Unedited, unformatted chapter forthcoming in Gallagher et al. Sage Reference Handbook of Environmental Leadership, *Sage, accepted for publication, made available at www.susannemoser.com with permission from Sage.*

GETTING REAL ABOUT IT:
MEETING THE PSYCHOLOGICAL AND SOCIAL DEMANDS OF A WORLD IN DISTRESS

Susanne C. Moser, Ph.D.

INTRODUCTION

With our lives we make our answers all the time,
to this ravenous, beautiful, mutilated, gorgeous world.
Victoria Safford (2005)

This is not the time for illusion or evasion;
it is time for transformation.
David Orr (2011)

"With our lives we make our answers all the time, to this ravenous, beautiful, mutilated, gorgeous world." Nothing could ring more true to someone who chooses to commit to environmental leadership in these times. I frame this chapter by the words of a religious leader, Unitarian minister Victoria Safford, and those of a passionate educator, visionary engineer, and activist scientist, David Orr, to name the enormous task before us – active and conscious transformation in the face of a mutilated and yet gorgeous world. A world in a degree of crisis that many are not fully aware of, and those that are, would rather deny or avoid.

Environmental leadership in such a world is a whole-life, whole-person commitment, not simply a matter of professional expertise, political savvy, or even passionate martyrdom for some time before burning out. Environmental leadership now and increasingly so in the future poses tremendous personal – psychological, interpersonal, and political – demands on us that deserve to be exposed clearly and explored consciously. It is the purpose of this chapter to focus on what is asked of environmental leaders in this respect.

Based on my own background and expertise, I will cast this chapter in light of the specter of climate change, but other global crises could serve as equally valid contexts. After all, climate change will not unfold in isolation of staggering losses of biodiversity and the unraveling of the ecosystems on which we humans depend; it will not occur in a vacuum apart from abysmal poverty and deep-seated human insecurity; it is deeply interwoven at the level of causes, impacts, and responses with other forms of resource depletion, environmental degradation, and social injustice. So, this chapter does not depend on climate change per se. Rather, this chapter depends on your imagination: to turn established and less-certain scientific projections into a picture of every-day life, some day in the future, and to place yourself as an environmental leader in that time. It depends on your willingness to sit with those possibilities.

As such, this chapter may be quite different from other entries in this handbook – at least in these two ways: first, it does not just synthesize a multi-disciplinary body of established knowledge and fact; it does not describe or critically assess existing leadership models; nor does it show tried-and-true leadership strategies and techniques. Instead it is a thought piece ahead of scientific study and empirical evidence. While grounded in science, it is an exploration of challenges rarely talked about, and a provocation to those who want to be environmental leaders in the face of them. Second, the chapter draws on a wildly diverse set of sources – ranging from climate science to eco- and depth psychology, from conflict resolution studies to communication science, from ethical writings to work in business and organizational leadership, from sermons to mainstream news reports, from scenario studies to poetry. As such, even just reading these pages demands leadership of you: to be versatile and flexible in the face of new information, to consider ideas from many, maybe unfamiliar, maybe even uncomfortable sources, and to form but hold lightly your own opinions about the points being made.

With that as an introduction, here is a roadmap of the remainder of the chapter: In Section 2, I set the stage with a tour-de-force through climate change science that is probably familiar to many, yet draw conclusions that may put some at the edge of their comfort zone. Section 3, the leadership-focused heart of this chapter, spells out the demands on future environmental leaders that arise from taking seriously the scenarios described in Section 2. Section 4 concludes the chapter with some thoughts on choosing leadership in these times, and how to sustain a commitment to it despite the difficulties and heart-break that may well come.

WHAT FUTURE? THE STAGE AND CONTEXT FOR ENVIRONMENTAL LEADERSHIP

Better a cruel truth than a comfortable delusion.
Edward Abbey (1990)

Part of my work in recent years has led me to books and papers that try to tell the climate story in compelling ways. For several years, my personal favorite has been Alastair McIntosh's (2008) *Hell and High Water: Climate Change, Hope and the Human Condition,* in part because of McIntosh's clear-eyed perspective and unrelenting courage, his effort to link the challenge of facing climate change with human psychology, and his struggling with finding meaningful work at this time in human history. In retrospect, I see his book as one of the motivations for writing this chapter. Janis Dickinson's 2009 gutsy introduction of mainstream science to existentialist psychology and the seemingly pervasive propensity of humans to deny that which reminds us of death, was another, and Clive Hamilton's (2010) *Requiem for a Species* the most recent and most powerful one. His book evoked in me what Buddhist teacher, systems thinker, and activist Joanna Macy and her colleague Molly Young Brown (1998) described as a kind of liberation, a sense of possibility, and burst of energy that comes from no longer avoiding the truth, and the feelings about the truth, of the state of our world.

What is that truth? I will resist the urge to put truth in quotation marks, thus giving you an easy way out. In fact, I will turn away from the "off-mainstream" writings for the moment to make that escape even more difficult. Instead, I will recollect the findings and conclusions of some of the most respected scientific institutions and individuals to paint a picture of our climate future that is difficult to refute.

Faster and faster toward "dangerous" climate change

In November 2011, in a brief flurry of news articles, the world learned that global energy demand, and with it carbon emissions, had risen at an alarming rate over the preceding year. Not only does the emissions trajectory the world has been on over the past decade exceed the worst-case emissions scenario envisioned by the Intergovernmental Panel on Climate Change (IPCC) but at its current incline and pace makes it all but practically impossible to reach the – quite arbitrary – target of 2 °C above the preindustrial global temperature average. Based on climate modeling studies, scientists had said as much years before (e.g., Ramanathan and Feng 2008), but scientific papers, even in prestigious journals, so often go unnoticed by the public. That 2-degree target has been as the threshold beyond which many climate scientists expect "dangerous" climate changes (Oppenheimer 2005; Gupta & van Asselt 2006), though many also have questioned whether it is not set too high or too rigidly (Hansen 2005; Lenton 2011; Moellendorf 2011).

If the emissions curve does not get bent downwards, the International Energy Agency – the messenger of the bad news otherwise known for its muted and conservative tone – expects to see "the world […] on a trajectory that results in a level of emissions consistent with a long-term average temperature increase of more than 3.5°C. Without these new policies, we are on an even more dangerous track, for a temperature increase of 6°C or more" within three generations (IEA, 2011a, p.2). Moreover, based on simple math, the deadline for beginning to make those serious policy changes (serious enough to reach the 2 °C target) was set to just five years from now: 2017 (IEA 2011b). The door on 2 °C, they said, was closing.

What does 3.5 much less 6 °C mean? This is a question that a group of scientists asked at a rather remarkable conference in Oxford, UK (see http://www.eci.ox.ac.uk/4degrees/). The conference broke a taboo of sorts, namely to speak of climate changes beyond the traditional "doubling of CO_2" that had occupied scientists for most of the past two decades. One of the world's most respected climate scientists, John Schellnhuber, called the world that awaits us beyond that doubling, beyond the "mere" 2 °C of warming a "Terra quasi-incognita" (Schellnhuber 2009) – a world virtually unknown.

That should give you pause. The world is hurtling toward more than 4 °C warming, and we don't know much about what that world looks like? Well, we have some rough outlines from the most recent assessment of the IPCC (2007): warming of more than 2 °C above the 1980-1999 average global temperature would involve

- an additional 1-3 billion people experiencing water stress

- most corals dying off, and more than 30% of all species at increased risk of extinction
- wildfire risk increasing and land areas becoming carbon sources, rather than sinks, thus adding to atmospheric carbon concentrations
- serious declines of the production of key cereals in the highly populated lower latitudes
- retreating mountain glaciers on land, on Greenland and the West Antarctic Icesheet
- committing the world over the long term to several meters of global sea-level rise, resulting in millions more people per year at greater risk of flooding and permanent displacement; and
- the burden of malnutrition, infectious disease, and cardio-respiratory diseases increasing, with heat waves, floods, and droughts particularly deadly.

As Schellnhuber rightly pointed out, most of the existing science has not looked at the more extreme climate scenarios, and very little science explores the interactive effects of all these changes occurring at the same time (NRC 2010; Kriegler et al. 2009). Thus, it is a dangerous mistake to think of the effects beyond 3 or 4 degrees of warming just being a bit more of the same than those at 1 or 2 degrees.

Researchers recently showed that for every five years the world delays serious action to avoid this kind of future, the percentage of needed emission reductions per year roughly doubles over the previous five years (Meinshausen et al. 2009). Moreover, for any emission reduction trajectory that aims to avoid catastrophe and begins to decline any later than 2010, the world has to achieve not only steep emission reductions but "negative emissions" any time after 2040 – i.e., it has to absorb carbon from the atmosphere rather than release any additional carbon into it. Scientists presenting at the Oxford conference put it like this: developing countries have to peak by 2030 and then decline at a rate of 3%, whereas developed nations' emissions have to peak by 2015 and decline by 3% every year after that. If both are achieved, then the world has a 50:50 chance of staying below 4 °C by 2100 (Anderson & Bows 2011). (That should give you an even bigger pause!).

If historical precedent is any indication of our prospects, at no time in human history has society seen short-term emission reductions greater than 5-6%, and those only as a result of the collapse of a major economic and political block (the Soviet Union or the Berlin Wall). As Sir Nicholas Stern, the British government's economic advisor, concluded in his review of such historical precedents, sustained, economy-wide reductions in emissions of more than 1% "have historically been associated only with economic recession or upheaval" (Stern 2007: 232).

Of course, it would be in that context of "economic recession or upheaval" that we would need to find the political will and institutional stability, the financial resources and social capital to adapt to the rapid changes unfolding – in every country, every community, in every sector of the economy, in the private and public sector, in every household – all at once. This fact is beginning to dawn on policy-makers and the public, and is emerging, at last, from the arcane writings of the scientific community into plain English in the mainstream press (e.g., The

Economist 2010). US President Barak Obama's science advisor, John Holdren, put it quite clearly in 2008:

> *Facing the menace of growing, human-caused disruption of global climate, civilization has only three options: mitigation (taking steps to reduce the pace and the magnitude of the climatic changes we are causing); adaptation (taking steps to reduce the adverse impacts of the changes that occur); and suffering from impacts not averted by either mitigation or adaptation. We are already doing some of each and will do more of all, but what the mix will be depends on choices that society will make going forward. Avoiding increases in suffering that could become catastrophic will require large increases in the efforts devoted to both mitigation and adaptation.* (p.430)

The American poet Mary Oliver summed it up in even fewer words in a poem about polar bears trying to not drown as their ice floes melt away:

> *That God had a plan, I do not doubt.*
> *But what if His plan was, that we would do better?*
> Mary Oliver (2008)

A choice between two kinds of transitions

Of course, we *could* do better, we *could* decide to retire our existing fossil-fuel dependent infrastructure early, invest at unprecedented rates in renewable energy and forbid any further forest clearing (to name but the most benign options). We could – by some miracle – come together as a global community, agree on a course of action, and implement it successfully. But the cost would rise steeply. The IEA put it in plain dollars and cents: "Delaying action is a false economy: for every $1 of investment in cleaner technology that is avoided in the power sector before 2020, an additional $4.30 would need to be spent after 2020 to compensate for the increased emissions" (IEA 2011). And even that level of investment, and that degree of economic restructuring, is not unprecedented (the history of mobilization for World War II in the US is but one costly and all-encompassing example, see Bartels 2001; Brown 2008). In short, we could agree it is worth spending a lot of money in the near term to preserve the life support system of the planet, if for no other reason than to save our own skin. Rational economic analysis shows that over the long run even a great expense now is far cheaper than the no-action alternative (see review in Hamilton 2010: 32-65). We may well do so.

That then leaves us with two – or maybe only one-and-a-half – different scenarios for the future: one, in which we have done too little too late, resulting in our communities, economies, and the ecosystems we depend on being overwhelmed by the pace and magnitude of climate change, and all attendant losses and disruptions. In the transition to that future, we will experience a range of essential systems degrading over time, or collapsing outright, but in either case shifting into completely altered states. In the other scenario we will act – very soon

and very fast – and thus experience radical changes in our energy, transportation, industrial and food systems, with deep implications for everything else we do – how and where we live, how and what we eat, how we get around, how we interact, how we work, and how we take care of our health and illnesses. In a span of merely a few decades we will decarbonize our lives completely. And while this happens, we will still experience significant impacts of climate change already set in motion from past emissions, and which we are committed to (lags in the system make the second scenario really just a modification of the first). Numerous research projects have explored how these different transition scenarios could play out (e.g., NRC 1999, Raskin et al. 2002; Meadows et al. 2004; Costanza et al. 2007).

In both cases, we all will experience enormous and rapid changes, and in both instances losses of what we once had and loved, were familiar with, and dependent on. In the second scenario we may even see improvements in some aspects of our lives – cleaner air, maybe a saner pace of work and life. But change it will involve regardless, and losses without a doubt.

And what is more: the vast majority of the public, i.e., all but the most engaged on climate change at present, will come to the realization of what is happening to them from a place of tangential awareness of and distracted attention to the topic, with opinions often based on misinformation, maybe apathy, and in any case a serious lack of a science-based understanding of the causes and magnitude of the problem, the functioning of the Earth system, the increasing and persistent consequences yet to unfold, and how they can contribute meaningfully and effectively to the solutions. While majorities of people in many countries now accept the reality of climate change, many even consider it a serious problem, a deep gulf remains between those expressed opinions and concerns and the public demand for serious action that one would expect from facing the facts described above. Twenty or more years of public opinion polls and survey's of people's understanding of climate change in the US (e.g., Leiserowitz et al. 2011, 2010; Moser 2008; Nisbet & Meyers 2007) and less so elsewhere (e.g., European Commission 2011; Ipsos Mori 2011; Reser et al. 2011; Moser 2010) along with countless anecdotal experiences of conversations with "regular folk", i.e., neighbors, family members, cab drivers, students and parents leave no doubt that the general public and our elected leaders simply do not yet grasp the seriousness and urgency of the situation or – in the absence of knowing what to do – choose to focus on more pleasant topics. It is in this world and one of these two futures you have chosen to be an environmental leader.

THE PSYCHOLOGICAL AND SOCIAL DEMANDS ON ENVIRONMENTAL LEADERS

What, then, is asked of someone who chooses or is asked to be an environmental leader in this time? Be a steward, shepherd, arbiter, crisis manager, grief counselor, future builder? What is the right metaphor describing the work and skills of the environmental leader of tomorrow? Maybe there is no one such metaphor, but rather, future leaders will be a bit of all of these. What seems assured is that the leaders of the future will face not just new, more difficult, and more pervasive environmental challenges than past and present leaders do, but will need to be

adept in a range of psychological, social, and political skills to navigate the inevitable human crises that will precede, trigger, and follow environmental ones. Future leaders will need to be not just experts in climate change, or a particular environmental field, but be capable of holding that which is happening to and in our world. They will need to mentor, guide, and assist people in processing enormous losses, human distress, constant crises, and the seemingly endless need to remain engaged in the task of maintaining, restoring, and rebuilding – despite all setbacks – a viable planet, the only place the human species can call its home.

In this section, I describe what I see as those demands, and explore how we might face them – limited as our ability to do so – from here, this seemingly safe place – may be. The seven challenges described below track, in some sense, a chronological or logical order. It is important to realize, however, that this is not a step-by-step recipe that one may follow through once and thereby succeed or complete it once and for all. Rather, it is in the nature of the challenges ahead and in the nature of the human psyche that people will need to iterate through each of them, again and again. Leaders of the future will face, meet, fail, and face again the demands put upon them.

The Bravest Thing: Getting Real

The first demand on a leader of the future is, according to American writer and climate movement builder Bill McKibben, to "do something braver than try to save the world we have known. *We must accept the fact that the world we have known is going to change in hideous and damaging ways*" (McKibben, 2010: 176, emphasis added). The bravest thing is to take this first step: get real. Facing the truth, and letting it sink in. A friend of mine, a coral researcher, once told the story how when the truth about a future without corals finally sank in, she had to run to the bathroom and vomit, it was so devastating. It took her years to accept it. So, this won't happen quickly and it is not to be rushed, though the temptation to jump into mad action to fight for solutions that may still – against all better knowledge – avert the worst is indeed immense. In fact, taking action may well be the right response for many. But coming to grips with the reality we now are in takes time, and is critical that we give it a quiet space inside ourselves, and that we ground ourselves in the face of it with any practices of balance we may already have or could adopt.

The landscape you will find yourself in, once you allow this realization to take hold, is a different one. Despair lives there, along with helplessness and anger, fear and disorientation, undoubtedly also unspeakable sadness. You are likely to come to recognize that this is a new time. The time before was one in which we insisted and relied on hope, on better tomorrows, in the US on the "American Dream." Now, we have to accept that "better tomorrows" may not come. It is akin to accepting one's own mortality, maybe a doctor's prognosis of one's impending death, but on a much grander scale.

In Western society, such a suggestion is considered fatalistic and morbid, and anyone who dares to ponder it out loud would be considered bad company (Macy and Brown, 1998). By

contrast, psychologists who study the existential fears of facing our own demise view it as an important capacity of the mature person (e.g., Becker 1973), and in light of the state of our world, an essential one (Nicholsen 2002).

As a leader in a time of rapid climate change, you will need to be grounded in this realization. But not just for yourself. Be real about it also with other people. Remember, as more and more impacts unfold, disasters disrupt our lives, and precious landscapes and assets fall apart or are lost, as much larger portions of society awakes to the emerging reality, there is likely to be a lot of confusion, a lot of not-knowing, uncertainty, and probably still a good deal of hanging on to hope-against-hope and denial. To speak clearly and calmly to what is, and what may yet come, cuts down on that confusion, cuts through the strange fog that people are in when they don't understand or deny reality. It's clarifying, grounding to be real with others.

Grief Work

Grief follows accepting what is happening with an open heart – for you and for those with whom you may speak, work, or who you may lead. The late Donella Meadows, systems modeler, writer, and farmer, spoke to this beautifully in one of her many weekly columns: "When I really let myself experience the state of the world, my first reaction is bottomless, unutterable sorrow. That moves quickly into outrage. The sorrow I can deal with; the outrage I used to suppress – after all, it might offend someone. Now I use it to give me courage. When I get mad, I have to move. With half-suppressed anger, I tend to swing out and do something impetuous and ignorant. But a fully felt, grounded, familiar anger can move me through a lifetime commitment to make things better" (Meadows 1997).

Grief deliberately acknowledged is utterly countercultural in modern western society, certainly when done in public. Farbotko and McGregor (2010) describe the discomfort that the tears of a Tuvalu politician evoked among delegates at the Copenhagen climate treaty negotiations. In the UK, climate grief groups have begun to form (Randall 2009), and psychologists in Australia and the US have acknowledged and begun to research people's emotional distress caused by environmental change and climate disruption (Doherty & Clayton 2011; Fritze et al. 2008; Albrecht et al. 2007; The Climate Institute 2011). But in the wider public discourse, much less in everyday practice, grief about environmental losses is still largely a solitary matter.

Weller (2011) and Macy & Brown (1998) argue this must change, if we are to connect with our deepest humanity and the sustaining motivations that will help us work toward constructive solutions and deal with the relentless onslaught of the coming changes. While leaders will have to do this work, each for his or her own sake and soul, grieving together with others holds it safely and honorably. One clear demand thus on you as a leader is to be at ease with your own grief, so as to provide a strong container for that of others.

Framing the Transition

The sustainability transition or – if we are less lucky – the transition to a much smaller human population, dependent on more degraded life support systems, is at heart a time of great uncertainty, of breaking down the old, while the new is not yet there (NRC 1999). This is the nature of all transitions (Bridges 2004; Quinn 2004, 1996). People will be tempted to hold on to their possessions, their rights and privileges, their identities, to all that once was. There will be much anxiety, and at no time really a guarantee of a certain, much less an unequivocally positive outcome. This demands of environmental leaders an ability to clearly frame this time of change for themselves and others. In fact, a psychologist and friend told me recently, "if we cannot think of all this as a transition, it is just about survival; we might as well give up."

The transition framing, with its inherent need to let go of the old, a time of the new not yet being formed, and the vision of a desirable outcome, this archetype of change provides us with a roadmap. Just having one will be a helpful thing. It sets an intention. It aids in recognizing markers along the way: the signs of decay, people's emotional reactions to it, experiments as seeds, the road blocks and setbacks, the emergence of innovative ways that foster social, ecological, and cultural renaissance, and the specter of an ending (even if it is beyond our own lifetime). Such a roadmap helps sustain the inordinate persistence, authentic hope, and unprecedented commitment to moral action that will be required of everyone even though the transition time is uncomfortable and dangerous. It will evoke a very different kind of behavior than merely "confronting collapse."

Growing the Capacity to Be with People in Distress

While holding that vision, leaders must grow their capacity to be with people in crisis, in deep uncertainty, distress, worry, anxiety, fear, denial, and grief. And they must resist their own, and help others avoid, the knee-jerk response of ideological hardening, defensiveness, and blame. One way to read the already observable political polarization around climate change is as just this sort of ideological hardening and defensiveness of our identities and worldviews – whether through the lens of existentialist psychology or cultural theory (Dickinson 2009; Kahan et al. 2007; Gastil et al. 2006; Solomon et al. 2004). This challenge, as well as the underlying psychological drivers, will be relentless: they will emerge again and again, and go on for a long time because there are neither quick fixes for the climate nor for the human response to the disruptions. Absent the "delusion of reprieve" (Frankl 1959/1984: 23), the capacity to tend those in distress does indeed require growing a big muscle. For some, including some scientists, this capacity is strengthened by drawing on faith. Meteorologist Bill Hooke (2011) and climate scientist Katharine Hayhoe (2011) are just two friends who speak publicly about their rootedness in faith.

Growing the Ability to Hold Paradoxes

A logical concurrent demand then on future leaders will be to hold the paradoxes with which we all need to deal: with what is here and now *and* what could be globally and in the future; the distresses and joys in front of us *and* the possibilities of better or worse yet to come; the grief over what is being lost *and* the gratitude for what we still have; the fears that are

inevitable and the hopes that we need; the practical realities of daily life *and* the vision of systemic change. In fact, a deliberate practice of visioning in the face of the unraveling will be a critically important practice. Holding paradoxes may even include the ability to remain engaged for the duration *and* the need, for any leader, to temporarily withdraw and recharge. As geographer, Diana Liverman, admitted at the Oxford climate conference, she sometimes prefers to immerse herself in her research so as to escape the implications of her findings (Hamilton 2010: 208).

But merely consciously holding these dichotomies is not enough. To not just compartmentalize them as coexistent but separate truths, leaders must learn for themselves and show others how to put them in useful tension. As in the ancient symbol of the mandorla in which two circles overlap to form an almond shape, leaders must learn to be with and in both extremes and in the liminal space between. As the long-standing psychological practice of moving back and forth between them tells us, it is in this liminal space where transformation occurs and something unpredictable, something new can emerge (Johnson 1991). In that space are hidden our capacities for compromise and innovation, acceptance and creativity.

Accountability and Amnesty

One of the challenging paradoxes that future leaders will undoubtedly have to confront is that of having to be stern and yet also compassionate. We all have contributed to the unsustainability of the planet, particularly those of us in the developed world. We all have made decisions against our better knowledge of how damaging they would be. We all have caused cumulative damage in ignorance, laziness, or need. Some have invested their whole lives – knowingly or unknowingly – in trades and professions that later turn out to have placed uncounted numbers of people at risk, undermined the livelihoods of others, or hastened the warming up of our atmosphere. Many have done so in the name of "saving the climate." There is no easy way to live sustainably in a system not set up to support it. There is no easy way to jettison an income-generating career. There is no easy way to come around and admit a lifetime of bad decisions. Not, where blame, finger-pointing, and litigation are rampant.

Thus, future leaders must come to grips with how to demand both accountability for our and others' actions – clearly a needed step, especially where people intentionally undermined an appropriate societal response – *and* grant amnesty to the struggling souls that try to live with themselves in the midst of that world. That is neither corruption nor forgiveness, but a call to work honestly with our moral compass when right and wrong may be difficult to discern.

Non-Violence and Restoration

This then leads to the final demand on future leaders. At first glance this may seem to be the most self-evident, as it bears directly on the motivation that bring many into the arena of environmental leadership in the first place: namely, to stop the destruction – both ecological and social – and begin the restoration of our "mutilated" world. But that is easier said than done. Non-violence will be exceedingly difficult when people are afraid, become more rigid, or

when they are existentially threatened. Violence – verbal, physical, emotional – is easy to fall into when we ourselves are threatened in our identities and existence. And non-violence will be all the more difficult to uphold, the more we will see disruption raging while destruction and denial continue. The impatience with progress may be unbearable, while defensiveness of whatever we view as "right" mounts. Leaders will need to learn non-violence as Gandhi and Martin Luther King Jr. taught it. They will need to learn how to be in difficult dialogues and resolve conflicts peacefully (Stone et al. 1999; Sidaway 2005). These are essential skills to have when it will be infinitely more difficult than now to focus on the restoration and long-term sustainability of the whole-Earth community.

Environmental leaders will need to persuade the rest of us that this is not a matter of environmental elitism to focus on the whole-Earth community; it is the life support system on which we depend, made up of animate and inanimate components of the environment *and* the people with whom we are intricately connected. There will be no survival without the restoration of the ecological fabric or without our neighbors.

CONCLUSION

When asked if I am pessimistic or optimistic about the future, my answer is always the same:
If you look at the science about what is happening on earth and aren't pessimistic, you don't understand data. But if you meet the people who are working to restore this earth and the lives of the poor, and you aren't optimistic, you haven't got a pulse.

Paul Hawken (2009)

I do not believe we can look for leadership beyond ourselves.

Terry Tempest Williams (2010)

In his description of life in Nazi concentrations camps, Victor Frankl (1959) spoke of an intensification of the inner life of the prisoners as their outer circumstance became evermore dire. Those who survived had found a way to muster inner resources that allowed them not only to escape the present desolation, but also experience nature, art, any gesture of human kindness more deeply. His recollection offered "sufficient proof that everything can be taken from a [person] but one thing: the last of the human freedoms – to choose one's attitude in any given set of circumstances" (p.75).

The climate future depicted above may be as challenging, or not, but the demands it will create will require that we choose our attitude toward the world we have shaped. It will produce an intensification of the inner life of future leaders. The more severe future climate disruptions will be, the greater the need for mature individuals to guide us through them, so as to avert an inhumane trajectory of responses to the inevitable distress that will come. This means, environmental leaders must "grow themselves up," and, thus, become able to guide and mentor others into a more mature place (Plotkin 2008).

This will only be possible if done together with others rather than alone. Those who feel called may want to invite others to join them on this journey, though one can neither force nor empower others to do so. Pursuing ever-increasing integrity, with courage, is what invites others to do the same (Quinn 2004: 221). Offering vision and the truth about the challenge, being open and inviting participation, taking responsibility and charge, yet also acknowledging dependence and the need for support is what creates an empowering environment for people to join leaders (Quinn 1996: 227)

There is nothing easy about the path of a true leader in these times. Accepting the responsibility of leadership will be a heavy burden, and those who take it on must help shape realistic expectations of what a leader can do. Clearly, this is not the kind of leadership that one takes on for the glory, the lure, and prestige of a top position. No one, not even the leaders, will have all the answers, and pretending to have them will be quickly unmasked. In the difficult times ahead, people may want quick and easy fixes, but what will sustain you and them are not flip answers, but quiet wisdom (Badaracco 2002). Who, who indeed, will be those leaders? Inside you, a voice may make an answer to this question, to our ravenous, beautiful world.

REFERENCES & SUGGESTED FURTHER READINGS

Abbey, E. (1990). *A Voice Crying in the Wilderness (Vox Clamantis in Deserto): Notes from a Secret Journal.* Santa Fe, NM: St. Martin's Griffin.

Albrecht, G., Sartore, G.-M., Connor, L., Higginbotham, N., Freeman, S., Kelly, B., et al. (2010). Solastalgia: The distress caused by environmental change. *Australasian Psychiatry, 15*(Suppl.), S95-S98.

Anderson, K., & Bows, A. (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.

Badaracco Jr., J. L. (2002). *Leading Quietly: An Unorthodox Guide to Doing the Right Thing*. Cambridge, CA: Harvard Business School Press.

Bartels, D. (2001). Wartime mobilization to counter severe global climate change. *Human Ecology, 10*(Special Issue), 229-232.

Becker, E. (1973). *The Denial of Death*. New York: Free Press.

Bridges, W. (2004). *Transitions: Making Sense of Life's Changes* (2nd. updated, expanded ed.). Cambridge, CA: DaCapo Press.

Brown, L. R. (2008). A wartime mobilization. *Earth Policy Institute Book Byte. Available at:* http://www.earthpolicy.org/Books/Seg/PB3ch13_ss1.htm.

Costanza, R., Graumlich, L. J., & Steffen, W. (Eds.). (2007). *Sustainability or Collapse? An Integrated History and Future of People on Earth*. Cambridge, MA: The MIT Press.

Dickinson, J. L. (2009). The people paradox: Self-esteem striving, immortality ideologies, and human response to climate change. *Ecology and Society, 14*(1), 34. [online] URL: http://www.ecologyandsociety.org/vol14/iss31/art34/.

Doherty, T. J., & Clayton, S. (2011). The Psychological Impacts of Global Climate Change. *American Psychologist, 66*(4), 265–276.

European Commission (2011). *Climate Change*. Special Eurobarometer 372. *Brussels*: European Commission Directorate-General for Climate Action.

Farbotko, C., & McGregor, H. V. (2010). Copenhagen, Climate Science and the Emotional Geographies of Climate Change. *Australian Geographer, 41*(2), 159 - 166.

Frankl, V. E. (1959 [1984]). *Man's Search for Meaning: An Introduction to Logotherapy* (3rd., newly revised and enlarged ed.). New York: Touchstone Book, Simon & Schuster.

Fritze, J. G., Blashki, G. A., Burke, S., & Wiseman, J. (2008). Hope, despair and transformation: Climate change and the promotion of mental health and wellbeing. *International Journal of Mental Health Systems, 2*(1), [art 13] available at: http://www.ijmhs.com/content/12/11/13.

Gastil, J., Kahan, D. M., & Braman, D. (2006). Ending polarization: The good news about the culture wars. *Boston Review, 312*(2), available at: http://bostonreview.net/BR31.32/gastilkahanbraman.php.

Gupta, J., & van Asselt, H. (2006). Helping operationalise Article 2: A transdisciplinary methodological tool for evaluating when climate change is dangerous. *Global Environmental Change, 16*(1), 83-94.

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

Hansen, J. E. (2005). A slippery slope: How much global warming constitutes "dangerous anthropogenic interference"? *Climatic Change, 68*(3), 269-279.

Hawken, P. (2009). Healing or Stealing? Commencement Address at the University of Portland, OR. Available at: http://www.up.edu/commencement/default.aspx?cid=9456

Hayhoe, Katharine (2011). Katharine Hayhoe: Climate Change Evangelist. PBS video available at: http://www.pbs.org/wgbh/nova/secretlife/scientists/katharine-hayhoe/.

Holdren, J. (2008). Science and technology for sustainable well-being. *Science, 319*, 424-434.

Hooke, William (2011). Environmental scientists as Christians. Available at: http://www.livingontherealworld.org/?p=435.

Intergovernmental Panel on Climate Change (2007). *Climate Change 2007: Synthesis Report of the Fourth Assessment of the IPCC*. Geneva: IPCC.

International Energy Agency (IEA) (2011a). *World Energy Outlook 2011: Executive Summary*. London: OECD/IEA. Available at: http://www.worldenergyoutlook.org/docs/weo2011/executive_summary.pdf.

International Energy Agency (IEA) (2011b). The world is locking itself into an unsustainable energy future which would have far-reaching consequences, IEA warns in its latest World Energy Outlook. *Press Release*, available at: http://www.iea.org/press/pressdetail.asp?PRESS_REL_ID=426, IEA: London.

Ipsos Mori (2011). *Key Environmental Concerns by Nation*. Survey data available at: http://www.slideshare.net/IpsosMORI/key-environmental-concerns-by-nation-ipsos.

Johnson, R. A. (1991). *Owning Your Own Shadow: Understanding the Dark Side of the Psyche*. New York: HarperOne.

Kahan, D. M., Braman, D., Gastil, J., Slovic, P., & Mertz, C. K. (2007). Culture and Identity-Protective Cognition: Explaining the White Male Effect in Risk Perception. *Journal of Empirical Legal Studies, 4*(3), 465-505.

Kriegler, E., Hall, J. W., Held, H., Dawson, R., & Schellnhuber, H. J. (2009). Imprecise probability assessment of tipping points in the climate system. *Proceedings of the National Academy of Sciences, 106*(13), 5041-5046.

Lenton, T. M. (2011). Beyond 2°C: redefining dangerous climate change for physical systems. *Wiley Interdisciplinary Reviews: Climate Change, 2*(3), 451-461.

Leiserowitz, A., Smith, N., & Marlon, J. R. (2010). *Americans' Knowledge of Climate Change*. New Haven, CT: Yale University, Yale Project on Climate Change Communication.

Leiserowitz, A., Maibach, E., Roser-Renouf, C., & Smith, N. (2011). *Global Warming's Six Americas, May 2011* New Haven, CT Yale University and George Mason University, Yale Project on Climate Change Communication.

Macy, J., & Young, B. M. (1998). *Coming Back to Life: Practices to Reconnect Our Lives, Our World*. Gabriola Island, BC: New Society Publishers.

McIntosh, A. (2008). *Hell and High Water: Climate Change, Hope and the Human Condition*. Edinburgh: Berlinn Ltd.

McKibben, B. (2010). Something Braver than Trying to Save the World. In K. D. Moore & M. P. Nelson (Eds.), *Moral Ground: Ethical Action for a Planet in Peril* (pp. 174-177). San Antonio, TX: Trinity University Press.

Meadows, D., Randers, J., & Meadows, D. (2004). *Limits to Growth: The 30-Year Update*: Chelsea Green Publishing.

Meadows, D. (1997). Feeling Our Feelings Might Not Be a Trivial Exercise. *The Donella Meadows Archive: Voice of a Global Citizen.* 30 January 1997. Available at: http://www.sustainer.org/?page_id=90&display_article=vn683feelingsed.

Meinshausen, M., Meinshausen, N., Hare, W., et al. (2009). Greenhouse-gas emissions targets for limiting global warming to 2°C. *Nature 458*, 1158-1162.

Moellendorf, D. (2011). A normative account of dangerous climate change. *Climatic Change, 108*(1), 57-72.

Moser, S. C. (2010). Costly Knowledge - Unaffordable Denial: The Politics of Public Understanding and Engagement on Climate Change. In M. T. Boykoff (Ed.), *The Politics of Climate Change* (pp. 161-187). Oxford: Routledge.

Moser, S. C. (2008). Toward a deeper engagement of the U.S. public on climate change: An open letter to the 44th president of the United States of America. *International Journal for Sustainability Communication (IJSC), 3*(June), 119-132.

National Research Council (NRC, 2010). *America's Climate Choices: Advancing the Science of Climate Change*. Washington, DC: National Academies Press.

National Research Council (1999). *Our Common Journey: A Transition Toward Sustainability*. Washington, DC: National Academy Press.

Nicholsen, S. W. (2002). *The Love of Nature and the End of the World: The unspoken Dimensions of Environmental Concern*. Cambridge, MA: The MIT Press.

Nisbet, M. C., and T. Myers. 2007. Twenty Years of Public Opinion about Global Warming. In *Public Opinion Quarterly* 71 (3): 444-470.

Oliver, M. (2008). Watching a documentary about polar bears trying to survive on the melting ice floes. In: *Red Bird* (p.44). Beacon Press: Boston.

Oppenheimer, M. (2005). Defining dangerous anthropogenic interference: The role of science, the limits of science. *Risk Analysis, 25*(6), 1399-1407.

Orr, D. W. (2011). At the end of our tether? The rationality of nonviolence. In D. W. Orr (Ed.), *Hope is an Imperative: The Essential David Orr* (pp. 333-340). Washington, DC: Island Press.

Plotkin, B. (2008). *Nature and the Human Soul: Cultivating Wholeness and Community in a Fragmented World*. Novato, CA: New World Library.Sidaway, R. (2005). *Resolving Environmental Disputes: From Conflict to Consensus*. London: Earthscan.

Quinn, R. E. (2004). *Building the Bridge as You Walk on It: A Guide for Leading Change*. San Francisco, CA: Jossey-Bass.

Quinn, R. E. (1996). *Deep Change: Discovering the Leader Within*. San Francisco: Jossey-Bass.

Ramanathan, V., & Feng, Y. (2008). On avoiding dangerous anthropogenic interference with the climate system: Formidable challenges ahead. *Proceedings of the National Academy of Sciences, 105*, 14245-14250.

Randall, R. (2009). Loss and Climate Change: The Cost of Parallel Narratives. *Ecopsychology, 1*(3), 118-129.

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

Reser, J. P., Pidgeon, N., Spence, A., Bradley, G., Glendon, A. I., & Ellul, M. (2011). *Public Risk Perceptions, Understandings and Responses to Climate Change in Australia and Great Britain: Interim Report*. Griffith, Queensland, Australia: Griffith University, Climate Change Response Program and Cardiff, Wales, UK: Understanding Risk Centre, Cardiff University.

Safford, V. (2011 [2005]). The small work in the great work. *Journey of the Spirit* (March 27), originally published at CommonDreams.org. Available at: http://www.shadowrockucc.org/storage/pdfs/jos/JOS%202011%202020Small%202020Work%202020in%202020the%202020Great%202020Work.pdf.

Schellnhuber, H.-J. (2009). *Terra Quasi-Incognita: Beyond the 2°C Line.* Keynote Address presented at the "4 Degrees & Beyond: International Climate Conference." Available at: http://www.eci.ox.ac.uk/4degrees/keynote.php.

Solomon, S., Greenberg, J., & Pyszczynski, T. (2004). The Cultural Animal: Twenty Years of Terror Management Theory and Research. In J. Greenberg, S. L. Koole & T. Pyszczynski (Eds.), *Handbook of Experimental Existential Psychology* (pp. 13-34). New York: Guilford Press.

Stern, N. (2007). *The Economics of Climate Change: The Stern Review*. Cambridge, UK: Cambridge University Press.

Stone, D., Patton, B., & Heen, S. (1999). *Difficult Conversations: How to Discuss what Matters Most*. New York: Penguin Books.

The Climate Institute (2011). *A Climate of Suffering: The Real Costs of Living with Inaction on Climate Change*. Melbourne, Sydney: The Climate Institute.

The Economist (2010). Adapting to climate change: Facing the consequences. *The Economist,* November 25, 2010*.* Available at: http://www.ewconomist.com/node/17572735/print.

Weller, F. (2011). *Entering the Healing Ground: Grief, Ritual and the Soul of the World*. Santa Rosa, CA: WisdomBridge Press.

Williams, T. T. (2010). Climate Change: What is Required of Us? In K. D. Moore & M. P. Nelson (Eds.), *Moral Ground: Ethical Action for a Planet in Peril* (pp. 429-433). San Antonio, TX: Trinity University Press.

ACKNOWLEDGMENTS

This chapter benefited tremendously from continual discussions with Carol Berzonsky. Additional comments on an earlier version of this chapter from Bill Hooke, Margaret Krebs, Beth Sawin, and Susan Watrous have further improved it. More importantly, they have strengthened my resolve to say what I feel needs to be said, even if they can't be held responsible for any of it.