# Interior transformation on the pathway to a viable future

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**Abstract**

A common response to the global sustainability crisis is to argue that human values and culture need to transform. However, the nature of this interior transformation is rarely explored in any detail. Instead, transformation is held up uncritically as the saviour that can get us out of trouble. In this paper, I apply a personal causal layered analysis (CLA) to tease out the dimensions of interior transformation for a viable future in more detail. The analysis draws out competing narratives of interior transformation and explores ~~emerging strategies for~~the potential of these narratives to ~~facilitating~~ facilitate transformation of values and consciousness. A story of a thriving Earth emerges as a key cultural resource for interior transformation.

Keywords: transformation; causal layered analysis; future narratives

## Introduction

It is now abundantly clear that human actions are altering the Earth on a planetary scale (OECD 2012; Steffen et al. 2015) while failing to deliver human well-being (Dearing et al. 2014). Humans possess the power to change the climate, alter water and nutrient cycles and send species and even ecosystems into extinction. So far, we have shown little ability to control this power. It could be harnessed for planetary restoration and creativity, but is instead delivering destruction that makes our planet less habitable for humans and other forms of life. We are facing what has been described as a global megacrisis (Ramos 2011), threatening the viability of human futures.

In this paper, my goal is to use futures thinking to explore the nature of the transformations required to shift towards a viable pathway for human civilisation. Sohail Inayatullah (2008) outlines six pillars of transformative futures thinking: mapping; anticipating; timing; deepening; creating alternatives; and transforming. Here, I focus particularly on deepening thinking about human transformation and identifying alternative perspectives on transformation, as a foundation for transforming practice. Transformation implies a fundamental qualitative shift in the nature of the entity under examination – literally, a change in form. In this paper, I am specifically interested in how human psycho-social structures – beliefs, values, worldviews and cultural commitments – could change form in response to the sustainability crisis. Human interior transformation would be characterised by the emergence of qualitatively new psycho-social structures, which may be better adapted to addressing the sustainability crisis.

A key starting point is that there is a lot of wishful thinking about human interior transformation. A common diagnosis of the current human situation is that we are heading towards, or already in, a crisis, which can only be averted through transformation of human values and culture (see for example Gilding 2011; Raskin et al. 2002; Slaughter 2010, 2014; Taylor 2014). While I agree with much of this diagnosis, the characteristics of the necessary transformation are rarely explored in any detail and few authors provide tangible suggestions for facilitating and supporting transformation of human psychological or cultural structures. There are notable exceptions; for example, Sattman-Frese and Hill (2007) explore the psychology of ecological transformation in great detail, and Hill (2014) has

1

written about the personal transformation needed to transition from shallow to deep notions of sustainability. Integral theorists, too, have explored stages of interior transformation in the context of sustainability challenges (e.g. Brown 2011; Esbjörn-Hargens & Zimmerman 2009). As valuable as these contributions are, they have had little impact on mainstream framing of the sustainability crisis. As a result, it is all too common for the idea of human transformation to takes on an almost magical character, held up (by some) as the solution to all of our ills. It is the solution that many sustainability advocates fall back on when all other approaches seem to have been exhausted – but its feasibility remains uncertain. In this paper, I use a personal application of causal layered analysis (CLA) to begin a process of looking more deeply at the nature of human interior transformation. The objective is to test the feasibility of consciously facilitating interior transformation as one strategy on the pathway to a viable future.

## Causal Layered Analysis

CLA is a futures theory and method developed by Sohail Inayatullah. Inspired by poststructural and critical thought, particularly the work of Foucault, CLA 'takes as its starting point the assumption that there are different levels of reality and ways of knowing' (Inayatullah 1998, p. 820). Exploring these different 'ways of knowing creates the opportunity for "transformation" – opening up new conceptual spaces where genuine alternatives can be discovered and considered' (de Simone 2004, p. 486). As such, CLA is a method that is particularly well suited to exploring the concept of human interior transformation.

Inayatullah defines four levels of reality. The first, or shallowest, is the **litany**, which is the official public or media description of an issue. This is 'the day-to-day future, the commonly accepted headlines of the way things are or should be' (Inayatullah 2008, p. 12). Descriptions at the level of the litany focus on quantitative trends and problems. Explanations tend to be visible and obvious and issues are presented as unconnected, engendering feelings of helplessness and apathy (Inayatullah 2004, pp. 11–12). Identified solutions tend to be short-term and the onus is on the government, or those with power, to implement the solutions (Inayatullah 1998).

The second level 'is concerned with **systemic causes**, including social, technological, economic, environmental, political and historical factors' (Inayatullah 2004, p. 12, my emphasis). ~~It provides interpretation based on quantitative data, technical explanations and academic analysis, with a goal of providing causal explanations. Good work at this level analyses the actions that precipitate an issue and explores the roles of various actors, but rarely reaches back far into the past or forward into the future. While assumptions may be questioned, the paradigm within which a problem is framed remains unquestioned (Inayatullah 2004, p. 12). Solutions are often located in civil society, in partnership with institutions (Inayatullah 1998).~~

The third level 'is concerned with structure and the discourse/worldview that supports and legitimates it' (Inayatullah 1998, p. 820). This is the level of **culture or worldview**. ~~, where:~~

~~The task is to find deeper social, linguistic and cultural processes that are actor-invariant (not dependent on who the actors are) and to some extent system-invariant. Discerning deeper assumptions behind the issue is crucial here, as are efforts to re-vision the problem. At this stage, one can explore how different discourses…do more than cause or mediate the issue, but constitute it (Inayatullah 2004, p. 12).~~

~~At this level, it becomes clear that the way problems are seen depends on the perspective that is taken. There is a focus, at this level, on uncovering frames, paradigms, mindscapes and discourses (Inayatullah 1998). Interestingly for this paper, solutions are often found 'in consciousness transformation, in changing worldview, in rethinking politics of reality' (Inayatullah 1998, p. 829). The focus shifts from the short-term to the long-term.~~

The fourth and deepest layer is concerned with **metaphor and myth**, focusing on 'the deep stories, the collective archetypes, the unconscious dimensions of the problem or the paradox' (Inayatullah 1998, p. 820). These deep stories can fuel or blind our vision (de Simone 2004). At this level: 'The language used is less specific, more concerned with evoking visual images, with touching the heart instead of reading the head' (Inayatullah 2004, p. 13). Problems are constituted by unconscious core myths that need to be brought into consciousness. The intent is to draw out and deconstruct

conventional metaphors, articulate alternative metaphors and bring the unconscious and the mythic to futures work. Solutions may then emerge in non-rational ways.

CLA moves up and down these four layers and explores the plural scenarios within each layer that are the seeds of alternative futures. The intent is to integrate understanding and solutions emerging from each of the layers. CLA is often used as a collective workshop method, but here I apply it as a personal transformative approach. As such, it is important to acknowledge that this is an idiosyncratic journey through the layers that is coloured by the contexts and literatures I am most familiar with. I have attempted to be both inclusive and parsimonious in the perspectives I discuss, but no doubt there are important perspectives that are left out. Also, while all the layers are of interest, I was particularly interested in what new stories might emerge at the deepest level to guide or inspire interior transformation. This focus is driven by a conviction that the stories we are able to collectively imagine and tell about the future matter – that they are a critical resource for transformation (Yusoff & Gabrys 2011). Below, I consider what emerged for me as I explored each of the layers in turn with respect to human transformation.

## The Litany

At the litany level, we are bombarded on a daily basis with three types of "news" about the sustainability crisis: bad news about environmental trends; good news about technological breakthroughs; and endless debates about political responses. Starting with the bad news, the media breathlessly reports each new milestone in environmental destruction – species going extinct, glaciers melting, ecosystems collapsing, extreme weather events and so on. To take just one recent example, carbon dioxide levels in the atmosphere touched 400 parts per million (ppm) for the first time in at least 800,000 years on 2nd May 2013. This milestone prompted news stories around the world, with headlines like '*Greenhouse Effect: $CO_2$ Concentrations Set to Hit Record High of 400 PPM*' (Walsh 2013) and '*Carbon-dioxide concentrations hit their highest level in 4m years*' (The Economist 2013). Of course, $CO_2$ levels have been continually rising for a long time, and reaching this abstract milestone changes nothing of substance. It is merely an opportunity for the media and campaigners to create some new interest in climate change. As is common with the litany, there is not much that an

individual can do in response to this kind of news. No individual action can prevent the inexorable ticking over of $CO_2$ concentrations. Solutions are not presented, just worrying news about climate

change, deforestation, water wars, grinding poverty, and ecological and social collapse. While some people may use this news to motivate personal actions to reduce environmental impact, others are more likely to respond with fear, apathy, nihilism or fundamentalism (Randle & Eckersley 2015) (Eckersley 2008).

The second strand of the litany is entirely focused on solutions, typically presented in the form of technological breakthroughs that will save us from environmental destruction. Which technology will save us is open to debate – various forms of solar power, battery storage, nuclear power, carbon capture and storage, and geo-engineering are all presented as candidates. The most recent technological solution to ignite media interest is Tesla's Powerwall (Francis 2015), a large lithium-ion battery designed for home use that will store electricity generated from solar panels and promises freedom from grid connection and rising electricity prices, while also looking great. Where the environmental news tends to create fear and concern, the technological news reassures us. The connection between the two is easy to make: the environment is in trouble, but government and business are developing technologies that will save us. Therefore, we can go ahead with our lives as normal.

A third strand of the litany is best described as political gossip, focusing on the daily ups and downs of political responses to environmental challenges. This strand of the litany has been prominent in Australia over the last few years during political debates about pricing carbon. When Kevin Rudd became Australia's Prime Minister in 2007, there was support on all sides of politics for putting a price on carbon. That support rapidly evaporated and the media has closely followed all the political ups and downs. Most analysis is superficial, however. The complex political debate is reduced to a clash of slogans – a 'clean energy future' (Australian Government 2011) versus a 'great big new tax on everything' (Taylor 2009).[1] In the political battle, soundbites prevail and political point scoring drowns out the environmental challenges.

In this entire litany, there is almost no discussion of human transformation. Human values, lifestyles and cultural commitments are rarely questioned. There is a sense that human nature is fixed in the face of environmental challenges, technological determinism and political debate. In other words, the idea that transformation of human values and cultures might be a fruitful path towards sustainability has largely failed to penetrate the litany level. It is not on the mainstream agenda.

## Systemic Causes

Analysis at this level digs deeper, beyond fears of environmental apocalypse, technological breakthroughs and political posturing to look at the immediate origins of the sustainability crisis and a broader range of technological, economic, political and social causes and responses. This deeper and broader analysis opens up transformation of human values and culture as a possibility. However, there are diverse views on the feasibility, desirability and pace of such transformation. I consider several common arguments about human transformation below.

Probably the most common view is that transformation of human values and culture is unnecessary, either because environmental problems are overstated (e.g. Lomborg 2007; Plimer 2009) or because we can achieve the necessary changes in our technological and economic systems without significant sociocultural change (e.g. Garnaut 2008). The argument that environmental problems are overstated does not stand up to scientific scrutiny (for example, see McKewon 2012 for an overview of scientific responses to Plimer, 2009) and is supported by a relatively small minority of the population (Leviston, Walker & Morwinski 2012).

The argument that human interior transformation is not necessary to achieve transformation of technological and economic systems is much more pervasive. In this view, responding to sustainability challenges like climate change is a matter of shifting technological, economic and institutional policy so that our infrastructure changes around us, while humans carry on unchanged. Thus we see discussion about pricing carbon so that markets will take care of climate change, or investing in technological innovation so that new technologies will take care of climate change, or putting in place international agreements to limit greenhouse gas emissions. In these analyses, human transformation is

simply not considered; it is assumed that we can make the transition to a clean energy system without changing our way of life. Most of the time, this silence about human interior transformation is an omission, or blind spot. Occasionally, it is a conscious choice, as when George H. W. Bush famously stated at the 1992 Rio Earth Summit that 'the American way of life is not negotiable' (Vidal 2012). Either way, most of the time, human interior transformation is not discussed as a possible response to sustainability challenges.

When human interior transformation *is* considered, a common argument is that such transformation is not possible because human nature is fixed. Human nature can be fixed in different ways. Some argue that humans are naturally selfish and that this is a virtue (e.g. Rand 1964). The hegemonic neo-classical economic model of human choice is slightly less radical, but does claim that humans are uniformly rational beings that will act to maximise their utility (van den Bergh, Ferrer-i-Carbonell & Munda 2000), leaving little room for interior transformation. This rational choice model underpins modern Western capitalism and is a pervasive assumption in analysis of sustainability challenges. Others recognise plural human natures but argue that those positions arethe structure of that plurality is fixed and wholesale human interior transformation is not possible. For example, grid-group cultural theory identifies four types of human solidarity: hierarchical; individualistic; egalitarian; and fatalist (Mamadouh 1999). The potential for human transformation is constrained to movement between these four types, with no potential for emergence of something outside the established framework.

An alternative argument sees human interior transformation as both possible and desirable, but too slow to offer a viable pathway towards a sustainable human civilisation (Riedy 2010). As noted in the Introduction, human interior transformation implies a fundamental shift in interior structures, such as values and worldviews. Developmental psychology indicates that processes of interior development in adults are slow, inconsistent, unpredictable and personally challenging (Brown & Beck 2009; Kegan 1982). Little is known about ways of reliably triggering human interior transformation but it seems that successful strategies, such as meditative practice (Wilber et al. 2008) or transformative learning (Mezirow 2009), either take years of dedicated practice to deliver results or require substantial resources to implement (Riedy 2010). When coupled with sustainability challenges that require urgent

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responses, human interior transformation is often discounted as a feasible strategy in favour of strategies that work with existing values and worldviews.[2] In other work, I have called this type of approach 'translation', as it involves translating the intentions of change agents into language and frames that resonates with the existing interior commitments of individuals, rather than trying to change those commitments (Riedy 2010).

Others believe that human interior transformation can happen very fast and, indeed, is an inevitable response to sustainability challenges. For example, Paul Gilding argues that a series of cascading, overlapping crises lie ahead that will lead to a tipping point when 'denial ends, and the reality that we face a global, civilization-threatening risk will become accepted wisdom, virtually overnight' (Gilding 2011, p. 106). At that point, he argues, there will be a 'Great Awakening' in which humanity will respond with 'extraordinary, imaginative transformation and political shifts that will in this case be capable of bringing us back from the brink' (Gilding 2011, p. 106). For others, technological development drives this kind of rapid human transformation. Ray Kurzweil (2006) argues that the continuing exponential growth in technological development is leading us rapidly to a point – labelled the singularity – at which humans will merge with machines to transcend our biological limitations. In this radical, techno-optimist view of human transformation, sustainability challenges become irrelevant in light of almost limitless human potential to manipulate our environment.

The final perspective I will consider here is that we are already in the midst of a process of human interior transformation, as evidenced by emerging social movements that prioritise collaboration, cooperation and sharing. These include the collaborative consumption movement (Botsman & Rogers 2010), the commons movement (Conrad 2013)(On the Commons n.d.), the global justice movement (Hawken 2007) and the growing prevalence of digital technologies that facilitate connective action (Bennett & Segerberg 2012). This perspective is supported by research (e.g. Rand, Greene & Nowak 2012) that highlights the cooperative nature of humans over the selfish rationality assumed by neoclassical economics. Proponents of this perspective seek to facilitate and harness these emerging transformations to respond to sustainability challenges more rapidly.

This is certainly not an exhaustive review of perspectives on human interior transformation in response to sustainability challenges, but it does give an indication of the diversity of analysis at this level.

## Worldview and Culture

At the level of worldview and culture, we move deeper still to explore ideological positions and discourses that underpin the diverse perspectives uncovered in the previous layer. Some ~~of the~~ key discourse clashes should already be apparent from the above discussion, such as the clash between those who see humans as dominant over nature and those who seek to accommodate human civilisation to natural constraints.

There are multiple options for uncovering and categorising discourses and worldviews. I have taken a pragmatic approach that ~~Here, I will draw on a developmental perspective~~draws on developmental psychology to identify and explore worldviews on human interior transformation. Again, there are many developmental theories that I could draw on here. Specifically, I ~~will~~ use the broad stages of human development identified by integral theorists (Beck & Cowan 1996; Esbjörn-Hargens 2010; Kegan 1982; Wilber 2000) to categorise worldviews. Integral theorists argue that human interiors develop through recognisable stages. While the labels used to represent these stages vary, the general direction is one of widening identity: 'from "me" (egocentric) to "my group" (ethnocentric) to "my country" (sociocentric) to "all of us" (worldcentric) to "all beings" (planetcentric) to finally "all of reality" (Kosmoscentric)' (Esbjörn-Hargens 2010, p. 42). These broad identity stages correspond, roughly, to differing discourses or worldviews. One of the reasons for adopting this particular approach to discourse identification, beyond personal familiarity, is that a developmental perspective on discourse is able to conceptually accommodate interior transformation.

Below, I will examine how each of these discourses identified by integral theorists views the potential for human interior transformation. I have excluded the Kosmoscentric discourse as it remains exceedingly rare. My characterisation of the discourses draws particularly on Beck and Cowan (1996), Wilber et al. (2008) and Esbjörn-Hargens (2010).[3] The characterisations of each discourse are

9

caricatures to some extent, as real discourses are often complex mixes of these different positions. Nevertheless, exploring these distinct positions is a valuable way of mapping different worldviews. To ground the discourses a little, I have provided a typical quote at the end of each discussion, drawn from the comments pages of The Conversation.[4]

**Egocentric**

Those participating in an egocentric discourse are focused on their own needs and protecting their self-interest. This discourse is exploitive and opportunistic, and sees others as a means to an end rather than people in their own right.

This discourse is entirely focused on satisfying present needs, so problems that lie in the future are simply not visible. As such, any perceived impetus for human interior transformation is missing. If the egocentric discourse is urged to transform, it will see this as an imposition, which it will resist unless there is some immediate and obvious benefit from going along with the transformation agenda. For example, if sustainability challenges present an immediate threat to well-being, as Gilding (2011) argues is inevitable, then the egocentric worldview may accommodate change as a survival mechanism. Egocentrics may also be willing to change if there is an immediate competitive advantage to be gained. Otherwise, egocentrics are likely to take the default position that they are doing fine, they are meeting their immediate needs, there is no need to change and the environment is just a source of resources to exploit for short-term gain. Nihilistic responses to fears about environmental catastrophe are common here (see Eckersley 2008).

> Typical comment: We will go sustainable when we have sucked every last hydro carbon out of old mother earth and not before.

**Ethnocentric**

The ethnocentric discourse or worldview identifies with the immediate group and values the hierarchical authority structures that keep the group functioning. This worldview seeks to belong and adhere to group norms as to what constitutes socially acceptable behaviour.

10

Those participating in an ethnocentric discourse are likely to take their cues to change from their authority figures. If they are directed to change, by church leaders, governments or others that they trust, they will endeavour to do so. The default position, however, is that the current system is working, they know their place and change is not necessary. The specific teachings of authority figures become very important in an ethnocentric worldview. A leader arguing that humans should have dominion over nature, rather than being stewards of nature, will provoke very different responses.[5] Ethnocentrics may externalise environmental problems, arguing (for example) that they are doing the right thing but there are too many people in developing countries and they are the ones that need to change. Transformation of human interiors may be valued, as in particular religions, but the desired form of transformation may be constrained to comply with religious teachings.

> Typical comment: If all the women in the world got together and agreed to have only one child each per lifetime: 1. Climate change would be arrested. It would be a NON -TOPIC.[6]

**Sociocentric**

The sociocentric discourse is individualistic and nationalistic, focused on achievement and getting ahead. It values rational, objective responses to environmental problems, often favouring technology and markets. This worldview recognises that its beliefs are self-chosen, so may be resistant to questioning of those beliefs.

A typical sociocentric response to environmental problems is to question whether they are really that bad and to argue that, if we do need to do something, then technology supported by market mechanisms will save us. Innovation and hard work are the appropriate responses and there is money to be made by coming up with solutions. In this view, there is no need for radical lifestyle changes – we can keep our current values and culture but be cleaner and greener through technological advancement. In other words, it is not interior human transformation that is needed but transformation of our techno-economic systems. Indeed, there will be strong resistance to interior transformation if that is likely to threaten the strategic interests of individuals or organisations. In extreme versions of this worldview, we see techno-utopian visions like the singularity (Kurzweil 2006) or geoengineering that have boundless optimism about the human potential to tame, shape and replace nature to meet our

11

needs. The rational bent of this discourse means that all options are on the table and need to be weighed up scientifically.

> Typical comment: Alas it appears impossible to have a sensible, reasoned discussion about what role modern nuclear power might play in solving our problems - driven by evidence and facts rather than fear and misrepresentation (from both extremes). I'd like to see all options on the table - tactics to reduce excessive consumption, better ways to produce the world's energy requirements (renewables and nuclear), greater efficiencies, coupled with real ways to recognise the value of the environment, biodiversity, and the "services" the environment provides us - including making companies "pay" for them.

**Worldcentric**

The worldcentric worldview is aware of multiple perspectives and subjectivity. It embraces this diversity, finding a sense of identity that takes in all people. It is a pluralist perspective and the source of most intrinsic environmental concerns.

From a worldcentric perspective, the Earth and its people are in peril and we all need to take urgent action to become sustainable. Interior transformation is essential to create a world where all perspectives are valued. In the worldcentric discourse, everyone needs to be part of the required transformation and governments are failing us on sustainability challenges because they are not including people in decision-making and not listening to our concerns. However, the worldcentric perspective does not recognise that ecological awareness emerges from a long and difficult process of interior development that many people have not yet experienced. Worldcentrics are baffled that others do not see sustainability challenges the same way they do and tend to label people as bad for not seeing the problem and taking action. They see sustainability challenges as urgent and are driven to act to avoid dystopian futures. Human interior transformation is valued but there is little understanding of how such transformation occurs.

> Typical comment: We need to really examine our expectations and "entitlements". We must reduce our carbon emissions full stop, no ifs or buts. People are dying, we are contributing to their deaths. I demand that Australia reduces its carbon footprint. t, Other countries are reducing their greenhouse gas

emissions, we are not leading the way. We are dragging our feet and saying "its too expensive, it's inconvenient, they have to do it first, it will cost jobs," but per capita we are the highest polluters in the world.

**Planetcentric**

The planetcentric worldview is an integrative perspective that is aware that its perspective is the culmination of a process of interior development through the stages discussed above. It is able to see and recognise other perspectives and their developmental relationship to each other. While it values all perspectives, including those of other species, it also recognises that some perspectives are more complex and inclusive than others.

A planetcentric discourse sees interior transformation as valuable, but potentially slow and difficult. It recognises the need to find ways for people operating from all discourses to engage in responses to sustainability challenges, with or without any transformation of those discourses. The worldcentric discourse realises that interior transformation is not a magical saviour but one of many available strategies that need to be employed strategically and simultaneously. For example, using scarce resources wisely to help key leaders to transform their practices is likely to leverage much greater results than seeking wholesale transformation. Planetcentrics engage in 'dialogue with the system' - they are able to repeatedly sense into what is needed to help a system develop (e.g., make it more sustainable), try different interventions (e.g., prototype; experiment; seed ideas), observe the system response, and adapt accordingly (Brown 2011).

> Typical comment: How about we all simply attend to what is possible here in this landscape, and by
> that criterion consider more closely what is the most probable scenario, and direct our time, energy and
> capital into making the best we can of it.

What emerges from this review of discourses on interior transformation is that most of the discourses, and certainly those that are most prevalent globally – the egocentric, ethnocentric and sociocentric – are not seeking interior transformation and are likely to resist external urging to transform. Interior transformation is only valued as people move into worldcentric discourses. It is valuable to recognise

that those promoting transformation are therefore engaged in a deep discursive conflict with those that resist the basic premise for transformation.

## Myth and metaphor

Moving deeper still, into the realm of myth and metaphor, means searching for the deep stories that fuel the discourse visions and their artistic expressions. I will explore two deep stories that are already popular before introducing two more that may have transformative potential. Table 1 summarises key characteristics of the four stories that emerged from this personal CLA process.

### The dystopian storyWe are all doomed

Dark, dystopian visions of the future, where human civilisation collapses under the pressures of climate change, ecological catastrophe, war, disease or invasion, are pervasive in popular culture. They are the fodder of Hollywood, giving us films like *Blade Runner*, *The Road* and *The Hunger Games*. They are commonplace across multiple media, from literature, to comics, to television, to gaming. The specifics of the story vary. Sometimes, humanity reaches too far and apocalypse is a punishment. I am reminded here of the story of Icarus, who built wings from feathers and wax but soared too close to the sun and fell to Earth when the wax melted. Sometimes, the apocalypse seems unjust, like an alien invasion of a thriving human civilisation. Raskin et al (2002) identify two variants – a barbarization scenario in which all of civilisation collapses and a 'fortress world' scenario, where the rich protect their standard of living with force, consigning the rest of humanity to despair. Regardless of their specific form, stories of future doom are all around us.

When images of apocalypse are so accessible, it is not surprising that some people will react to information about sustainability challenges like climate change with urgency and activism. It is easy to map the scientific warnings about climate change onto the ever-present story of future doom and see future climate scenarios as apocalyptic. The dramatic imagery of the dystopian story helps to communicate a sense of urgency about responding to sustainability challenges that may motivate people to take action to avoid an unpleasant future. Indeed, many of the purveyors of dystopian visions are actively calling out for transformation. However, for some of the audience, it these visions

~~may~~ can be overwhelming, leading to nihilistic and fundamentalist responses~~-~~ (Randle & Eckersley 2015)~~(Eckersley 2008)~~. Further, there is a risk that the dramatic imagery of the dystopian story overplays what humanity is facing and actually hinders the development of particular responses. If we hold firmly to ~~the~~ a deep story that urgent action is needed to respond to sustainability challenges (for example, that we are living in the 'critical decade' (Climate Commission 2011)), then perhaps we will discard responses like interior transformation and cultural change that can only happen gradually. Something important might be lost in doing so.

## ~~The techno-utopian story~~Technology will save us

An alternative deep story, ~~almost~~ even more ~~as~~ pervasive ~~as~~ than the dystopian story, is the techno-utopian story. This is a story of dominance over nature, where humans adapt the environment to suit our needs using ever more ingenious technologies. It is a story of eternal progress, steeped in optimism about human potential and possibilities. In the techno-utopian story, humans will find new technologies to solve the climate crisis – either new energy technologies or geo-engineering technologies that allow us to manage the Earth's ecological systems, build green cities and prevent the worst impacts of climate change. It is a particular staple of science fiction, where humanity has often fanned out beyond the Earth to conquer other planets and other galaxies. *Star Trek* and *Star Wars* are typical examples. In this story, there is no limit to human potential and planetary boundaries do not constrain us. It is fair to say that this is the dominant story in our capitalist, consumer societies.

Whereas the dystopian story can engender too much urgency, the techno-utopian story leads to complacency. If technology will save us, then there is no need to worry about the future or to take action to live within planetary boundaries. Instead, we should embrace new technologies and enjoy the benefits they bring. The potential dark side of technology is ignored. In this story, interior transformation is not necessary. Instead, we pursue transformation of our technologies to allow us to continue living our lives as we do now, but on a grander, wealthier scale.

An important metaphorical concept within the techno-utopian story is that of terraforming. In science fiction, terraforming is the process of deliberately modifying a planet or moon so that it becomes habitable by humans. Literally, the term means 'Earth-shaping'. As the Earth is unique in the solar

15

system in its ability to support human life, and there may be few planets like ours further afield, the techno-utopian story relies on terraforming as a way of allowing humanity to leave the confines of the Earth.

**Terraforming ourselves**

Both of the deep stories presented above are problematic. The dystopian future narrative can provide an impetus for action but can also provoke fearful reactions, nihilism and fundamentalism. Further, it may overstate or overly dramatise the urgency of our predicament. The techno-utopian future narrative is blindly optimistic, failing to see that human pursuit of technological solutions and unconstrained growth is leading towards ecological crisis. It requires humans to reliably manage the Earth's complex systems, which is a task that may well be beyond us. As we rely more and more on technology, we become, in many ways, less resilient and more vulnerable.

In the search for a metaphor that could navigate between these two extremes, I found the concept of terraforming useful – if we could just turn it on its head. What if, instead of terraforming other planets, we sought to terraform ourselves? What if we collectively decided to become more 'Earth-shaped' and to live within planetary boundaries? What would that story look like? We would need to transform our values, worldviews and institutions so that they take shapes that are in harmony with the Earth.

There are several elements to this story that I want to stress. First, it explicitly recognises that we need to transform ourselves to respond to the sustainability challenge. This is a story in which humanity consciously

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Clearly, this is a transformative story, where humanity shifts its values and culture to be satisfied with a way of live governed by what the Earth can sustain. It shies away from the techno-utopian reliance on exterior transformation alone, recognising that interior transformation is needed. Second, it is a positive, proactive story. Unlike dystopian visions, there is a clear role for human agency and action. ThirdOn the other hand, it rejects some of the urgency of the dystopian story. In science fiction, terraforming is typically a slow process that happens over decades or centuries. It does not deliver

instant results. This means letting go of our ability to transform ourselves instantly or rapidly in response to climate change, but opening up the potential for interior transformation to be part of a suite of responses to climate change, some rapid, some slower. Terraforming ourselves would be an ongoing, long-term project. Finally, terraforming ~~is typically~~planets would be an experimental process, where different approaches are tested out, evaluated and retained or discarded. Terraforming ourselves would be a similar process, where various initiatives for transforming human interiors were tested and evaluated in an environment of conscious experimentation. As part of the ongoing project of terraforming ourselves, we would need to experiment with new leadership strategies, narratives and frames, practices, communication strategies and cultural symbols to guide transformation.

When the story of 'terraforming ourselves' emerged from my personal CLA process, I thought the process was complete. However, the story was ultimately unsatisfying, for two reasons. First, the language of terraforming is abstract and technical, unlikely to provide the foundation for a compelling, shareable story that could drive transformation. ~~The problem is that this~~Second, the story lacks the excitement and entertainment value of dystopian and techno-utopian visions. It is a story of sufficiency, restraint and boundaries, in which the goal is merely sustainability – becoming Earth-shaped. It is difficult to see how such a story could rapidly gain traction in competition with the dystopian and techno-utopian visions that currently dominate our entertainment industries. While wrapped in different language, the story is at heart the story of sufficiency and constraint that is already preached by many environmentalists. As I reflected on this, an additional story emerged.

**The thriving Earth**

17

dystopian and techno-utopian visions that currently dominate our entertainment industries. As I reflected on this, an additional story emerged.

In the story of the 'thriving Earth', humanity still embarks on a process of interior transformation, seeking out new values and worldviews that will allow us to live within planetary boundaries and deliver well-being for all. However, the story emphasises a different goal. Here, the goal is not mere sustainability, but to live extraordinary, thriving, prosperous lives while respecting planetary boundaries and delivering a social foundation for all. We would be embarrassed to describe the key personal relationships in our lives as merely sustainable, so why should we aim for mere sustainability in our relationship with the Earth? The story of a thriving Earth is one in which interior transformation provides the foundation not only for a harmonious relationship with the Earth but to 'strive toward the greatness implicit in thriving, flourishing, plentitude' (Russell 2013, Loc 127 [Kindle]). This story blends constraint in our material relationship with the Earth with abundant room for growth in what it means to be human. Russell (2013) provides the most complete telling of this story to date but there are elements in the work of many others that call for a move beyond mere sustainability (Benson & Craig 2014; Evans & Abrahamse 2009) or for a Great Transition (Raskin et al. 2002).

The story of a thriving Earth is clearly a positive one – who doesn't want to thrive? As such, it avoids the negative responses that dystopian futures engender and instead seeks to harness individual and collective agency towards a goal that is more exciting than mere sustainability. At the same time, it does not shy away from planetary boundaries like the techno-utopian story. Instead, it uses these boundaries as constraints to encourage creative responses that allow us to live well despite the boundaries. In design, constraints can be important triggers for creative responses; this story takes a similar path. Finally, the language of thriving, prosperity and abundance is simple and familiar. We could expect people to more readily relate to this story than to the story of terraforming ourselves. This makes it more likely that the story will be picked up and shared widely, which is essential if it is to drive transformation.

*Table 1: Four stories about the future and their transformative potential.*

| Story | Metaphors | Proponents | Impacts and | Perspective on |
|-------|-----------|------------|-------------|----------------|
|       |           |            |             |                |

| | | | **outcomes** | **transformation** |
|---|---|---|---|---|
| We are all doomed | Icarus, apocalypse, fortress world | The entertainment industry, climate science | Can inspire activism but also nihilism and fundamentalism; creates a sense of urgency that can limit what actions are considered | A cry for transformation, without a clear path to individual and collective agency |
| Technology will save us | The singularity, the green city, the consumer, endless growth | Mainstream government and business | Complacency, blind optimism, consumerism, depletion of natural capital, a brittle civilisation | We can shape our environment so that interior transformation is unnecessary |
| Terraforming ourselves | Terraforming in reverse, sufficiency | Environmentalists | Creates space for human agency, allows for more gradual transformation through experimentation, but too abstract and constraining to inspire | We need to consciously transform to survive within planetary boundaries |
| The thriving Earth | Abundance, natural systems | The disruptive leading edge | Creates space for human agency and creativity, greater potential to inspire with a simple positive message, balance between boundaries and growth, resilience | We need to consciously and creatively transform to thrive within planetary boundaries |

*(Margin annotations: Formatted: Font: Bold; Formatted: Line spacing: single; Formatted: Line spacing: single; Formatted: Line spacing: single)*

# Concluding discussion

In this article, I have applied causal layered analysis to explore four layers of human interior transformation: the litany; social causes; worldview and culture; and myth and metaphor. My intent was to move beyond wishful thinking about the potential for human transformation in response to the global sustainability crisis. My hope was to deepen our perspectives on human transformation and open up alternatives for transformative practice. So, what has been revealed?

At the deepest level of myth and metaphor, popular stories and images of dystopian and techno-utopian futures hinder the potential for transformative practice. Dystopian visions can paralyse us or create such a sense of urgency that interior transformation is discarded as too slow to make a difference. Techno-utopian visions comfort us with the promise that interior transformation is not

necessary and technology will save us. My argument is that the stories we tell about our society and our future matter, as they shape our worldviews and actions. New stories Stories that navigate between these the dystopian and utopian extremes need to emerge and find traction if interior transformation is to find space in our sustainability practices. Stories alone are not the whole answer to the question of how to facilitate transformation, but they do provide an important foundation.

In the personal CLA that formed the basis for this paper, a metaphor of 'terraforming ourselves' first emerged for me as an alternative story. Terraforming ourselves, or making ourselves more Earth-shaped, would be a slow process of conscious experimentation, but could offer a long-term narrative frame within which more rapid actions could be taken. Surfacing this story would require at least some sustainability practitioners to abandon urgency in favour of more gradual strategies of facilitating the development of human potential.

However, on reflection, I felt that this story lacked the traction to compete with the dystopian and techno-utopian stories that dominate the entertainment industry, because of its technical language and its focus on restraint and boundaries. I then turned to a story of the 'thriving Earth' as an alternative that may be able to achieve greater traction. In this story, human interior transformation allows us not merely to survive but to collectively thrive on Earth, while still respecting planetary boundaries and delivering well-being for all. This story uses simpler, more positive language to improves its shareability. One possible strategy for facilitating viable human futures is to tell this story of thrivability over and over again in different ways, building up a cultural resource for transformation. I would like to see thrivability replacing sustainability as the focus for our collective action.

Moving back up to the layer of worldview and culture, it is apparent that most worldviews do not value interior transformation. It is an elite concept that only emerges as a valuable goal at the worldcentric stage of development. Thus, practitioners that choose to work on interior transformation will need to work strategically with those who are receptive to such an approach and, importantly, may have influence with other discourses. Focusing scarce resources on facilitating interior transformation for key discourse leaders emerges as a promising strategy. Meanwhile, much of the work required to respond to sustainability challenges will not be about transformation but about

working with existing discourses to find ways to engage them in responses that make sense to those discourses. This is a process of translation, rather than transformation – of finding language that works with where people are and responses that resonate with existing values (Brown & Riedy 2006; Riedy 2010).

As we rise further to the layer of social causes, many different analyses of sustainability challenges and interior transformation are evident, underpinned by conflicting discourses and myths. One possible strategy emerging at this level is to continually draw attention to the transformations that are already taking place all around us. Staying as we are is not an option, but steering the transformations that are already underway is an option. When we draw attention to emerging movements that are underpinned by worldcentric or planetcentric values, like the collaborative consumption movement, the commons movement and the global justice movement, and new practices like social networking, we are making transformation tangible and real for people. This has the potential to both reduce the fear of transformation and draw attention to practical ways in which people can participate. We can build these success stories into our narratives of a thriving Earth.

Finally, at the level of the litany, we emerge into a sea of disconnected soundbites. There are warnings about climate change, stories about technological solutions and endless political gossip. Finding space for interior transformation and stories of thrivability at the litany level is undoubtedly challenging. One small step is to always attempt to bring the different strands of the litany together when we communicate. This might mean always offering a practical solution when we give a warning about sustainability, so that people can see a clear action they can take. Or it could mean drawing attention to how disconnected the political process is from what climate science is telling us. Or it might mean highlighting how particular discussions contribute to, or undermine, a thrivability story.

The pathway to a thriving Earth remains hazy and the role of interior transformation on that journey is unclear. It may be entirely possible for us to thrive on this planet, without substantial change in our values, by applying the technologies and institutions we have already developed to avert crises. On the other hand, interior transformation may be crucial to success. Faced with this uncertainty, my key argument in this paper is that we need to resist the temptation to see a transformation in human values

21

as a realistic short-term solution to the sustainability crisis, while also resisting the urge to discard it as too slow to be of any value. We must continue to experiment with transformative practices in support of long-term sustainability and thrivability, while simultaneously trying everything else we can think of to make sure that we survive on this planet long enough to truly transform.

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**Endnotes**

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[1] This was the language used successfully by current Australian Prime Minister Tony Abbott to denigrate carbon pricing during Australia's 2013 Federal election.

[2] As an example, see Solitaire Townsend's (2009) dismissal of attempts to change values in favour of tailoring messages to appeal to existing values.

[3] I am also indebted to the summary diagram presented with an online version of Esbjorn-Hargens (2010) at http://integrallife.com/integral-post/overview-integral-theory, and I acknowledge the writings of Clare Graves, which informed the work of Beck and Cowan (1996).

[4] See http://theconversation.com/au. The Conversation is a popular online news site operating in Australia, Africa, the United States and the United Kingdom that offers a forum for debate on contemporary issues. Similar comments can be found on any number of other online sites.

[5] As a result, Pope Francis' Encyclical On Care for Our Common Home (http://w2.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html) is a very significant development for the ethnocentric discourse, asking Catholics around the world to take action to address climate change.

[6] I selected this comment because it gives a sense of the way the ethnocentric discourse can push blame to those who are not seen as part of the group. In this particular comment the division is gender-based, but it could equally be based on ethnicity, or a divide between developed and developing nations, or some other perceived division between who is in the group and who is not.