Becoming *homo sapiens sapiens*:
Mapping the Psycho-Cultural Transformation in the Anthropocene

Carol L. Berzonsky and Susanne C. Moser

Abstract

If it is true that humans are about to leave behind the environmental conditions we have known for the 150,000-200,000 years of our species' existence, then we are now changing the context in which we have evolved to date. This means *Homo sapiens* will have to co-evolve further with the climatic and environmental conditions it is creating through its planetary impact in the Anthropocene. Given the rapidity of the changes humans have set in motion, however, this next evolutionary phase may be cultural rather than biological, reflected in behaviors, practices, artifacts, institutions and underlying values and worldviews, and, therefore, psychological. Such a psycho-cultural transformation is frequently called for, but rarely explored in detail. This paper presents a model of psychological transformation from the fields of depth psychology and anthropology known as an archetypal death-rebirth process. Applied to a cultural transformation, the model offers a frame to interpret this time of unprecedented environmental and cultural endings. It gives purpose and meaning to the suffering involved in transformations and, crucially, offers hope through the vision of renewal. Its tripartite progression of severance, threshold, and reincorporation provides a map for navigating the *terra quasi-incognita* of this transformation that tells us what to expect and therefore how to respond. Finally, it offers an explication of how a transformation far more profound than changes in actions and policies may allow us to become the truly wise humans, *Homo sapiens sapiens*, our species' name denotes we could be.

Highlights
- Focus on the psycho-cultural transformation of worldviews, identity and values required for a transition to sustainability
- Introduction of an archetypal death-rebirth model of psychological transformation
- Application of the archetypal model to a culture facing climate change
- Exploration of the death-rebirth archetype as frame, map, and explanation of psycho-cultural transformation

Keywords: climate change, depth psychology, transformation, death-rebirth archetype, worldview

1. Introduction

The widely recognized criticality of rapid anthropogenic climate change (IPCC 2014; Steffen et al. 2015) along with other profound and deleterious changes in the Anthropocene (e.g., biodiversity loss, resource depletion) have led to the emergence of a scientific and public discourse on "transformation" (e.g., ISSC 2013; O'Brien 2012; Scoones, Leach and Newell 2015). In the context of climate change, there is a growing recognition that efforts at mitigating greenhouse gas emissions are inadequate and too slow to halt, much less reverse current climatic trends (Anderson and Bows 2011; Dangerman and Schellnhuber 2013). A similar recognition is emerging around adaptation (e.g., Kates, Travis and Wilbanks 2011; New et al. 2011). In this emerging discourse on transformation, experts argue that far deeper societal changes than observed to date are necessary if society wishes to avoid the worst of projected climate changes (Brown et al. 2013; Folke et al. 2010; Grin, Rotmans and Schot 2010; Nalau and Handmer 2015; O'Brien and Selboe 2015; O'Brien and Sygna 2013; Park et al. 2012; Pelling, 2011; Sharma 2007; Kellert and Speth 2009).

Transformational change – according to various existing definitions (Brown et al. 2013; Feola 2014; O'Brien 2013) – is distinguished from smaller adjustments and modification by the alteration in a system's fundamental form, structure and function. Many argue that not only are changes needed in the outwardly visible forms of infrastructure and policy, but also in the values that underlie and drive human choices and behaviors (e.g., Adger et al. 2013; de Witt 2016; Hackmann and St. Clair 2012; Horlings 2015; O'Brien 2013). Explicitly or implicitly, they call for society to move away from values that drive environmentally unsustainable and economically and socially unjust trends to a new set of values supporting the emergence of true ecological, economic, and social sustainability (Corner et al. 2015; Kasser 2009, 2016; Kinzig et al. 2013; WGBU 2011). Meadows' (1999) work supports this argument. Her analysis of leverage points for affecting system change suggests that the most durable, effective and influential system change ultimately requires a shift in the *dominant* cultural worldviews and values – the deepest of these leverage points.

The oft-repeated call for value changes raises the difficult questions how these deep cultural drivers transform, what that change process looks like, and whether that process can be facilitated or supported. While many have deplored and critiqued the values that underlie unsustainable practices (e.g., McKibben 2009; Hamilton 2010; Orr 2011) and many have described the more hopeful endpoints of the sustainability transition (e.g., Earth Charter Commission 2000; Raskin 2006), few in the transformation discourse address the process by which such a profound cultural transformation might occur. A prominent example is *World in Transition* (WGBU 2011), one of the most substantial reports on the need for, and exploration of, various interventions to facilitate a global transformation toward sustainability. It describes certain values as supportive of the sustainability transition while "politics" (i.e., the active defense of interests and values in the political process are depicted as barriers to this transition. It offers no recommendations on how to foster a shift in values toward sustainability. Those "politics" reflect the struggle between new and old values, and between emerging and existing, dominant interests and powers (e.g., Bahadur and Tanner 2014; Eriksen, Nightingale, and Eakin 2015; Penna and Geels 2012).

This paper aims to help fill this gap by drawing on bodies of literature heretofore largely ignored in the discussion of transformation in the climate change context, namely analytical and archetypal depth psychology and anthropological work on rites of passage. We agree with Holm et al. (2015) that these previously untapped humanistic traditions have much to offer to the better understanding of the psychological dimensions of the sustainability transition. Our paper hinges on the argument that a discourse on cultural transformation must involve psychology because the prevalent worldviews, values, identities, and deepest beliefs about self and world held by its members are the underpinning psycho-cultural drivers that shape culture. In other words, a cultural transformation at the level of core values and beliefs is a psychological transformation. In our application of psychological theory to the transformation at the cultural level, we thus use the phrase "psycho-cultural transformation." Our main aim in this paper then is to propose a model to look at the work required to successfully engage such a psycho-cultural transformation. It is a theoretical lens through which to explore how such a transformation might unfold and what it requires.

Below, we begin by articulating the worldview and system of key values that are problematic for sustainability and must be reviewed as society undergoes a deep psycho-cultural transformation. In section 3, we lay out the psychological foundations and a model that is valuable for charting profound inner change, and then apply it to the collective, that is we explore a psycho-cultural transformation, in Section 4, with climate change as our context. We conclude with synthesizing remarks in Section 5.

2. What is Being Transformed?

We begin our exploration of the psycho-cultural transformation process by articulating what might be transformed. We use the concept of "worldview" as shorthand for the internalized system of deeply held beliefs, values and related identity (self-image) that informs the perspectives and behaviors of individuals, and – collectively – the institutions, practices and artifacts of a culture (Hiebert 2008; Aerts et al. 2007;

Sire 2015). Such worldviews also reflect stages or psychological positions over the course of human development.

Our focus here is on the views and values commonly associated with the globally dominant and environmentally significant "modern Western" culture. However, we recognize that all cultures espouse to certain values that are compatible with sustainability and others that run counter to maintaining environmentally sustainable, economically just and socially equitable and dignified lives (e.g., Blühdorn 2007). Thus, our focus is on those *dominant* values, beliefs and worldviews that will come up for review in a transformation given their insufficiency or incompatibility with environmental, economic and social sustainability (Table 1).

[insert Table 1 about here]

Without any or only weak counterbalancing tenets, these values together constitute a "dominant social paradigm" characterized by fragmentation, either/or thinking, an isolation of humans from nature, and a split of the material from the spiritual, the individual from community (e.g., Jung 1931/1970, 1961/1965; Pierages and Ehrlich 1974; Plotkin 2008),[1] which has become globally pervasive (Basáñez 2016; Kasser 2009; Myers and Kent 2003).

While these values are mediated by a complex web of social, economic, and governance institutions, and thus exert varying degrees of influence on cultural narratives, behaviors, policies, and developmental pathways, perpetuating them results in the human impact on Earth that characterize the Anthropocene, with all attendant risks to life, livelihood and life support systems (e.g., Speth 2009, Hoekstra and Wiedmann 2014).

In part, they are so difficult to change because adherence to these values and worldviews have created identities associated with high social status (Dietz, Rosa and York 2010). As many critics note, the collective political will to intervene in them (through policy, regulation, prices, behavioral campaigns and education aimed at collective constraint) is nearly impossible to garner as long as the deepest underlying values are taboo and seemingly beyond societal inspection (Hamilton 2010; Orr 2011; Speth 2009; Pope Francis 2015). This deep inquiry is the work of a psycho-cultural transformation.

3. The Structure and Theory of the Psychological Transformative Process

Before exploring how a psycho-cultural transformation might unfold, we first lay out the psychological processes by which deeply held values, beliefs and worldviews can be transformed in an individual. Drawing on depth psychological and developmental psychologies and anthropological literature on cultural practices supporting such psychological transformation, our goal is to explore rather than prescribe an approach to psycho-cultural transformation, looking for *early signs of and road markers throughout* this challenging territory of change.

Notably, the body of work we draw on is equivalent to existing work, e.g., at the level of organizations (Scharmer 2009); socio-technical regimes (e.g., technological systems, industries) (e.g., Rotmans et al. 2000); social institutions and relations (Beck 2016); and epochal civilization change (Thomassen 2009). The shape and elements of the transformation processes these authors describe are not

---

[1] We point the reader here to a fascinating, cross-cultural series on "Human Becoming", hosted by the Berggruen Institute, which offers diverse viewpoints on various cultures' core values, and how each views the individual relating to others, the larger world, and the divine (http://philosophyandculture.berggruen.org/ideas/16). While being careful not to essentialize any one culture or acknowledging extremist and corrupt values and behaviors in all cultures, the individualistic, non-relational conception of *being* human prevalent in modern Western culture emerges as a notable contrast to many other cultures' relational, interdependent conception of *becoming* human. See also the collection of essays at http://www.humansandnature.org/what-does-it-mean-to-be-human, asking just such questions.

just conveniently similar to those found in a psychological transformation. We argue they are consistent because they describe the same archetypal process.

At the core of a profound transformation is a pattern recognized in depth psychology as a death-rebirth or death-renewal archetype (Eliade 1994; Hollis 2000; Jung 1950/1969; Turner 1967). This archetypal pattern is activated when one set of values, beliefs, and ways of being dies away, while a new set emerges and becomes established. The death-rebirth archetype can be found at times of momentous transitions or life passages, e.g., when an individual is transitioning from one developmental stage to another, facing a profound physical or psychological crisis (Turner 1967; van Gennep 1960). In such circumstances, the individual is in the psychological predicament of dismantling one deeply entrenched way of being and self-identifying while developing a new self-image (identity), more equipped and appropriate for the new situation.

The term "archetype" – as understood by Jung and others – best describes common patterns that transcend unique individuals or contexts. They encompass psychodynamics, roles, behaviors, images, instinctual responses, feelings, and experiences (Edinger 1999; Jung 1931/1970, 1952/1969).

Anthropologist van Gennep's (1960) work particularly focused on the archetype of psychological death-rebirth in the context of "initiatory rites of passages" enacted across cultures. Such rites are often quite arduous and harrowing, accurately mirroring the psychological process itself (Morinis 1985; Campbell 1949). One of his most significant contributions was to articulate the processual nature of the archetypal pattern of these transitional passages, involving three common phases: separation, transition, and incorporation.

Below we examine each of these phases of the psychological transformative process and use the archetypal structure as both a "frame" through which the profound changes can be understood and as a "map" for navigating the *terra quasi-incognita* (Schellnhuber 2009) inherent in any truly transformative process.

3.1 Severance

At heart, the transformation process is a process of becoming. Inherent in any becoming, however, is an ending which begins the severance, the separation from the previous world. The transformative process could not begin if the subject were not agreeing to destabilize itself in service to change. The psychological system must be willing to loosen its own achieved cohesiveness to dismantle and dissolve to make room for new ways of being. The psychological work at the start of this developmental transition fosters the process of detaching from the existing identity along with its associated core beliefs, values, and priorities (Eliade 1994; Plotkin 2008).

This destabilization can be resisted and refused, but only at one's own peril. Avoidance does not resolve the crisis. Thus, the non-negotiable nature of the ending of the old ways of being is a hallmark of the severance phase (Plotkin 2008). It is often precipitated by or occurs in conjunction with an outer crisis dictating the need for changes in the psychology that no longer serves or has become too limiting to reach a more expanded potential (Plotkin 2008). In fact, remaining tied to the old beliefs and identity risks causing harm to oneself and others.

Because this first stage of passage begins a radical departure from a state to which there can be no return, it is experienced psychologically as a death (Eliade 1994; Jung 1944/1968). Death and apocalyptic imagery (Edinger 1999; Plotkin 2008) is indicative and normal. Disbelief, disorientation, profound grief, insecurity and fear are natural responses accompanying the severance phase (Plotkin 2008; Stein 1983). "Death consciousness" (Hamilton 2010; Stein 1983) turns severance into an existential crisis, during which crucial questions get raised, such as "How did I get to this crisis?"; "Is the old way really coming to an end?"; "What exactly is over now?"; "What does this ending mean for who I am, for my future?" This deep reflection is a countercultural hallmark of the severance phase.

These unpleasant, even harsh emotional experiences raise the question why anyone would choose to participate in such a painful process, particularly given that the challenges grow far more intense and

difficult long before they become liberating, exciting, and expansive. One answer is that the repercussions of not changing are even more untenable.

Eventually, the break-up of previous structures allows new ones to emerge. Successful engagement of the severance phase involves acceptance of this loosening process and coming to terms with what is ending. Processing these deep emotions helps catalyze progress along the transformative pathway and is thus productive and favorable.

3.2 Threshold

The middle phase of the tripartite process is the transitional period of the passage. Its characteristic features of liminality, the simultaneous processes of dying and becoming and a painful ordeal make this phase perhaps the distinguishing element of a psychological transformation.

Named by van Gennep (1960) as the liminal phase (after the Latin word *limen* for threshold), this phase involves the crossing of a "passenger" "through a realm that has few or none of the attributes of the past or coming state" (Turner, 1967, p. 94). The subject is no longer able to fully identify with the previous life stage but has not yet shed all its identifiable features, resulting in a lack of a solid sense of self. Thus, the phase is characterized by a "coincidence of opposite processes, [whereby] undoing, dissolution, [and] decomposition are accompanied by processes of growth, transformation, and the reformulation of old elements in new patterns" (Turner 1967, p. 99).

Another distinguishing feature of the threshold phase is the ordeal. It constitutes a profound reckoning, a reconciliation of opposite motivations, and an endurance of liminality. It entails identifying and threshing through the outworn elements of the previous worldview. The enormous pressure to change surfaces these elements along with repressed or suppressed psychological issues (e.g., unhealed wounds, self-protective strategies, repressed beliefs, even previously held but now outdated hopes for the future), making them available to conscious examination (Stein, 1983). It also involves the agonizing experience of holding the tension between conflicting values, beliefs, demands and desires; and it requires the capacity to endure ambiguity, a lack of a clear identity over an indeterminate length of time to reach the end of the ordeal.

The experiences of this phase are psychologically demanding, calling forth that which must be transformed along with the capacities to persist. It involves a sense of great vulnerability and being at risk of easy influence by others. The need to feel certainty, resolve ambiguity, and relieve anxiety can lead to premature grasping for security. and reverting to the old ways of being to fortify one's identity (Jung 1928/1966). Resisting that, this phase is characterized by mourning, fears for the future, the search for grounded hope and driving existential questions about one's relationship to the wider human and Earth community and the spiritual dimension of existence: "If what previously gave me meaning and purpose is falling away, then who am I now (becoming)?" "What is the true purpose of my existence?" The demise of the self-image during the ordeal is experienced psychologically as a defeat, which can be misinterpreted as personal failure. In this model of transformation, the exact opposite is true. The defeat of that which resists renewal is the very aim of transformation, for as long as the previous worldview remains in place, a new one cannot emerge.

There is no guarantee of successful completion of the arduous work of the ordeal. A positive outcome requires the choice to participate, the commitment to meet each obstacle as it arrives and the ability to develop any undeveloped capacities (e.g., paradoxical thinking, grieving, restraint, death consciousness, self-reflection, courage, humility, endurance, compassion, and patience). Containing the process (e.g., by framing it as proposed here) helps prevent the loss of the momentum and energy required to persevere.

The reward for sufficiently engaging the challenges of the ordeal is the promise of a psychological tipping point: enough of the old has been dismantled, enough of the new has emerged, to mark the proverbial light at the end of the tunnel – reincorporation is near.

3.3 Reincorporation

The "post-liminal" reincorporation phase of a transformation marks the return from the loneliness and isolation of an demanding reckoning and the beginning of putting the new ways of being into visible form. The primary theme is birth or rebirth, emergence, renewal, and beginnings. From the dead of the threshold, the subject returns to life (Foster and Little 1980). Its task is to integrate and aggregate all that has been learned in the previous phase, coalesce it into a new, stable identity (Turner 1967). This identity becomes visible in creativity, new ways of thinking, prioritizing and behaving – it becomes embodied, i.e., incorporated.

Thus, a renewed sense of aliveness is characteristic of this stage. It typically is an intensely creative, action-oriented and dynamic time, in which the individual feels a sense of obligation to make manifest what was learned and envisioned in the ordeal on behalf of the greater good (Plotkin 2008).

Reincorporation comes with its own challenges: how to be and behave is not readily clear or easily enacted, and not necessarily welcomed by others. Commitment, integrity, courage, steadfastness, sacrifice and faith are needed to act in new ways and bring to fruition the new vision for oneself. New skills may be needed, new relationships must be built, and not everything attempted will succeed. Adversity will test the visionary who returns from the ordeal (Campbell 1949). Failure tolerance is required to step into new roles and responsibilities. Against the onslaught of doubt and challenge, the individual is vulnerable, bound to forget and struggles to hold on to the new inspiration, and therefore deserves protection and nurturance.

4. Application of the Framework to Societal Transformation in the Face of Global Environmental Change

The archetypal pattern described above is a useful lens through which to examine the cultural transformation many call for in the face of the global climatic perils humans face. The systemic threats to Earth's life support systems pose an all-encompassing outer crisis that permits no escape. This "imprisoned" condition is typical and indicative of a transformative crisis. While maybe jarring or uncomfortable to some, there is value in calling it out as a psychological death-rebirth process. Its targets are the values and beliefs that are fundamentally at odds with human survival and well-being. While not held uniformly, they are still held by far too many people and embedded in human-built institutions, resulting in environmentally destructive behavior.

4.1 Psycho-Cultural Severance

Looking through the lens of psycho-cultural severance at the collective level, one would expect to see signs of an implacable ending of an era, the dominant appearance of death and apocalyptic imagery in the *zeitgeist*, widely recognized cultural commentators naming the ending, and also a variety of emotional responses typical for the severance phase.

Indeed, experts and commentators from a wide variety of fields and sectors view the climate crisis we have created for ourselves as a pivotal moment in the history of civilization, maybe even the evolution of the human species (e.g., Hamilton 2010; Hansen 2009; Kunstler 2005; McKibben 2010; Orr 2009; Ronda 2013; Scranton 2013; Wade 2015). While foreshadowed by others for decades, the number of such foreboding warnings has risen considerably in the last two decades and is now part of the cultural discourse. Even the conservative language of the IPCC (2014) is clear about the inability to return the planet to a less imperiled status. Evidence is accumulating with every assessment that "business as usual" is an increasingly unsafe option. The cumulative body of climate science illustrates just what an uncompromising global crisis humanity is facing, one that will become the impetus for (voluntary or involuntary) transformation.

As this realization grows, scientists and popularizing voices signify the beginning of the end. For example, Crutzen's (2002) use of the term "Anthropocene" announces humanity and Earth crossing a line

into a new geologic era, as does Raskin et al.'s (2002) Great Transition Initiative. Meanwhile, still marginal voices (largely from within the growing climate movement) demand that the current way of being and thinking must loosen, while others illustrate that they can. A sense is emerging that the foundations of a long-held, but increasingly untenable worldview are quaking.

Death and apocalyptic imagery are also emerging at this time. End-time symbolism predictably surfaces in the *zeitgeist* when an epochal "end of the world as we know it" is occurring (Meade 2012). In fact, such dystopian imagery, films and narratives are trending in the media and the arts, inviting dedicated study (e.g., Foust and O'Shannon Murphy 2009; Hoggett 2011; Swyngedouw 2010). From a depth psychological point of view, such symbolism reflects the psychological condition and experience of the collective. Its appeal indicates the collective need to process a severance phase.

But as expected, during this time of a collective severance, we also observe emotional responses such as denial, fear, and grief. The mass rejection of climate change – particularly in countries that have benefitted the most from the Western, growth-oriented worldview – has many roots, but through the lens of the death-rebirth archetype, it emerges as a cultural expression of the challenges at the onset of a transformation when people begin to grapple with a profound ending. Stoknes (2015) argued that "an easy way out of the anxiety is to not want to know too much about what is coming. Thus, to some extent, we all resist taking in the full ramifications of the climate disruptions" (p. 77). The death-rebirth model helps to recognize and validate these widespread responses as normal, but it also suggests that prolonged denial would be a dangerous choice, because it allows the problem to worsen and blocks the transformative process.

Saying "yes" to a psycho-cultural transformation requires various skills. Incidentally, the very capacities needed to navigate the challenges of the transformation become some of the very capacities that characterize a sustainable culture. One is the ability to engage deep and unpleasant emotional states such as anger, despair and grief without hurting others. Another is the ability to face actual and symbolic deaths, including the actual loss of people, nature, and the cherished elements of a collective identity such as economic or social "progress" (Hamilton 2010). In response to mass coral die-offs, threats to iconic species like polar bears, extreme events, or the loss of favorite habitats in one's backyard, psychologists and others are noticing "climate grief" (e.g., Randall 2009; Running 2007). Some recognize the value of processing such emotions for moving forward in the transformative process (Brillinger 1997; Moser 2013). Head (2016), for example, suggested that "grief can facilitate the transition to a low carbon society. … [W]e will not be able to make the transition without it – grieving is part of the work of decarbonization" (p. 5). She continued, "grief is not something we can get 'beyond,' rather it has to become part of our lives and politics. It doesn't stave off catastrophe, but it will give us a better chance of effective action" (p. 18).[2]

4.2 Psycho-Cultural Threshold

The most grueling portion of a psycho-cultural transformation – the threshold – entails the processes of scrutinizing and discarding outworn, but often cherished elements of the previous identity and worldview and developing new ones commensurate with the demands of the emerging life situation.

An increasingly hotter world will place unrelenting pressures on society to change – environmentally, socially, economically, politically, technologically, psychologically, and spiritually. The pressure to change persists whether or not society manages to reach the 1.5-2°C warming limit agreed upon in 2015 in Paris (UN 2015). While achieving it would spare the world the worst of climate change impacts, society would face a complete make-over of all systems that currently produce GHG emissions. If the target is not achieved, increasingly destructive impacts, which will be experienced differentially by various segments of society, point to the ways in which the climate crisis will force various psycho-cultural issues to the fore.

---

[2] A more detailed discussion of these capacities is beyond the scope of this paper, but available in Berzonsky (2016).

For example, climate change serves as a potent mirror of human power (and thus beliefs in human dominion and superiority) by reflecting our species' capacity for destruction. Anthropogenic climate change brings to, stark consciousness how humans are a massive geologic force, partly from human ingenuity, partly from our power in numbers (population growth). By the end of the 20th century we humans could no longer claim innocence of our Earth-shaping capacities and the power to destroy vital habitat, other-than-human co-inhabitants, and even the once believed to be ensured human future. The destruction from climate change will confront humanity with the need to recognize planetary boundaries (the physical and biochemical limits that circumscribe a "safe operating space for humanity", Steffen et al. 2015). Importantly, this threat to humanity's own survival stems not from causes beyond ourselves, but is rooted – psycho-culturally – in materialistic desires, egocentric gratifications, and the long-lasting luxury of neglecting limits (Hamilton 2010).

Planetary boundaries, however, are only the broadest of all limits society is likely to contend with in coming decades. Global warming will surface countless trade-offs where people cannot "have it all," such as which places, activities, or people to protect and at what cost (Daw et al. 2014). Such trade-offs will leave little choice but to reckon with limits. This involves taking a hard look at societal values and beliefs, collective emotions and identity around the topic of constraints (the flipside of unmitigated growth and development), the insistence on progress and material consumption, and other anthropocentric choices. Curiously, the "margins" (*limens*) of human habitation (spaces of limits, such as coasts, mountains, drylands, and the Arctic) are the "frontlines" of climate change, where such difficult trade-offs are already apparent (e.g., Glavovic et al. 2005; Goodell 2016; Trainor et al. 2007).

The more severe these climate impacts become, the more they will press into collective consciousness, placing the human-Earth relationship under scrutiny. Psycho-culturally, this involves wrestling with dualisms such as desires and needs, dominion and stewardship. It also means confronting beliefs in exceptionalism, and with the need but sometimes unwillingness to remedy past actions. Ultimately, this would demand that humans question their place within nature; contending with a seeming ambiguity about being Earth-bound creatures; and requiring that we collectively explore, and maybe agree on, the role humans not just play, but *wish* to play in the course of Earth's evolution (e.g., Bloodhart and Swim 2011; Sarazzin and Lecomte 2016).

Looking through the lens of psycho-cultural transformation, in the threshold, society would need to confront every obstacle that stands between a life-threatening culture and a life-sustaining one. For example, the pressures of the climate crisis will further expose areas of vulnerability in the social system (e.g., Marino and Ribot 2012) as instances of insufficiently dealt with or suppressed historical wounds from social infractions such as amassing wealth in the hands of the few while exploiting far too many people, natural resources and non-human species (e.g., Hoekstra and Wiedmann 2014). Lasting cultural wounds from colonialism, mistreatment or annihilation of traditional cultures and Native peoples, slavery, misogyny, and other instances of injustice and wrongdoing continue to bleed into current societal interactions and relationships. These unprocessed, unfinished instances of injustice will be hotspots across the globe undergoing the stresses of transformative change.

The model also suggests this would be a time when people ask existential questions. Scharmer (2009) observes this phase is a time when organizations ask: "How can we become part of the story of the future rather than holding on to the story of the past?" Similarly, Thomassen (2009) suggests epochal periods of societal change are ones "where man [sic] asks radical questions." And, in fact, early signs of this phase include people asking, "What does it mean to be human?"; "Is there any hope?"; and "What should we hope for?"

In this phase, society would be tested in its ability to collectively bear the relentless pressures to change, the physical and psychological suffering that comes from dealing with uncertainty, grief, despair, periods of seeming lack of progress, even regress, extreme polarizations, and dismantling of the collective identity. People would have to grapple with bearing such suffering without projecting it onto neighbor and nation. Can society hold itself together while falling apart? Can it stand in cultural liminality without seeking consolation from charismatic figures who promise erroneous security and (premature) end to liminality (Thomassen 2009)? Can people engage proactively in "positive disintegration" (Dabrowski

1964) or actively participate in a collective cultural death rather than succumb to feelings of victimization (Hamilton 2010)? Can they do the deep work of collective truth-telling about past (systemic) exploitative and harmful behaviors and engage in reconciliation? Can society hold seemingly opposing stances on all value dimensions such as loving one's country and criticizing it at the same time (Rohr 2002); wishing for progress, but in a new way; having untold powers, yet having to restrain them to live sustainably?

     The demands on and definition of leadership in such a profoundly difficult time may well be unprecedented (Moser 2012). True leaders, guiding and supporting groups through the threshold will have to help frame and explain the process, encouraging and supporting the hard work of the day, while helping people find grounded, if not radical hope within themselves and with each other (Stoknes 2013; Lear 2006). Ultimately, what visions for a new society emerge, which values and worldviews will prevail is not entirely predictable from here, even if some promising signs are already emerging (Basáñez 2016; Schlitz 2015). And while it unfolds, the signs of the new may long be overshadowed by the challenges of letting go of the old. But when enough of the old has been put to death, when wounds have been tended and rifts sufficiently healed, the shift to reincorporation can commence.

4.3 Psycho-Cultural Reincorporation

The lens of the death-rebirth model of transformation suggests outlines of the reincorporation phase although there is much that is unknowable. For example, the conditions of the rebuilding phase depend on how severe the casualties to people and planet may have been or what positive events and innovations may have prevented unthinkable tragedies.

     Theoretically, we would expect that society would now be charged with aggregating and integrating the pieces of wisdom and new insights gained into a new worldview, a new identity. It would work towards a new plateau of psycho-cultural stability. Accordingly, the *zeitgeist* of the reincorporation would reflect symbols of renewal, birth, ascent, hope, unity, and stability, even as the lived reality continues to be profoundly colored by the day-to-day challenges of a climate-altered world. Such symbols might be reflected in the writings and speeches of cultural commentators or in imagery emerging in the media and arts.

     Elements of already-existing visions of economic, ecological, and social sustainability currently existent at the cultural margin would move into the mainstream (Section 1). Much of the reincorporation work would be to make these new ways of thinking manifest in concrete ways of being and acting. For example, having been confronted with the specific consequences of un-sustainability, one might reasonably expect to see a considerable focus on restoring and repairing what was previously destroyed (where possible). Outwardly, one might expect continued (accelerated) efforts to restabilize the climate, albeit at a new level.

     As Plotkin (2008, p. 40), suggests, having done the difficult work during a time of psychological homelessness in the liminal phase, society would have found a new identity, its "true home," or "psycho-ecological niche" and now learn to act from that new self-understanding. A new metanarrative would become prevalent whereby humans see themselves in a different relationship with creation (e.g., Swimme and Tucker 2011); the new culture might construct its sense of self in relation to the cosmos (DeCicco and Stroink 2007; Næss 1988). As a result, it would not act merely from a place of altruism or duty toward the natural world, but might be genuinely inspired to care for all beings as a reflection of an understanding wherein all members of the Earth community are part of one body, that is, as a reflection of an expanded sense of self. Society might make deliberate attempts to overcome the Anthropocene, rather than perpetuate it, i.e., to become a non-dominant species again (Sarrazin and Lecomte 2016). Such an "evocentric" culture might be centered around and dedicated to the continuation of life itself (Sarrazin and Lecomte 2016), and as such would be characterized by gratitude for, and an abiding generosity toward, all forms of life.

     The identity, social norms, ethics, abiding myths, and priorities enacted by members of that culture would stem from the very experiences of having undergone a life-threatening, revelatory ordeal and reflect the maturity that comes from the hard lessons learned there. Having suffered the impacts of an

environment not cared for, people might recognize the value of caring for the living environment on which their sustenance depends, accepting the conditions of life and death, the finiteness of life on Earth. Its new ontology would be based on an experiential understanding of wholeness. Resulting priorities would be survival, renewal and sustainability, reflected in new systems of inclusive governance, common-good preserving legislation, life-centered education, and closed-loop economics.

Fierce, tenacious commitment to these new values might also become visible in the behavior of leaders. Whether in politics, business, civil society, or whatever new constellations this future society might have, they might vow to take on the difficult tasks ahead. Communities might pledge to enact their commitment to restoration, life-sustaining practices, and new ways of caring for each other. Charters may be written or rewritten to guide international relations, as nations amend their bills of rights with bills of responsibility.

A defining complement of that new society would stem from the new vision for itself that it received during the reckoning and deep seeking in the threshold.[3] There might be glimpses of an answer to the existential question that loomed at the outset of this transformational journey, namely: if we are not the humans we thought we were – the smaller version of ourselves that submitted to this transformation – then who are we? Who really is the last surviving descendant of the genus *Homo – Homo sapiens sapiens*?[4]

Asking the biggest of all questions would not be another version of modern Westerners' exceptionalism. Rather, this transcendental question aims at differentiation. It asks how humans are unique, not better or more important than someone occupying a different niche. It asks about humans' particular way of belonging, about their role or task enacted for the mutual benefit of the larger Earth community, forming a participatory relationship in which people allow themselves to be affected and changed by things previously believed to be inanimate, non-sentient, and undeserving of rights.

As with the other phases of the transformation, safe passage is not guaranteed and requires critical capacities to meet the challenges involved. For example, one might speculate that in addition to technical and practical skills, developing soft skills may become critical, including compassion, effective communication, dialogue, collaboration, reflectivity, honesty, and forgiveness. Moreover, the need to persist in the face of skepticism, pessimism, outright sabotage or the temptation to seek immediate gratifications rather than staying committed to long-term goals will demand courage, creativity and perseverance. Some will continue to hold fast to the old ways, casting doubt, thinking too small, and undermining the belief in whatever inspiration emerged from the ordeal. Dealing with internal doubts, loss of inspirations, and humiliation will also be required as people enact new ideas. Over time the capacity grows to be truly adaptive to climate change: aware and alert, open-minded, risk and failure-tolerant, comfortable with uncertainty, experimental, learning-oriented, and reflective (Hafenmayer-Stefanská and Hafenmayer 2013; Heifetz et al. 2009; O'Brien and Sygna 2015).

5. Conclusion

Observing initiatory experiences, Eliade (1994, p. 196) noted, "a human being becomes *himself or herself* only after having solved a series of desperately difficult and even dangerous situations; that is, after having undergone 'tortures' and 'death,' followed by an awakening to another life that is qualitatively different because it is regenerated." In this paper, we have explored this idea in the context of the psycho-cultural transformation associated with a transition from an environmentally destructive culture to a durable, socially and economically just and ecologically sustainable one. We have proposed a model of

---

[3] Space does not permit a fuller exploration of the spiritual dimension of the transformation here, but was attempted in Berzonsky (2016).

[4] *Homo sapiens* had two subspecies at one time. *Homo sapiens idaltu* (the "first-born") is the immediate ancestor of modern humans, *Homo sapiens sapiens*. The now-extinct subspecies lived some 160,000 years ago in the Pleistocene in Africa (White et al. 2003).

psycho-cultural transformation to explore the processes that would unfold if society actively engaged this transformation at the level of worldviews, beliefs, values, and identity. If Eliade is correct, then a successfully navigated, collective transformation might help us make an evolutionary shift to grow more fully into our name, *homo sapiens sapiens*, wise humans. Interestingly, the skills and capacities required to make this transformative change are the hallmarks that define a mature, sustainable society.

Nothing about this process is easy, and this model of transformation makes no apologies for the inherent challenges; its promise is the perpetuation of existence, and a novel experience of life itself. The model provides a frame, a map and an explanation of the psychological territory of transformation which helps to normalize an experience seemingly already underway at present and helps us take full advantage of the opportunities that lie within it. Knowing this territory can give a person – and a collective – hope in dark times, a hope that is rooted not in the assurance of outcome, but in the rightness of the transformative process (Orr 2011; Stoknes 2015).

As a *frame*, the death-rebirth process helps us interpret events and experiences. It serves as a container to hold the situation and, thus, to maintain perspective during difficult times. Leaders could use it to reassure others that transformation is profoundly difficult but also possible. It prepares us to work toward and for something greater than we can perceive at the moment. It calls on us to become a nobler version of our current selves.

As a *map*, this model tells us something about the psychological territory that must be traversed and thus how best to prepare for and respond if true transformation and not superficial change is the goal. It provides a sketch of the challenges, dangers and obstacles ahead and outlines the capacities required to successfully work through each phase. These are skills that one could begin to foster now, thereby aiding the transformation process. Such a map enables us to understand the importance of actively engaging the demise of out-worn worldviews and values while seeking and supporting the gestation of new ones, e.g., in social movements or innovative business endeavors. Importantly and inspiringly, this map also suggests that if we rise to the challenge, there will be a point – a social tipping point – at which enough of the previous cultural identity has been threshed through and an as-yet-unknown image, idea, or inspiration might emerge to ignite the light of a new era (e.g., Bentley and O'Brien 2012).

The third benefit of applying a depth psychological death-rebirth model is its *explanatory* power. It explains the psychological mechanisms and deep inner work by which an egocentric, anthropocentric worldview transforms into an ecocentric and perhaps evocentric one.

Importantly, the ideas offered here must not be viewed as an exclusive "solution" to the question of how to become an authentically sustainable culture, nor are they in opposition to the many interventions needed to support radical outer systems changes (e.g., Farla et al. 2012; Mercure et al. 2016; Parson and Kravitz 2013). Emphatically, we do not propose a sequential process, wherein values must change first before other changes in practice and policy can be initiated. One is always implicated in and intertwined with the other. Values change in some and then inspire others; behaviors change values and values change behaviors; those passionate to spread certain values use bully pulpits, policies and markets. Inner change is in these ways linked to outer change. Ignoring the psycho-cultural component of the transformation, however, risks missing what may well be the most obstinate obstacle to the change so many call for as humanity enters the Anthropocene.

6. References

Adam, B., and C. Groves. 2011. Futures tended: Care and future-oriented responsibility. *Bulletin of Science, Technology & Society* 31(1): 17-27.

Adger, W. N., J. Barnett, K. Brown, N. Marshall, and K. O'Brien. 2013. Cultural dimensions of climate change impacts and adaptation. *Nature Climate Change* 3(2): 112-117.

Aerts, D., L. Apostel, B. D. Moor, S. Hellemans, E. Maex, H. V. Belle, and J. V. d. Veken. 2007. *World Views: From Fragmentation to Integration*. 2nd ed. (internet), Brussels: VUB Press.

Anderson, K., and A. Bows. 2011. Beyond "dangerous" climate change: Emission scenarios for a new world. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 369(1934): 20-44.

Bahadur, A., and T. Tanner. 2014. Transformational resilience thinking: Putting people, power and politics at the heart of urban climate resilience. *Environment and Urbanization* 26(1): 200-214.

Basáñez, M. E. 2016. *A World of Three Cultures: Honor, Achievement and Joy*. Oxford, UK: Oxford University Press.

Beck, U. 2016. *The Metamorphosis of the World*. Cambridge, UK: Polity Press.

Bentley, R. A. & M. O'Brien (2012) Cultural Evolutionary Tipping Points in the Storage and Transmission of Information. *Frontiers in Psychology,* 3: [569]. Available online at: http://journal.frontiersin.org/article/10.3389/fpsyg.2012.00569/full.

Berzonsky, C. L. 2016. Towards *Homo Sapiens Sapiens*: Climate Change as a Global Rite of Passage. Dissertation, Depth Psychology Program, Pacifica Graduate Institute, Carpinteria, CA.

Bloodhart, B., and J. K. Swim. 2011. Equality, harmony, and the environment: An ecofeminist approach to understanding the role of cultural values on the treatment of women and nature. *Ecopsychology* 2(3): 187-194.

Blühdorn, I. 2007. Sustaining the unsustainable: Symbolic politics and the politics of simulation. *Environmental Politics* 16(2): 251-275.

Brillinger, M. F. 1997. Paths of learning, grieving and transforming. *Futures* 29(8): 749-754.

Brown, K., S. O'Neill, and C. Fabricius. 2013. Transformation and social science perspectives. In *World Social Science Report 2013: Changing Global Environments*, eds. International Social Science Council (ISSC) and United Nations Educational Scientific and Cultural Organization (UNESCO), pp. 98-104. Paris, France: UNESCO, ISSC, OECD.

Callicott, J. B. 1994. *Earth's Insights: A Multicultural Survey of Ecological Ethics from the Mediterranean Basin to the Australian Outback*. Berkeley, CA: University of California Press.

Campbell, J. 1949. *The Hero with a Thousand Faces*. Novato, CA: New World Library.

Corner, A., E. Markowitz, and N. Pidgeon. 2015. Public engagement with climate change: The role of human values. *Wiley Interdisciplinary Reviews: Climate Change* 5(3): 411-422.

Crutzen, P. J. 2002. Geology of mankind: The Anthropocene. *Nature* 415: 23.

Dabrowski, K. 1964. *Positive Disintegration*. Boston: Little Brown & Co.

Daily, G. ed. 1997. *Nature's Services: Societal Dependence On Natural Ecosystems*. Washington, DC: Island Press.

Dangerman, A. T. C. J., and H. J. Schellnhuber. 2013. Energy systems transformation. *Proceedings of the National Academy of Sciences* 110(7): E549-E558.

Daw, T. M., S. Coulthard, W. W. L. Cheung, K. Brown, C. Abunge, D. Galafassi, G. D. Peterson, et al. 2015. Evaluating taboo trade-offs in ecosystems services and human well-being. *Proceedings of the National Academy of Sciences* 112(22): 6949-6954.

DeCicco, T., and M. Stroink. 2007. A third model of self-construal: The metapersonal self. *The International Journal of Transpersonal Studies* 26: 82-104.

de Witt, A. 2016. Global warming calls for an inner climate change: The transformative power of worldview reflection for sustainability. In *Spirituality and Sustainability: New Horizons and Exemplary Approaches*, eds. S. Dhiman and J. Marques, 199-214. Cham: Springer International Publishing.

Dietz, T., E. A. Rosa, and R. York. 2010. Human driving forces of global change: Dominant perspectives. In *Human Footprints on the Global Environment: Threats to Sustainability*, eds. E. A. Rosa, A. Diekmann, T. Dietz and C. C. Jaeger, 83-134. Cambridge, MA: MIT Press.

Dietz, T., A. Fitzgerald, and R. Shwom. 2005. Environmental values. *Annual Review of Environment and Resources* 30(1): 335-372.

Earth Charter Commission. 2000. The Earth Charter. San Jose, Costa Rica: The Earth Charter Initiative.

Edinger, E. 1999. *Archetype of the Apocalypse: Divine Vengeance, Terrorism, and the End of the World*. Chicago, IL: Open Court.

Eliade, M. 1994. *Rites and Symbols of Initiation: The Mysteries of Birth and Rebirth*. Putnam, CN: Spring Publications, Inc.

Ellis, E. C. 2011. Anthropogenic transformation of the terrestrial biosphere. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 369(1938): 1010-1035.

Eriksen, S. H., A. J. Nightingale, and H. Eakin. 2015. Reframing adaptation: The political nature of climate change adaptation. *Global Environmental Change* 35: 523-533.

Farla, J., J. Markard, R. Raven, and L. Coenen 2012. Sustainability transitions in the making: A closer look at actors, strategies and resources. *Technological Forecasting and Social Change* 79(6): 991-998.

Feola, G. 2014. Societal transformation in response to global environmental change: A review of emerging concepts. *AMBIO* 44(5): 376-390.

Folke, C., S. R. Carpenter, B. Walker, M. Scheffer, T. Chapin, and J. Rockström. 2010. Resilience thinking: integrating resilience, adaptability and transformability. *Ecology and Society* 15 (4): 20 [online] URL: http:// www.ecologyandsociety.org/vol15/iss4/art20/.

Foster, S. and M. Little. 1980. *The Book of the Vision Quest: Personal Transformation in the Wilderness*. New York, NY: Prentice Hall Press.

Foust, C. R., and W. O'Shannon Murphy. 2009. Revealing and reframing apocalyptic tragedy in global warming discourse. *Environmental Communication: A Journal of Nature and Culture* 3(2): 151-167.

Glavovic, B. C., K. Limburg, K. K. Liu, K. C. Emeis, H. Thomas, H. Kremer, B. Avril, J. Zhang, M. R. Mulholland, M. Glaser, and D. P. Swaney. 2005. Living on the margin in the Anthropocene: Engagement arenas for sustainability research and action at the ocean-land interface. *Current Opinion in Environmental Sustainability* 14(June): 232-238.

Goodell, J. 2016. Can New York be saved in the era of global warming? The future of America's greatest city is at risk. *Rolling Stone*, Available at: http://www.rollingstone.com/politics/news/can-new-york-be-saved-in-the-era-of-global-warming.

Grin, J., J. Rotmans, and J. Schot. 2010. *Transitions to Sustainable Development. New Directions in the Study of Long Term Transformative Change*. New York: Routledge.

Hackmann, H., and A. L. St. Clair. 2012. Transformative Cornerstones of Social Science Research for Global Change. Paris: International Social Science Council (ISSC).

Hafenmayer-Stefanská, J., and W. Hafenmayer. 2013. *The Future Makers: A Journey to People Who Are Changing the World—And What We Can Learn From Them*. Sheffield, UK: Greenleaf.

Hamilton, C. 2010. *Requiem for a Species: Why We Resist the Truth About Climate Change*. London: Earthscan.

Hansen, J. E. 2009. *Storms of My Grandchildren: The Truth About the Coming Climate Catastrophe and Our Last Chance to Save Humanity*. London: Bloomsbury Publishing.

Hayward, T. 1997. Anthropocentrism: A misunderstood problem. *Environmental Values* 6(1): 49-63.

Head, L. 2016. Grief, loss and the cultural politics of climate change. In H. Bulkeley, M. Paterson, & J. Stripple (Eds.), *Towards a cultural politics of climate change: Devices, desires and dissent*, pp.81-93. Cambridge, UK: Cambridge University Press.

Heifetz, R., A. Grashow, and M. Linsky. 2009. *The Practice of Adaptive Leadership: Tools and Tactics for Changing Your Organization and the World*. Boston, MA: Harvard Business Press.

Hiebert, P. G. 2008. *Transforming Worldviews: An Anthropological Understanding of How People Change*. Grand Rapids, MI: Baker Academic.

Hoekstra, A. Y., and T. O. Wiedmann. 2014. Humanity's unsustainable environmental footprint. *Science* 344: 1114-1117.

Hoggett, P. 2011. Climate change and the apocalyptic imagination. *Psychoanalysis Culture Society* 16(3): 261-275.

Hollis, J. 2000. *The Archetypal Imagination*. College Station, TX: Texas A&M University Press.

Holm, P., J. Adamson, H. Huang, L. Kirdan, S. Kitch, I. McCalman, J. Ogude, et al. 2015. Humanities for the environment – A manifesto for research and action. *Humanities* 4: 977-992.

Horlings, L. G. 2015. The inner dimension of sustainability: Personal and cultural values. *Current Opinion in Environmental Sustainability* 14: 163-169.

IPCC (Intergovernmental Panel on Climate Change). 2014. *Climate Change 2014: Synthesis.* Report of the Fifth Assessment of the Intergovernmental Panel on Climate Change. Geneva: IPCC.

ISSC (International Social Science Council) (ed.). 2013. *World Social Science Report 2013: Changing Global Environments*. Paris: UNESCO/ISSC.

Jaspers, K. 1953. *The Origin and Goal of History*. New Haven, CT: Yale University Press.

Jung, C. G. 1928/1966. The relation between the ego and the unconscious. In The collected works of C. G. Jung, eds. H. Read, M. Fordham, G. Adler & W. McGuire, 123-241. Princeton, NJ: Princeton University Press.

Jung, C. G. 1931/1970. Mind and earth (R. F. C. Hull, Trans.). In H. Read, M. Fordham, G. Adler, and W. McGuire (Eds.), *The Collected Works of C. G. Jung* (Vol. 10, 2nd ed., 29-49). Princeton, NJ: Princeton University Press.

Jung, C. G. 1944/1968. *Psychology and Alchemy* (R. F. C. Hull, Trans.). H. Read, M. Fordham, G. Adler, and W. McGuire (Eds.), *The Collected Works of C. G. Jung* (Vol. 12, 2nd ed.). Princeton, NJ: Princeton University Press.

Jung, C. G. 1950/1969. Concerning rebirth. In *The Collected Works of C. G. Jung,* eds. W. McGuire, S. H. Read, M. Fordham and G. Adler, 113-147. Princeton, NJ: Princeton University Press.

Jung, C. G. 1952/1969. Answer to Job (R. F. C. Hull, Trans.). In H. Read, M. Fordham, G. Adler, and W. McGuire (Eds.), *The Collected Works of C. G. Jung* (Vol. 11, 2nd ed., 355-470). Princeton, NJ: Princeton University Press.

Jung, C. G. 1961/1965. Healing the split (R. F. C. Hull, Trans.). In H. Read, M. Fordham, G. Adler, and W. McGuire (Eds.), *The Collected Works of C. G. Jung* (Vol. 18, 253-264). Princeton, NJ: Princeton University Press.

Kasser, T. 2016. Materialistic values and goals. *Annual Review of Psychology* 67(1): 489-514.

Kasser, T. 2009. Values and ecological sustainability: Recent research and policy possibilities. In *The Coming Transformation: Values to Sustain Human and Natural Communities*, eds. S. R. Kellert and J. G. Speth, 180-204. New Haven, CT: Yale School of Forestry and Environmental Studies.

Kates, R. W., W. R. Travis, and T. J. Wilbanks. 2011. Transformational adaptation when incremental adaptations to climate change are insufficient. *Proceedings of the National Academy of Sciences* 109(19): 7156-7161.

Keller, E. F. 1985. *Reflections on Gender and Science*. New Haven, CT: Yale University Press.

Kellert, S. R. and J. G. Speth (eds.). 2009. *The Coming Transformation: Values to Sustain Human and Natural Communities*. New Haven, CT: Yale School of Forestry and Environmental Studies.

Kinzig, A. P., P. R. Ehrlich, L. J. Alston, K. Arrow, S. Barrett, T. G. Buchman, G. C. Daily, et al. 2013. Social norms and global environmental challenges: The complex interaction of behaviors, values, and policy. *BioScience* 63(3): 164-175.

Lear, J. 2006. *Radical Hope: Ethics in the Face of Cultural Devastation*. Cambridge, MA: Harvard University Press.

Leduc, T. B. 2014. Climates of ontological change: Past wisdom in current binds? *Wiley Interdisciplinary Reviews: Climate Change* 5(2): 247-260.

López-Pedraza, R. 1990. *Cultural Anxiety*. Einsiedeln, Switzerland: Daimon Verlag.

Marino, E., and J. Ribot. 2012. Special Issue Introduction: Adding insult to injury: Climate change and the inequities of climate intervention. *Global Environmental Change* 22(2): 323-328.

McKibben, B. 2010. *Eaarth: Making a Life on a Tough New Planet*. New York, NY: Henry Holt and Company.

Meade, M. 2012. *Why the World Doesn't End: Tales of Renewal in Times of Loss*. Seattle, WA: Greenfire Press.

Meadows, D. 1999. Leverage Points: Places to Intervene in a System. *Sustainability Institute Papers*. Hartland, VT: Sustainability Institute.

Merchant, C. 1980. *The Death of Nature: Women, Ecology and the Scientific Revolution*. San Francisco: Harper and Row.

Mercure, J.-F., H. Pollitt, A. M. Bassi, J. E. Viñuales, and N. R. Edwards. 2016. Modelling complex systems of heterogeneous agents to better design sustainability transitions policy. *Global Environmental Change* 37: 102-115.

Minkov, M., and G. Hofstede. 2012. Hofstede's fifth dimension: New evidence from the World Values Survey. *Journal of Cross-Cultural Psychology* 43(1): 3-14.

Morinis, A. (1985) The ritual experience: Pain and the transformation of consciousness in ordeals of initiation. *Ethos,* 13**,** 150-174.

Moser, S. C. 2013. Navigating the political and emotional terrain of adaptation: Community engagement when climate change comes home. In *Successful Adaptation to Climate Change: Linking Science and Policy in a Rapidly Changing World*, eds. S. C. Moser and M. T. Boykoff, 289-305. London: Routledge.

Moser, S. C. 2012. Getting real about it: Navigating the psychological and social demands of a world in distress. In *Sage Handbook on Environmental Leadership*, eds. D. Rigling Gallagher, R. N. L. Andrews and N. L. Christensen, 432-440. Thousand Oaks, CA: Sage.

Myers, N., and J. Kent. 2003. New consumers: The influence of affluence on the environment *Proceedings of the National Academy of Sciences* 100(8): 4963-4968.

Nalau, J., and J. Handmer. 2015. When is transformation a viable policy alternative? *Environmental Science & Policy* 54: 349-356.

Næss, A. 1988. Self-realization: An ecological approach to being in the world. In J. Seed, J. Macy, P. Fleming and A. Næss (eds.), *Thinking Like a Mountain: Towards a Council of All Beings*, 19-31. Philadelphia, PA and Gabriola Island, BC: New Society Publishers.

Neumann, E. 1994. *The fear of the feminine and other essays on feminine psychology.* Princeton, NJ: Princeton University Press.

New, M., D. Liverman, H. Schröder, and K. Anderson. 2011 Four degrees and beyond: The potential for a global temperature increase of four degrees and its implications. *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 369(1934): 6-19.

O'Brien, K. 2012. Global environmental change II: From adaptation to deliberate transformation. *Progress in Human Geography* 36(5): 667-676.

O'Brien, K., and E. Selboe. 2015. Social transformation: The real adaptive challenge. In *The Adaptive Challenge of Climate Change*, eds. K. O'Brien and E. Selboe, 311-324. New York: Cambridge University Press.

O'Brien, K., and L. Sygna. 2015. The adaptive challenge of climate change. In *The Adaptive Challenge of Climate Change*, eds. K. O'Brien and E. Selboe, 1-23. New York: Cambridge University Press.

Orr, D. W. 2009. *Down to the Wire: Confronting Climate Collapse*. Oxford: Oxford University Press.

Orr, D. 2011. *Hope is an Imperative: The Essential David Orr*. Washington, DC: Island Press.

Park, S. E., N. A. Marshall, E. Jakku, A. M. Dowdd, S. M. Howden, E. Mendham, and A. Fleming. 2012. Informing adaptation responses to climate change through theories of transformation. *Global Environmental Change* 22: 115-126.

Parson, E. A., and E. L. Kravitz. 2013. Market instruments for the sustainability transition. *Annual Review of Environment and Resources* 38(1): 415-440.

Parsons, M., K. Fisher and J. Nalau (2016). Alternative approaches to co-design: Insights from Indigenous/academic research collaborations. *Current Opinion in Environmental Sustainability* 20: 99-105.

Pelling, M. 2011. *Adaptation to Climate Change: From Resilience to Transformation*. London: Routledge.

Penna, C. C. R., and F. W. Geels. 2012. Multi-dimensional struggles in the greening of industry: A dialectic issue lifecycle model and case study. *Technological Forecasting & Social Change* 79: 999-1020.

Pirages, D. C., and P. R. Ehrlich. 1974. *Ark II: Social Response to Environmental Imperatives*. San Francisco, CA: Freeman.

Plotkin, B. 2008. *Nature and the Human Soul: Cultivating Wholeness and Community in a Fragmented World*. Novato, CA: New World Library.

Pope Francis. 2015. Laudato si': On care of our common home. San Francisco, CA: Ignatius Press.

Plumwood, V. 1993. *Feminism and the Mastery of Nature*. London: Routledge.

Randall, R. 2009. Loss and climate change: The cost of parallel narratives. *Ecopsychology* 1(3): 118-129.

Raskin, P. D. 2006. The Great Transition Today: A Report from the Future. Boston: The Tellus Institute. Available at: http://www.gtinitiative.org/default.asp?action=43.

Raskin, P. D., T. Banuri, G. C. Gallopín, P. Gutman, A. Hammond, R. Kates, and R. Swart. 2002. *Great Transition: The Promise and Lure of Times Ahead. A Report of the Global Scenario Group*. Stockholm, Sweden: Stockholm Environment Institute.

Roberts, J. T., and B. C. Parks. 2007. *A Climate of Injustice: Global Inequality, North-South Politics, and Climate Policy*. Cambridge, MA: The MIT Press.

Rohr, R. (2002) Grieving as sacred space: How these anxious and ambiguous days might offer up the most holy of gifts. *Sojourners Magazine*. Available at: https://sojo.net/magazine/january-february-2002/grieving-sacred-space

Ronda, M. 2013. Mourning and melancholia in the Anthropocene. *Post45*. Available at: http://post45.research.yale.edu/2013/06/mourning-and-melancholia-in-the-anthropocene/.

Rotmans, J., R. Kemp, M. B. A. van Asselt, F. W. Geels, G. Verbong, and K. Molendijk. 2000. *Transitions and Transition Management*. Maastricht: International Centre for Integrative Studies (ICIS).

Running, S. W. 2007. Five stages of climate grief. *Friends of Two Rivers.* Available at: http://www.friendsof2rivers.org/dr-steve-running-5-stages-of-climate-grief.html.

Sarrazin, F., and J. Lecomte. 2016. Evolution in the Anthropocene: Taking account of the evolutionary effects of human actions is crucial for humans and non-humans. *Science* 351: 922-923.

Scharmer, O. 2009. *Theory U: Leading from the Future as it Emerges*. San Francisco: Berrett-Koehler Publishers.

Schellnhuber, H. J. 2009. Terra quasi-incognita: Beyond the 2°C line. Conference presentation, *4 Degrees and Beyond: International Climate Conference at Oxford University*, 1-20. Oxford, UK.

Schlitz, M. 2015. *Death Makes Life Possible: Revolutionary Insights on Living, Dying, and the Continuation of Consciousness*. Louisville, CO: Sounds True.

Schwartz, G. M., and J. J. Nichols eds. 2006. *After Collapse: The Regeneration of Complex Societies*. Tucson, AZ: The University of Arizona Press.

Scranton, R. .2013. Learning how to die in the Anthropocene. *The Stone.* Available at: http://opinionator.blogs.nytimes.com/2013/11/10/learning-how-to-die-in-the-anthropocene/#more-150341.

Scoones, I., M. Leach, and P. Newell eds. 2015. *The Politics of Green Transformations*. Oxford: Routledge.

Sharma, M. 2007. Personal to planetary transformation. *Kosmos Journal* n/v (Fall/Winter): 31-35. Available at: http://www.kosmosjournal.org/article/personal-to-planetary-transformation/.

Shepard, P. 1982. *Nature and Madness*. San Francisco: Sierra Club Books.

Sire, J. W. 2015. *Naming the Elephant: Worldview as a Concept*. 2nd ed. Downers Grove, IL: InterVarsity Press.

Sorell, T. 1991. *Scientism: Philosophy and the Infatuation with Science*. New York: Routledge.

Speth, J. G. 2009. The coming transformation: Values to sustain human and natural communities. In *The Coming Transformation: Values to Sustain Human and Natural Communities*, eds. S. R. Kellert and J. G. Speth, 4-20. New Haven, CT: Yale School of Forestry and Environmental Studies.

Steffen, W., K. Richardson, J. Rockström, S. E. Cornell, I. Fetzer, E. M. Bennett, R. Biggs, et al. 2015. Planetary boundaries: Guiding human development on a changing planet. *Science* 347: 736.

Stein, M. 1983. *In Midlife: A Jungian Perspective*. Woodstock, CT: Spring Publications.

Stoknes, P. E. 2015. *What We Think About When We Try Not to Think About Global Warming: Toward a New Psychology of Climate Action*. White River Junction, VT: Chelsea Green Books.

Swimme, B., and M.E. Tucker. 2011. *Journey of the Universe*. New Haven, CT: Yale University Press.

Swyngedouw, E. 2010. Apocalypse forever? Post-political populism and the spectre of climate change. *Theory Culture Society* 27(2-3): 213-232.

Thomassen, B. 2009. The uses and meanings of liminality. *International Political Anthropology* 2(1): 5-27.

Thompson, M., and S. Rayner. 1998. Cultural discourses. In *Human Choice and Climate Change: What Have We Learned?*, eds. S. Rayner and E. L. Malone, vol.1, 265-344. Columbus, Ohio: Battelle Press.

Turner, V. 1967. *The Forest of Symbols: Aspects of Ndembu Ritual*. Ithaca, NY: Cornell University Press.

Trainor, S., F. S. Chapin III, H. P. Huntington, D. C. Natcher, and G. Kofinas. 2007. Arctic climate impacts: Environmental injustice in Canada and the United States. *Local Environment* 12(6): 627-643.

UN (United Nations). 2015. Paris Agreement. New York: UN. Available at: http://unfccc.int/paris_agreement/items/9485.php

van Gennep, A. 1960. *The Rites of Passage*. Chicago, IL: University of Chicago Press.

von Franz, M.-L. 1992. *Psyche and Matter*. Boston, MA: Shambhala Publications.

Wade, L. 2015. Climate change means one world's death and another's birth. *Wired Magazine* n/v, September 1, retrieved from http://www.wired.com/2015/09/climate-change-means-one-worlds-death-anothers-birth.

Wei-ming, T. 1994. Beyond the Enlightenment mentality. In *Worldviews and Ecology: Religion, Philosophy, and the Environment*, eds. M. E. Tucker and J. A. Grim, 19-29. New York: Orbis Books.

Welzel, C. 2014. *Freedom Rising: Human Empowerment and the Quest for Emancipation*. Cambridge, UK: Cambridge University Press.

WBGU (Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen/ German Advisory Council on Global Change). 2011. *Welt im Wandel: Gesellschaftsvertrag für eine Große Transformation/A Changing World: Societal Contract for a Great Transformation*. Berlin: WGBU.

White, T. D., B. Asfaw, D. DeGusta, H. Gilbert, G. D. Richards, G. Suwa, and F. C. Howell. 2003. Pleistocene Homo sapiens from Middle Awash, Ethiopia. *Nature* 423: 742-747.