises; emphasising obligations of **planetary stewardship** within the eternal ethical frameworks of their own faith – Pope Francis' encyclical *Laudate deum* and the recent Al Mizan Islamic initiative among prominent examples.[76]

Beyond specific religions, many operate worldviews influenced by **spiritual sensibility.*** For example, as many as one in three people in Europe and the USA may identify as "spiritual, but not religious".[77] Even without religious convention and structure, sincere spiritual inquiry, practice and experience can "help us get things in perspective in the fullest and broadest and deepest sense".[78] To achieve the extraordinary turnarounds will depend upon a measure of soul-searching across society – and a sense of the sacred, whatever shape it takes is profoundly relevant to sustainability challenges.

Global crises raise **existential questions** – individual and collective. *Why do we exist? What's my relationship to the world that will persist beyond my lifetime? What are my responsibilities towards the collective?* Religious frameworks and spiritual inquiry tend to support people in exploring such questions. In secular contexts, there is a growing need to develop a similar capacity.[79]

2.2 – Inner states, traits and capacities

To choose, design and enact effective, collective solutions at the scale and complexity called for by *Earth for All* requires not only interrogation of the mindsets that shaped our predicament, but also understanding of our innate, often latent capacity to transform them.[81] Section 2.2 discusses common traps in human psychology that produce and maintain particular sustainability issues, and the transformative capacities we may cultivate to mitigate them, and lay inner foundations for more regenerative behaviours, societies and systems.

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* Spirituality involves the "recognition of a feeling or sense or belief that there is something greater than myself, something more to being human than sensory experience, and that the greater whole of which we are part is cosmic or divine in nature."[80]

2.2.1 Liberating attention; reclaiming agency

"Tell me what you pay attention to and I will tell you who you are."

– José Ortega y Gasset

Attention is the inner faculty that binds all others together into conscious experience – and it is foundational to action at all scales.[82] To choose effective action, we need awareness of what's happening. Furthermore, what we collectively pay attention to determines what we consider important, and worthy of resource and energy.[83] But whereas we may think that we're in charge of what we pay attention to, evolutionary drives combine with market forces to ensure otherwise.[84] Humans are pre-programmed to prioritise survival objectives in our evolutionary landscape. Despite our aspirational 'higher' values, **primal impulses** – attuned to acquire what tastes good, to avoid immediate threat, to seek group safety and to reproduce – regularly snatch attention from our chosen object of focus. Likewise, while globalised modern society is built on a model of humans as rational agents, acting out of choice, neuro- and cognitive science show that involuntary impulses, entrenched habits and 'autopilot' are often directing behaviour.[85]

> At a time when we most need to concentrate on our shared world and its needs, our attention has never been more distracted and fragmented.

With the help of smartphone technology, global economic and political powers have learned to 'hack' these neurophysiological systems.[86] Their power to capture attention and to *sell* it now directly affects over half of the global population.[87] Consequently, at a time when we most need to concentrate on our shared world and its needs, our attention has never been more **distracted** and **fragmented**. As well as directly limiting our agency for system change, corrosive impacts extend to our mental health, cognitive capacity, relationships, social trust and nature-connectedness.[88] * The same media algorithms that drive unsustainable consumption are exploited to manipulate political behaviour, seed disinformation and entrench polarisation across the world. The importance to society of **reclaiming agency** in the sphere of attention cannot be overstated.

Adequate policy interventions are long overdue that can regulate the **attention economy's** monopoly of our focus – for example regulation of social media offerings to limit attentional hijack, or replication of French workers' "right to disconnect".[89] While we work collectively towards these, we may also purposefully increase our own capacity to **resist digital manipulation**. For example, our innate capacity for mindfulness—a particular kind of attention—can be cultivated through practices that protect against proactively distracting stimuli and enhance self-control and presence.[90]

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* Rapid and uninterrogated adoption of digital technology is considered a significant cause of current record levels of anxiety and worry.[91] Social media is believed to play a part in driving down self-esteem and robbing young people of their wellbeing.[92]

2.2.2 Overcoming bias; seeing clearly

"We see the world as 'we' are, not as 'it' is; because it is the 'I' behind the 'eye' that does the seeing."

– Anais Nin

Commonly we assume that beliefs and choices are based on information about what's really happening in the world, gathered by the senses. But cognitive science shows that, usually, we see the world we expect to see; quickly classifying new experience according to existing models.[93] These short-cuts are fundamental to coherent understanding and decision-making amid chaotic sensory stimuli.[94] However they also contribute to '**confirmation bias**', limiting our receptivity to novel information and possibility.[95] At a societal level, bias towards existing beliefs and judgements reduces our capacity to respond skilfully to a changing world – contributing, for example, to a 50 year delay in meaningful action on climate science.[96]

> **Widespread climate denial is not simply a meme propagated by vested interests – it's a normal, protective mechanism that involves avoiding or minimising uncomfortable truths in favour of less challenging narratives.**

Susceptibility to confirmation bias can be increased by experience of worry or perceived threat (see Section 2.2.5), or the **cognitive dissonance** that arises when new evidence reveals misalignment between our behaviour and our values.[97] Thus widespread **climate denial** is not simply a meme propagated by vested interests – it's a normal, protective mechanism that involves avoiding or minimising uncomfortable truths in favour of less challenging narratives. **Climate disavowal**, a form of 'soft denial' that admits the facts but plays down the threat, similarly distorts perceptions to limit discomfort – and may now be more common than outright denial.[98]

In the context of collective action at all levels of society, positive feelings like hope play a vital role in overcoming resistance to uncomfortable truths, limiting 'doomerism', expanding possibility and sustaining effort.[99] However, **willful optimism** about chances of success can itself become a form of soft denial, and can perpetuate complacency or misdirected efforts.[100] To initiate the extraordinary turnarounds calls for **acceptance** of the real extent of crises, including possible limits to 'fixing' them. Effective strategies can only be based on clear-eyed assessment of a situation, and leaders have a role in balancing appropriate hope and realism in public communication; combining motivation with attunement to the depth of the crisis.*

Biases and defence mechanisms present powerful psychological barriers to collective action and political will for systems change; polarising debate and hindering consensus-building.[101] Meta-cognition, self-awareness and education around these common mechanisms can

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* The pioneering eco-philosopher Joanna Macy introduces the concept of 'Active Hope'; preserving the motivating power of hope amid planetary crisis while remaining connected with reality and avoiding denial. Macy contrasts the hope that rests on expectation with hope that motivates action to bring about desired outcomes: "something we do, rather than something we have".[105]

reduce their undermining influence on critical thinking and in decision-making.[102] Interventions have been developed specifically to help civil servants manage complex decision-making by combining awareness-based practices with inquiry into predictable distortion of thinking by emotions and biases.[103] In the US, pioneering mindfulness- and compassion-based 'ColorInsight' practices support developing awareness of racial bias; in service of effective collaboration towards social change.[104]

2.2.3 Developing sense-making; grasping complexity

"No man was ever wise by chance."

– Seneca

The escalating complexity of human systems is outstripping our capacity to manage them – even while our power to cause catastrophic harm accelerates. The interconnected crises of sustainability and inequality emphasised in *Earth for All* are characterised by '**adaptive**' problems: they cannot adequately be addressed with current knowledge and skills. Rather, they demand that we learn—or un-learn—and grow.[106]

At both individual and societal levels, it's possible to **develop** the cognitive, emotional and relational capacities to better comprehend and navigate complexity. Wisdom traditions have long advocated the societal benefits of cultivating heart and mind, and contemporary research is beginning to catch up.[107] Science shows that adults develop psychologically throughout life, that practice can dramatically **alter brain structure** and activity, and that inner development programmes for individuals and teams can have profound positive effects on inner capacities.[108]

Trainable cognitive capacities associated with complexity awareness and sustainable attitudes include **meta-awareness** or **meta-cognition**—the capacity to be aware of awareness or to think about thinking—and **cognitive flexibility**: the ability to readily switch attention between concepts, and comprehend multiple concepts simultaneously.[109] In particular these cognitive capacities support our ability to intentionally switch perspective, and evaluate competing paradigms.[110]

Meeting the complexity of our times means more than achieving hyper-rationality. Cognitive scientists describe another innate 'mode' of mind, deprioritised by modern life, that comprehends relatedness and enables us to perceive the world as interconnected and whole.[111] Indigenous teachings are grounded in this more direct awareness of interdependencies – and contemplative practices tend to develop this capacity for nonlinear, **'holistic-intuitive' cognition**.[112] *

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* 'verbal-conceptual' describes a mode of perception sometimes associated with the brain's left hemisphere, that interprets the world as a collection of abstract pieces and rules – isolated symbolic units that serve rational problem-solving. In this mode, thought to be dominant in modern societies, we process experience in inanimate 'chunks', oblivious to the whole system in which we act.[113] In contrast, the more primary 'holistic-intuitive' mode of mind, associated with the brain's right hemisphere, remains open to the changing environment and updates its working models of reality intuitively. This open, receptive mode renders perception with a lens of relationship and wholeness.

2.2.4 Activating imagination; unleashing possibility

"The great instrument of moral good is the imagination."

– Percy Bysshe Shelley

Imagination has a profound part to play in systems change, but is easily overlooked. Often confused with fantasy or frivolity, imagination can be dismissed as a distraction from what's 'real' or serious. This is a mistake, however: imagination underpins our ability to understand our reality and envision the future – a vital inner capacity to enable outer change.[114]

Implicit in systems of meaning outlined above, imagination is foundational to beliefs, identity, values, and what we consider important and sacred. As Iain McGilchrist outlines in his hemispheric theory, imagination (paired with intuition) is another **way of perceiving the world** – complementary to science and reason. Imagination underpins sense-making; helping us model uncertainty, relationships, complexity and paradox.[115]

Imagination is a core component of empathy – enabling the ability to 'step into somebody's shoes'. It helps overcome heuristics such as salience bias and hyperbolic discounting to expand circles of care and responsibility to include those distant in time and space.[116] Integral to ethical decision-making, **moral imagination** includes the ability to evoke the perspectives and experiences of other beings, foundational to action on behalf of e.g. future generations, other cultures, and other species (see also 3.2).[117]

> Addressing global crises and building a viable, life-sustaining society requires the ability to envision possible alternatives.

What we can imagine influences what we believe is possible – and vice-versa. Addressing global crises and building a viable, life-sustaining society requires the ability to **envision possible alternatives**. Imagination is a basis for positive agency, building motivation to act *before* a crisis enforces reactivity. This kind of agency is rooted less in linear plans for the future, than openness to present possibility and creativity; sometimes described as the 'art of the possible'. Futures Methodologies use cognitive and embodied exercises to help scaffold different visions of the future.[118]

Metaphor work, myth and immersive storytelling can access different parts of the brain, allowing people to experience different ways of being, perspectives and scenarios.[119] **The arts** have always played a profound role in shaping these channels of collective imagination; and popular culture, from films, theatre and music to fiction, news stories, cartoons and social media, remains pivotal in activating shared values and visions for the world. Art furthermore has a crucial role in shaping our notions of beauty and the desirable – an aesthetic that valorises the beauty of e.g equality, balance, consumer-restraint and sacrifice could be a precondition for entrenching behavioural norms aligned with these values.[120]

2.2.5 Promoting resilience; mitigating threat response

"I can be changed by what happens to me. But I refuse to be reduced by it."

– Maya Angelou

Awareness of ecological breakdown and threat to life contributes to widespread and serious **climate distress** – most acutely amongst young people.[121] Those working in related fields shoulder a heavy emotional burden, contributing to reduced effectiveness and burnout.[122] More generally, young people worldwide are experiencing unprecedented levels of mental ill-health.[123] Difficult emotions are normal when processing adversity, and represent a healthy response to unhealthy societal conditions. They shouldn't be hastily pathologised or 'treated'. However, persistent distress can harm health, reinforce unsustainable behaviour, perpetuate denial and inhibit climate action across society.[124] As climate impacts intensify, strategies for adaptation and system change cannot ignore the role of **psychological resilience**. Resilience involves more than recovery, entailing adaptability and even maturation amid change; sometimes associated with 'post-traumatic growth'.[125] Evidence-based practices can support the cultivation of this natural capacity.[126] Public acknowledgment of citizens' distress and efforts to address resilience furthermore present important routes to broadening climate discourse and motivating collective action.[127]

> Neuroscience suggests that passivity might be a default response to prolonged difficult events, and that a sense of agency in this context must be actively learned, with important implications for climate action.

Interrelated with both individual and community resilience is the neurophysiology of humans' response to threat. **Threat response** is governed partly by underlying brain-body states; patterns of nervous system activation that motivate us to seek safety – often summarised as 'fight/flight/freeze'. Although adaptive in our evolutionary landscape, in today's world fight/flight responses can inhibit empathy, contributing to extremist views, **'othering' dynamics and social tension**.[128] * The 'freeze' response can be equally maladaptive. Indeed, neuroscience suggests that **passivity** might be a default response to prolonged difficult events, and that a sense of agency in this context must be actively *learned*, with important implications for climate action.[129]

Individuals and groups may furthermore become inclined towards or even 'stuck' in patterns of threat activation through traumatic experience. Approaches that allow individual, collective and intergenerational **trauma** to be acknowledged and healed have much to contribute to social cohesion and collective action.[130]

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* Feelings of anger are part of a normal emotional spectrum and productive in certain circumstances.[138] As far back as Aristotle, philosophers have considered righteous indignation a moral virtue. However, aggressive or impulsive expression of anger can also be highly destructive for individuals and groups, increasing feelings such as fear and blame, thoughts of revenge, and incivility that can damage collective agency.[139]

Our social environment impacts our nervous system in turn – for example, antagonism within a group can raise nervous system activation for individuals. Without resilience strategies, challenging experience can thus contribute to a **vicious circle** of increasing reactivity and declining wellbeing and **social trust**; a dynamic of particular relevance to *Earth for All's* current models.[131] Conversely where e.g. better mental health support and higher individual resilience reduces threat reactivity, communities are less susceptible to fragmenting effects of e.g. polarisation and radical populism, supporting group resilience, with important implications for sustainable behaviour.[132] Such cycles demonstrate strikingly the interconnection of individual, societal and planetary health.[133]

As *Earth for All* highlights, social trust arises from trustworthy social organisation; and is naturally intertwined with economic factors like inequality.[134] Citizens should not feel unduly responsible for their own wellbeing in poor conditions.[135] However, amid compound crises, humans *also* need **strategies for resilience** less dependent on particular material circumstances, to protect wellbeing and cohesion and avoid worsening vicious circles.[136] *Alongside* the case for economic reform, **evidence-based psychological approaches** and investment in strengthening community can help counteract reactive and avoidant tendencies, nurture connection and restore social fabric in the face of profound uncertainty.[137]

2.2.6 Cultivating the heart; embodying connection

"What really counts in each of us and in our lives are the bonds of love – which can make one's life not an episode but part of a larger continuum."

– Aurelio Peccei

Among the dubious legacies of the Enlightenment worldview in today's policy thinking is a tendency to deprioritise qualities of the heart that have bound societies together across millennia. However, the 'Selfish Gene' theory is waning in influence and more holistic, contemporary accounts of evolutionary biology and human history demonstrate that our unparalleled **capacity for collaboration** has been equally if not more important to our 'success' as a species.[140] In particular, qualities such as love and compassion are 'negentropic' in human systems – cohering forces that create order out of chaos.[141] What we learn to value or love, and the depth to which we love it, shapes our world. And from Gandhi to Che Guevara, revolutionary leadership has long been "guided by a great feeling of love".[142]

Most religions treat **love** as sacred in some way: fundamental to divine nature, and usually to human nature. True to rationalist-materialist thinking, however, a quality once held most transcendent and ineffable is often treated by secular society as one transitory emotion among many. Love may be the most powerful intrapsychic force we experience, yet among the least researched or discussed in the context of politics, system change or sustainability.[143] As such it remains one of the greatest forces for change yet to be properly unlocked in human systems. In

the political sphere, a platform of 'Radical Love' has recently been championed as an antidote to polarising narratives and populism; and had its first major political success in the Istanbul mayoral elections of 2019.[144]

Although love remains a tricky subject for science to pin down, qualities of heart including **compassion**, **empathy** and '**kama muta**' (the feeling of being deeply 'moved') have been more thoroughly researched and are associated with social change and sustainability mindsets and behaviours.[145] For example, empathy has been found to increase sharing behaviour in economic interactions, whilst increased compassion strengthens belief that humans are causing the climate crisis, and boosts sustainable decision-making and support for climate change mitigation policies.[146] Compassion is also associated with overcoming the bystander effect—bias against intervening in critical situations when other observers are present—currently rife across the planet.[147]

Such emotional capacities can be actively undermined or intentionally nurtured, with civilisational impact. As described in 2.1, many evidence-based practices can support us to restore attention to what's really important to us, and cultivate innate capacities of the heart and the values that mutually reinforce them. In cultures influenced by Modernist separation of mind and matter, developing **body awareness** is foundational in cultivating these embodied qualities – for example, body awareness is a precondition for empathy.[148] Heart qualities are also supported by a social environment that habituates connection. Widespread isolation from others and from nature is at the core of our crises, and considerations of community bonds, embodied nature connection and other relational practices are imperative in system approaches.[149]

Wherever a rationalist paradigm is dominant, the driving role of emotions of all kinds in decision-making can be drastically underestimated.[150] Adequate systems understanding depends therefore on cultivating the related capacity for **emotional intelligence**, which is likewise a vital foundation of collaboration and collective action.[151]

3 – Application and action

While core narratives, psychological mechanisms and inner capacities are clearly implicit in our dual crises of sustainability and inequality, translating matters of heart and mind into meaningful activation for system change may still intuitively seem implausible. More specifically, talk of broad shifts in mindsets and systems of meaning (2.1) can seem far-fetched, whilst the more straightforward cultivation of inner capacities such as attention regulation or critical thinking (2.2), being relatively feasible, may seem superficial. As Roberto Unger has it, *"Anything that can be proposed in the present climate of opinion is likely to be dismissed as either trivial or utopian"*.[152] This familiar binary however excludes another, more **'programmatic' lens** that allows iterative changes to have compound effects, and interdependent macro and micro shifts to reinforce each other over time.

Here we introduce some leading approaches in inner-outer transformation whose synthesising narratives and applications give substance to this view. Myriad efforts by innovators and researchers are evolving theory and practice in this territory at all scales, and a brief introduction

to some of the most prominent may help readers imagine how inner considerations can inform models for action, with transformative implications.

3.1 Capacity development – transformative inner skills, qualities and capacities

Leaders and teams are increasingly expected to demonstrate **inner qualities** like authenticity, self-awareness, critical thinking, emotional intelligence and empathic listening, although many are still uncomfortable with these 'new' expectations.[153] Training to support these domains is ever more widespread and increasingly supported by robust research, but tends to be piecemeal and poorly integrated with other workplace practices and culture.[154] * Recently, however, frameworks have been developed to provide the structure and language required for a more integrated approach, embedded in a sustainable transformation agenda.

For instance, the **Inner Development Goals** (IDGs) framework, launched in 2021, was developed with input from over 1,000 experts to support work towards the UN's Sustainable Development Goals (SDGs). This communication framework consists of 23 transformative skills and qualities across five dimensions: Being, Thinking, Relating, Collaborating and Acting.[155] These inner goals are being integrated into training programmes for public servants and within multinational corporations.[156] They're also finding a place alongside physical sciences as part of 'climate literacy' in schools.[157]

In 2022, the European Commission report, '**GreenComp**', provided a framework of 12 sustainability competencies within the domains of 'embodying sustainability values', 'embracing complexity', 'envisioning a sustainable future' and 'acting for sustainability'.[158] More recently, the RSA launched the **Capabilities for Life** framework, proposing '8 C's' for navigating global challenges, towards a 'regenerative economy'. Capabilities—for example 'citizenship', 'change' and 'care'—manifest differently depending on their interaction with a spectrum of mindsets from individualistic, to human-centric to 'life-centric'.[159] In an academic context, the Inner-Outer Transformation Model makes the linkages between inner qualities, social change and sustainability more explicit. [160]

Workplace training innovations explicitly geared to work with such frameworks and support action on climate and nature emergencies are quickly generating an evidence base and high-level interest. Examples include the **Inner Green Deal**, active in the European Commission, and **Mindfulness-Based Sustainability Training**.[161] Many advocacy and 'mainstreaming' initiatives with global reach now promote particular inner qualities and associated practices in the service of societal and planetary health. Examples include the Global Compassion Coalition, The Mindfulness Initiative, Prosocial World, UNDP's Conscious Food Systems Alliance and the Wellbeing Project.[162] Academic institutions increasingly offer related education.[163]

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* Training methods with the most extensive evidence base include Acceptance and Commitment Training (ACT), compassion training, mindfulness training, and Non-Violent Communication. The word 'mindfulness' is now mentioned in the title, abstract or keywords of over 20,000 academic articles.[164]

3.2 Working with mindsets in teams, organisations and systems.

Development of inner capacities can lead to shifts in mindset, however such shifts may also be more directly enabled through approaches that create conditions for new ways of thinking and behaving.

For instance, the change management method **Theory U** has been used to shift stuck patterns of thinking and behaviour across diverse situations, including educational reform, UN agencies accelerating implementation of SDGs, community and multi-stakeholder work, and ethical transformation in business – facilitating mindset shift from 'ego' to 'eco'.[165] In organisations, institutions, and daily life we often focus on the 'what' and 'how' of change: what result do we want and how do we get there? Theory U adds a dimension of exploring the *interior condition* of the intervenor and system, asking "what are the deepest origins of our intentions and actions?" Suspending judgement and redirecting attention from habitual thought patterns, participants open mind, heart, and will to new arenas of possibility. In addition to awareness-based practices, the methodology offers practical tools, such as stakeholder dialogues and co-creative initiatives, to bridge the gap between current reality and desired future, enabling incremental systems change.[166]

> **Through experiential imagination, visioning and group exercises participants can shift worldviews and deeply held beliefs about what is possible, how change happens, and the role we can play in shifting paradigms, opening up new possibilities.**

Other approaches focus more exclusively on shifting specific mindsets related to sustainability and social change. **Moral Imaginations**, for instance, uses an imagination-based pedagogy to connect to moral courage, strength and action. The approach emphasises that all meaningful and moral action begins in imagination, attention and perception, and that these 'muscles' can be trained for the good of the whole. Through experiential imagination, visioning and group exercises participants can shift worldviews and deeply held beliefs about what is possible, how change happens, and the role we can play in shifting paradigms, opening up new possibilities.[167] Collective imagination exercises expand the sense of self and build kinship with generations past, present and future and the more-than-human world. The practice has been used in governments, corporations and NGOs to bridge imagination with strategy and policy, with the aim of creating visions and the longing for a life-centric society.[168]

Other influential approaches addressing mindsets directly includethe **Compassionate Systems Framework** developed by Peter Senge and Mette Miriam Böll at the Centre for Systems Awareness, transformational leadership development based on the work of Monica Sharma and associated 'Three Spheres of Transformation' from Karen O'Brien.[169] Research consultancies and creative agencies like Frameworks Institute and Futerra help clients to understand the impact of the worldviews, framing and deep stories implicit in their communication, and provide free resources to help build public will for sustainability and progressive change.

3.3 Connecting individual, societal and planetary flourishing – Wellbeing Economics and inner capacities for a healthy democracy

As acknowledged by *Earth for All*, a growing movement seeks to challenge directly the paradigm of economic growth and replace Gross Domestic Product (GDP) with wellbeing as a measure of societal success.***** **Wellbeing Economics** frames qualities of citizens' inner lives, such as mental health or community connections, both as important ends in themselves and as enabling factors in the interdependent wellbeing of individual, society and planet.[170]

The movement encompasses both bottom-up and top-down approaches. For instance, the **Wellbeing Economy Alliance** is a global collaboration between organisations, grassroots movements and individuals working to transform the economic system, whilst the **Wellbeing Economy Governments partnership (WEGo)** includes the governments of Scotland, Iceland, New Zealand, Wales and Finland, with active participation from Canada.[171] The high-profile nature of these initiatives could play a major role in rebalancing the perceived importance of inner and outer conditions for prosperity, and accordingly increase the funding allocated to neglected 'inner' interventions and initiatives.

The **Kingdom of Bhutan's** bold, national-level experience of promoting **Gross National Happiness (GNH)** goes further in explicitly integrating inner and outer definitions and determinants of societal flourishing. While acknowledging the importance of material development in meeting basic needs, GNH proposes that the *purpose* of the economy is not GDP growth – but rather promoting the happiness and wellbeing of all life. Both inner and outer domains of wellbeing (e.g. psychological wellbeing, community vitality, time use, good governance, living standards, environment) are measured in a national GNH survey, which has also guided policy making. Moreover, a form of inner cultivation which has been described as "leadership of the self" encourages citizens to embody lives guided by values such as kindness, compassion and integrity, in order to manifest positive change in the world, rather than solely expecting leaders to deliver it. Bhutan's expression of GNH as an example of wellbeing economics has arisen within the context of its historical roots in Mahayana Buddhism, including its ethics, philosophies, and contemplative traditions.[172]

Similarly, the **Wellbeing of Future Generations Act in Wales** encourages holistic approaches focussed on the long-term that incorporate psychological, emotional, behavioural and perceptual factors when shaping sustainability-related policies.[173] Wellbeing goals for the country include resilience, health, equality, cohesion and global responsibility.[174] As part of this agenda, inner development classes on topics like trust, emotional intelligence, mindfulness, and relationship building are available for free to all public and third sector staff in Wales through a government agency.[175]

Some social philosophers have argued that the development of inner capacities amongst a substantial portion of the voting population is required for the effective **functioning of democracy** in a complex world.[176] Important historic precedent supports this view. The Nordic concept of

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* GDP does not distinguish between economic activity that is generative for society from that which is deleterious, whilst failing to measure activities that fall outside the market, yet undeniably determine our happiness. Wellbeing on the other hand is thought to be a better measure of that which makes life worthwhile.[179]

folkbildning, building on the German Idealist philosophers' notion of **Bildung**, emphasises the dialectical relationship between the development of individual consciousness and societal progress.[177] A comprehensive programme that articulated the philosophy of holistic personal development, intertwining individual self-cultivation with cultural and intellectual maturation, was developed at the end of the 19th century and maintained well into the mid-20th century. This free six-month programme reached up to ten percent of the adult population, with applicants from all parts of society. This folkbildning effort is believed crucial to the introduction and flourishing of successful democracies across Nordic countries, which consistently lead the world in measures of happiness, development and environmental performance.[178]

3.4 Conscious connection

Implicit in most inner-outer approaches to sustainability and system change, and explicitly central to some, is the restoration of **conscious connection** – and consciousness *of* connection. Emphasis on (inter-)relationship is critical in overcoming the hyper-fragmentation of dominant analytical perspectives, and adopting views more in keeping with natural complexity.[180]

Increasingly, attention is drawn to the ways in which more relational approaches, such as African *Ukama* and *Ubuntu* ethics, can transform understanding in fields such as "sustainable development", that are Eurocentric in origin and often entangled in reductive modernist principles implicit in sustainability crises.[181] Scholars highlight prioritisation of relatedness, equality and human belonging to a community of life contributing to an ethic of interdependence.[182]

Some initiatives seek specifically to counteract the alienation, loneliness, polarisation and fragmentation of group identities ascendant in Western cultures, which inhibit collective action. For example, **A Larger Us** seeks approaches to global crises rooted in belonging, bridge-building and consciousness of threat response and trauma, aiming to turn "breakdown loops" – vicious cycles of psychological and political harm, into "breakthrough loops" of political and psychological positives.[183]

Developed by Joanna Macy, ***Work that Reconnects*** has for decades combined contemplative practice with systems thinking to help people discover and embody their interconnectedness with others and with nature, in the service of collective action. This interactive group process supports participants to respond creatively to crises rather than becoming overwhelmed by distress.[184]

A research collaboration between The Mindfulness Initiative and Lund University Centre for Sustainability Studies (LUCSUS) frames the climate crisis as a '**relationship crisis**' characterised by disconnection, and bases **policy recommendations** on inner approaches such as mindfulness and compassion training as **enablers of *re*connection** – to self, others and nature.[185] LUCSUS also hosts the Contemplative Sustainable Futures Program for learning, networking and knowledge development on the role of inner dimensions and (re)connection for sustainability and systems transformation.[186]

Myriad smaller initiatives work to foster conscious **connection with nature** through facilitated, embodied experience. From forest schools to contemplative retreats, initiatives promote psychological connection through repeated active engagement and appreciation of natural environments.[187]

Sustainability narratives based in reconnection are often closely linked with **Indigenous knowledges**. A choice has been made to avoid repeating the same caveat throughout: despite minimal acknowledgement, Indigenous respect for nature, and critique of domineering and extractive paradigms has tacitly influenced 'Western' sustainability thinking throughout its history.[188] Likewise, Indigenous knowledge and embodiment of belonging and interconnection heavily influences more recent inner-outer approaches to sustainability and regeneration, with many practices for e.g. nature connection adapted directly from traditional origins.[189] Therefore, while it would be inappropriate to reduce Indigenous wisdoms to an 'application' of particular insights, their foundational contribution is unquestionable. Crucial to necessary inner-outer system change is respectful knowledge exchange and the integration of diverse systems of thought towards a new paradigm for sustainability. To value indigenous wisdom without reinforcing colonial mindsets and exploitation remains a profound ongoing challenge for global environmental stewardship in both inner and outer dimensions.[190]

> **Indigenous respect for nature, and critique of domineering and extractive paradigms has influenced 'Western' sustainability thinking throughout its history.**

Conclusion

Earth for All acknowledges that a Giant Leap towards an equitable, ecological global system will require "active governments willing to reshape markets and drive long-term visions for societies". Needless to say, if this were our current state of governance—capably oriented towards global cooperation in the long term, planetary interest, not to mention energised by an ambitious public mandate—then something like the Giant Leap scenario would be in progress already. To this end, if we are not simply waiting for a miracle, then we also urgently require understanding of the psychological and cultural conditions that can support necessary political will and vision at the global level.

> If we are not simply waiting for a miracle, then we urgently require understanding of the psychological and cultural conditions that can support necessary political will and vision at the global level.

A growing body of scientific research and practical application now confirms the importance of such inner factors to sustainability. Indeed, their integration into sustainability science has accelerated in recent years, with the 2022 Intergovernmental Panel on Climate Change (IPCC) reports on mitigation and adaptation referencing "inner transitions for sustainability" for the first time.[191] In the interest of completeness and accuracy, systems thinking now requires a revolution in integration of inner capacities for transformation.[192] Interventions require the same inner-outer integration – for the sake of uptake, efficacy, and access to deeper leverage points.

This paper offers the briefest introduction to just a few elements of this essential inner dimension, and the need to challenge existing theories of change in this light. Beyond these pages a vast and growing field of knowledge exists to be explored – and as attention to this area increases, ever more principles, understandings and approaches will emerge.[193] All of the elements included here are actionable through evidence-based approaches, from narrative framing to contemplative training, and each section above could be accompanied by a range of recommendations. The output of several decades' innovation and learning in the field of inner-outer transformation waits to support policymakers ready to include the inner world in concrete plans for transformation.[194] However, to make specific 'inner' policy recommendations, separate from the 'outer', would be to reinforce dualistic thinking, when our task is fundamentally a matter of integration.[195]

First then, we urge reinterpretation of *Earth for All*'s existing extraordinary turnarounds in this more holistic light. Any resulting recommendations and policies might still be considered 'externally-led', but would acknowledge inner conditions for success and potential inner leverage points throughout the system. Following this, integration might best be served by devising some 'inner-led' turnarounds. While these would likewise entail important external enablers and dependencies, their primary focus would be upon turning around the inner conditions of un-sustainability: transforming breakdown loops into breakthrough loops.[196]

The simpler aim of this paper is however to urge a single overarching turnaround: **a widespread turn towards the under-appreciated inner in all system thinking, discourse, policies, allocation of resources and strategies for change**. Without such a turn, we may expect that systems solutions of the necessary depth will continue to evade us. To achieve it however would open the field of possibility not only to adequate crisis response, but to human flourishing and improved psycho-social quality of life, the like of which we have not yet learned collectively to hope for.

If this proposition sounds unduly utopian, we might remember that in recent centuries, the lion's share of human endeavour has been channelled into improving exterior conditions for (some) humans, with startling effects. By comparison, scarcely any collective energy has been directed towards inner-led improvements in quality of life. The low-hanging fruit of material progress is gone, and the balance now due at a planetary scale. By contrast, staggering potential for improving inner wealth and conditions remain virtually unexplored. We are replete with obvious ways to change inner life for the better, with cascading material benefits. Only consider the case of mental health – the poor cousin of physical health when it comes to funding and yet foundational to quality of life, inner and outer, for individuals and communities.

Indeed, as R. Buckminster Fuller suggests, the world may now be "too dangerous for anything *less* than utopia". From now-unavoidable climate impacts to escalating AI, authoritarianism and disinformation, no future global scenario is without significant threat. Achieving the necessary societal transitions will be anything but neat and easy. To resist *dys*topian futures amid coming disruption will require nothing less than revolution in collective inner resource. What qualities and values must we embody in order to navigate wisely the world we have created – as groups, as coalitions, as a species? To choose policy and technology that benefits all and avoids deepening inequalities? To maintain our humanity towards one another amid unstable conditions, and avoid spiralling protectionism and conflict? What stories do we now need to tell about who we are, to protect our planetary life together?

Knowing only that our world will change beyond recognition, we have an opportunity to consider what foundations we would wish to build change upon. Permitting ourselves at this late hour to imagine a Giant Leap in socio-economic transformation, we must likewise imagine the great shift in inner conditions that would allow it.

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Earth4All is an international initiative to accelerate the systems changes we need for an equitable future on a finite planet. Combining the best available science with new economic thinking, Earth4All was designed to identify the transformations we need to create prosperity for all. Earth4All was initiated by The Club of Rome, the Potsdam Institute for Climate Impact Research, the Stockholm Resilience Centre and the Norwegian Business School. It builds on the legacies of *The Limits to Growth* and the planetary boundaries frameworks.

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