Introduction:

John and Paul are both CEOs of manufacturing businesses. John is proud of his business and is focused on maximizing profits for his shareholders. He considers himself a self-made man. He uses the river that his business is located by to dispose waste from his manufacturing process. He abides by the legal limits of the contaminants. He wishes the federal government would have less regulation because meeting these standards is costly and decreasing his profits. His business is his and is designed to optimize his income and profits. His employees are expected to be productive and serve his and his business’s needs.

Paul is also the owner of a manufacturing business located on a river. He realizes that his business is impacted by local and global businesses, political, environmental, and social dynamics. He watches the turbulence of the external environment to learn how to adapt to disruptions in his business. He is grateful for all the people in his life who have helped him achieve success. He also uses the river to dispose waste from his manufacturing process. He abides by the legal limits and even sets higher standards because he understands protecting the environment is how he can ensure his great grandchildren will have a better quality of life. He sees regulations as feedback that current practices are creating harm and the businesses that are affected by these regulations need to redesign their manufacturing processes.

Paul studied how other manufacturing plants up and down the river were disposing their waste and decided to follow it downstream to see what the combined impact was of all these individual businesses decisions. He found that while all were abiding by the law, the combined effect of their disposal processes was creating a cesspool downstream. This has caused him to start a coalition of business owners on this river to change their cumulative impact on the quality of water. Paul is proud of his business and treats his employees well. He knows that nothing can be done in his company without the active support of the people in it. John and Paul’s choices and actions are all shaped by the way they see their world.

Much of environmental leadership focus has been on the level of strategies, structures, and business operations (Schein, 2015). In contrast, there has been little focus on critical internal shifts such as value systems and deep motivations for integrating sustainable leadership practices into our personal and organizational lives. The purpose of this chapter is to explore the interior work of environmental leadership.
Environmental leadership is defined as the choices positional leaders or individual agents of leadership make that result in environmentally sustainable solutions or decisions. In my consulting practice, I focus on the intersection of leadership and change. I have found that there are different levels of intervention that a consultant or individual leader can use to trigger organizational or personal change (Medows 2008; Scharmer, 2009).

**Levels of intervention:**

The first level is like the squeaky wheel. The focus is on stopping the squeak and anything that works is the solution. If you throw water on a squeaky wheel, the sound will go away. However, the solution doesn't last and when it comes back it is louder. This level of intervention doesn't have the reflective practice that looks for the root of the problem, rather, it focuses on a quick fix.

When we began to see domestic violence in our communities the first response was at this level. Individuals who cared about this issue, began to open their homes to victims of domestic violence. This worked in the short term, but as more people came forward with the need for shelter, it wasn’t sufficient to solve the problem.

The second level of intervention focuses on patterns of behavior that helps identify tactics. It is one step deeper than the first level. If a leader looked at patterns of behavior with a sustainability focus they would look for solutions that would shift or create a new pattern. This focus would create some shifts but wouldn’t reach a sustainable long-term solution because the shift in practice doesn’t go deep enough.

Over time, a pattern of need by victims of domestic abuse emerged. The next level of response to increased demand for help by domestic violence victims was to increase the number of people who would open their homes to help shelter them. A network of people was linked together to provide a coordinated response. This was a good tactic, but didn’t meet the rising need and wasn’t sustainable.

The third level of intervention focuses on the systemic structures and processes and how they can help or hinder the direction an organization wants to go. If an organization wanted to recycle and upcycle a carpet manufacturing business, the leaders would change the processes and structures to strategically achieve this goal. (McDonough & Braungart, 2002). However, changing structures and processes can just as easily help an organization become more efficient, increase profit, or be more innovative. By itself, structure and processes don’t necessarily lead to a sustainable orientation by positional leaders – that requires a shift in worldview.

In the domestic violence movement, this is when organizations were formed and shelters were built. Building shelters and providing additional help to the victims was a strategic response to the need. However, it only focused on responding to the victims and creating a safe refuge for them.
The fourth level of intervention focuses on an individual’s mindset and worldviews. When an individual changes the way they view the world, all their relationships, thought patterns, behaviors, and insights shift. There are patterns of thought that align with sustainable leadership and others that drive actions and behaviors that don’t. When a person’s worldview changes in specific ways, the individual integrates their worldview and actions intentionally to support environmentally sustainable decisions (Kuenkel, 2015).

In the evolution of thought in the domestic violence movement, staff eventually started to look “upstream” to what was causing the problem. This shift in focus, caused them to realize that if they wanted a sustainable solution to the problem, they would have to start influencing the larger system in their communities. It was at this point that leaders in the field began to build collaborations and partnerships with local law enforcement, the judicial system, legal aid, psychological services and prevention programing. They created outreach and engaged their communities to build a culture of zero tolerance for domestic violence. These strategies expanded their relationships in their communities, built trust in the system, and helped them influence the larger systems and how they responded to this issue. For the first time in this movement, the people who built and ran the shelters, were not alone. They had lots of company in their communities helping them with this issue. New strategies and solutions were generated to help create a more sustainable solution to domestic violence.

**Worldviews and deep background assumptions**

Worldviews are the way an individual views the world. Worldviews often reflect the deep background assumptions that we hold. An assumption is a belief, supposition, conjecture, or theory that we hold that impacts our reactions and responses to a life event. The event could be how to handle a relationship, an organizational decision, respond to a disruptive challenge, or feel about a situation. Most often, deep background assumptions exist in the subconscious or unconscious mind. If a person becomes aware of their assumptions, it gives them great opportunity to examine them consciously to evaluate if they serve you. Given the dynamic shifting occurring in the world, reexamining deep background assumptions and worldviews are a powerful way to become more adaptive and effective. When worldviews shift, change can be achieved rapidly and these shifts can open us up to new ways of thinking and to see different possibilities.

**Four worldview shifts needed for sustainable leaders**

Based on my own research and consulting practice, I suggest that there are four internal worldview shifts that occur when an individual chooses an environmentally sustainable framework to lead from (Schein, 2015).

**The first shift** is from a seeing our organizations and communities as closed systems to seeing them as open systems. Closed systems are bounded and dynamics outside the system do not change the dynamics inside a closed system. In a closed system,
control is possible because the number of variables remains static (Allen, 2012). In an open system, dynamics from other systems can permeate an open system and create an expanding the number of variables. This creates a dynamic complex system. Leadership in an open system focuses on influence and patterns. To understand the leverage points that can influence the system, open systems thinkers learn how all the elements, ties, interconnections, and relationships impact the system as a whole (Meadows, 2008; Miller, 2010; Capra & Luisi, 2014).

A closed system worldview doesn’t see or ignores the meaning of the connections between an organizational system and the broader external environment. They see solutions that are good for the organization alone. A closed system worldview inhibits an individual from seeing the connections between their system and other systems. This makes it difficult for them to see a world filled with networked relationships and connections (Ramo, 2016).

Open systems are complex and dynamic. In resilience science, sustainable solutions are always viewed from a linked systems perspective (Walker & Salt, 2012). If community leaders want to avoid overfishing, they know that they can’t approach it from an environmental perspective alone. To get the active support from fishermen, the strategy also needs to consider how changes in their fish catch impact their ability to carry a loan on their boat. A sustainable strategy also needs to consider the social impact that can result in their family or community. Resilient solutions see systems as linked and look for sustainable solutions that work within social, environmental and economic systems. Their solutions are more sustainable because their worldview accepts that systems are open and linked and changes in one system will ripple across other systems.

When a person shifts their worldview from a closed to open system, they realize that their choices will impact other individuals, organizations, and systems. In open systems, we realize that others’ actions will affect us and our actions will impact and affect others. The stock market is an open system. Political destabilization in one part of the world will affect the economies in another part of the world.

The shift to open systems leads to the next worldview shift. Once we see our systems as open and linked, we begin to see connections that have been hidden but were always there. We start seeing the connections between ourselves and our organizations to the environment and the people in it.

The second worldview shift is from separation to connection. Separation is based on the perception that we are separate from each other and our environment. If one believes that one stands alone, then predominant self-interest is the logical choice. Serving yourself first and holding on to your power and resources regardless of its impact on others flows directly from a separate worldview. John’s belief that he is a self-made man is an example of this belief that we all stand alone. The problem with self-interest is that when unbridled, it oppresses others and the environment.
The belief that people are driven by self-interest is anchored in another myth – the myth of survival of the fittest (Hutchins, 2014; Kohn, 1992). If our individual survival depends on our ability to defend ourselves and be stronger than the next person, then self-interest becomes tightly linked to survival. This belief scales up into our organizational behaviors and justifies actions that can hurt communities and the environment. The fiscal crisis in 2008 would be one example where individual and organizational self-interest was used to justify actions that nearly took down the global economy and created great pain for many people.

A culture of separation and self-interest has misquoted Darwin’s research as “survival of the fittest”. Rather, he said survival of the best fit within the larger environment (Hutchins, 2014; Kohn, 1992). One of the ways to fit best into a place and thrive for the long haul is to be sensitive to the context and form mutually beneficial relationships. Researchers have found that mutuality and cooperation are widely present in nature (Benyus, 2002, Baumeister; 2014). Weather systems are complex dynamic and interdependent which is why changes in the temperature of the Pacific Ocean can change the winter weather pattern in the upper Midwest in the United States. Nature and weather are examples of systems based on connection.

When a worldview shifts to connection, everything changes. We see ourselves in relationship with others, our environment, and our future. This worldview shift helps us to see the hidden connections in our world and networks and interdependence become obvious. Connection shifts hierarchies to networks, changes the power dynamic in relationships, and recognizes new dynamic feedback loops (Brafman & Beckstrom; 2006; Capra, 1996; Capra, 2002; Allen, Stelzer & Wielkiewicz 1998; Satterwhite, 2010).

Connections shift self-interest to enlightened self-interest. Enlightened self-interest is defined as people who act to further the interests of others to ultimately serve their own self-interest. In nature, as ecological systems become more complex, species develop specializations. This specialization eventually shifts interspecies relationships. As a system becomes more complex, open and connected; species begin to depend on other species in an ecosystem to provide key nutrients because other species can do it more effectively than they can for itself (Kiuchi & Shireman, 2002). Connections and interdependencies create a shift in the nature of our relationships. Instead of standing isolated and alone, we see how our actions help others and in turn how others help us. This interdependent relationship occurs between people, organizations, and the environment – to see it, we must shift our worldview from separation to connection.

If we shifted our worldview to one that recognized our connection and interdependence, a natural result of increasing complexity, would what we see and how we think change? For example, can anyone succeed over time if another fails in an interdependent system? This question stimulates reflection about the nature of interdependence and connection. It also suggests that the way we can serve ourselves best is to ensure that the larger systems thrives and remains healthy.
The shift from closed to open systems helps us see how systems are linked, influence each other, and create complexity. The open system worldview causes us to see our global economy, connections between ourselves and others and our organizations and the environment. In a connected worldview we begin to see how actions continue to ripple throughout linked systems. Paul reflected a connected worldview when he investigated the combined impact everyone’s waste from manufacturing plants along the river affected the quality of water downstream. This leads us to the third shift, the need to see how actions impact systems over time.

The third critical internal shift is from short-term to long-term, thinking (Brand, 2008; Satterwhite, Miller & Sheridan 2015). Different feedback loops with different criteria show up when success is defined over the long term instead of just the short term. Long term thinking extends the time horizon beyond quarterly profits and the next election cycle. Longer feedback loops shift decision making from short-term gain to long-term investment based on the higher purpose of the organization, which is to thrive over time. (Benyus, 2002; Baumeister, 2014; Capra & Luisi, 2014; Wielkiewicz & Stelzner 2005).

The logic behind short term thinking is a series of unexamined assumptions. The first is that events are discrete. Each problem is separate from another. As our world becomes more complex being temporally blind causes us to see events as discrete. When we learn to connect time between the past, present and into the future, we see events as streams flowing through time horizons (Oshry, 1995). We understand that how we solve problems in the past, creates the agenda for current problems and how we solve problems in the present creates the agenda of problems in the future. For example, if a CEO solves a current problem that serves the short-term goal in a way that diminishes trust with his employees, the next time a big problem needs to be solved, it will be more difficult to gain active cooperation because less trust exists in the organization.

In short-term time horizons, the focus is on the completion of a project instead of what this action or decision will have on the whole system. If the goal is to maximize profits, the focus and the measure is on the accumulation of profit. This serves the short-term but there may be unexamined consequences over time. For example, if a company raises prices and disproportionately distributes profits, it can weaken the buying power of its customers, and over time cause the company to be less resilient.

Short-term thinking also causes us to be blind to the impact of our actions on the entire system over time. The North Dakota pipeline conflict is a disagreement based on time frame. One side is focused on getting the pipeline finished to fulfill the need to get oil to market and the other is looking at the risk to water quality if there is an accident in the future. Water quality is the introduction of another criterion and feedback loop that reflects longer term thinking in the oil pipeline debate. An example of where both short and long-term time horizons are being considered in is the field of investment. Financial investment strategies have now designed mutual funds that optimize both short and
long-term investments. They balance the mix of investments to extend beyond short term profit to include stocks that will provide long term returns.

Long term thinking and action increases the number of variables that a company needs to consider in making decisions. In Paul’s story, he shifted from dumping waste from his plant that met the federal regulations, to raising his company’s standards and eliminating harmful waste, even though it cost more to make this shift. His focus wasn’t just on profit, he chose to reduce profit to ensure higher quality of water for the people downstream. Adding water quality as a criterion shifts the feedback loop to water quality as a measure of success as well as profit.

Long term thinking also shifts our focus from a narrow range of factors to the entire system. Over time things don’t stay in one place, events in an open and connected system start affecting other things. If everyone does the minimum, the emergent pattern can be devastating for the larger system. For example, if we choose to deny climate change because it disrupts the business model of the oil and gas industry, the short-term result is stability in those industries for employment and the economy. However, the long-term time horizon would look at the risk of air quality, climate disruptions in raising water levels, increased natural disasters, and the social health and economic impact for our great grandchildren. In a long-term time horizon, health of future generations, resilience of ecological systems, and sustainability of air and water quality becomes a meaningful criterion in addition to profit.

In a connected open system world, actions continue to ripple throughout the system. And those effects can only be truly understood over time and through a holistic view.

The fourth shift is from inert to living systems. When we see organizations or the environment as inert, we create a subject to object relationship with them. An object is something we own and can move at will. I don’t have to ask my coffee cup’s permission to move it to a more convenient place nearer my hand. Traditional worldviews see nature as an object. This means that the resources in nature can be exploited for a company’s purpose and profit. We don’t need to consider how to extract resources in a way that minimizes damage to the ecosystem the resources are found in. Inert objects don’t need this consideration. Opening up national parks to extraction of natural resources reflect a subject to object relationship. The resources represent profits to companies. Their short-term purpose is to make profits and this drives the economy. Therefore, these parks’ resources should be accessible to businesses who could profit from them. They aren’t seen as a living system, rather, they are objects to be used by others.

When we shift to seeing our organizations and our environment as living systems, we shift our relationship to subject - subject. This shift changes the nature of our relationship. Living systems require consultation with each other. Each living entity needs to recognize its reciprocity and equity with each other. Living entities have decision making rights in any negotiation, even they can’t speak for themselves. Living
systems help us see all life as sacred including national park resources, the employees in our organizations, the communities we live in, and our customers and supply lines. (Allen, 2012; Allen, 2015; Baumeister; 2014; Capra & Luisi, 2014).

Nature is a living system. It continually adapts and adjusts to allow for the future flourishing of life on earth (Benyus 2002). With a 3.8-billion-year history, we can say that the design of nature is successful since we still have life on this planet (Benyus, 2002). Nature is structured as a complex, dynamic, interdependent network. There is reciprocity and mutuality in its relationships. Shifting to a worldview of living systems causes us to see each other as unique living beings who make up living communities and organizations who are embedded in a larger living system called nature. This shift to seeing living systems, require leadership practices to become more skilled at leading collectively, a process that recognizes multiple stakeholders and decision making rights (Kuenkel, 2016).

**Implications**

When a person assumes that they exist in an open system, filled with connections, where actions can only be fully understood over time, and that systems are living, it changes the way they approach everything. For example, Al and Lois Steuter own the Sandhill and Sun Ranch in the Sandhills of Nebraska. It is a sustainable ranching business by design.

Al is an example of how these four worldviews shifts impact how he thinks about ranching and how his worldview has influenced how he ranches. “The Sandhill & Sun Ranch is conservatively stocked to insure long-term sustainable grazing for the cattle herd on standing perennial forage on a year-long basis” ([http://sandhillandsunranch.com/](http://sandhillandsunranch.com/)).

He sees his ranch as an *open system* impacted by weather and the grassland’s ecology. He is committed to maintaining healthy populations of native plant and animal species on his ranch. His decisions aren’t just based on the relationship between his cattle herd and the grasslands. They also consider the other plant and animal species that use the same landscape. The ranch is linked to the environment, social and economic systems. He designed his ranch in a way that sees and uses his *connections* to the land and all the species in it including the size of his herd. Finally, he considers his acreage in the Sand Hills as his grassland endowment. It is a *living system* that he treats with respect. If he ran more cattle for a short term economic gain, he would be hurting the *resilience of the long-term ecology* he depends on, much like spending down the principle of an endowment instead of using only the interest. He chooses to maintain the number of cattle in relationship to what is going on with his grasslands. If there is drought, he will maintain a smaller herd. I have even heard him ask “what does the grassland need” to ensure its resilience as an ecosystem. Al, represents how these four worldviews can create an integrated framework that shapes his behavior, thinking, and the decisions he makes.
These four worldviews are linked and together create an integrated approach to an individual’s choices. If positional leaders held these worldviews, they would lead in a sustainable way. If the worldviews became conscious a positional leader could articulate how they influence the definition, thinking, and practice of environmental leadership for sustainability.

However, there are people who see the world as a closed system where things are separate. They see nothing wrong with short term time horizons or viewing their organizations as objects they control. There are reasons why people don’t shift their worldviews as the world around them changes. The first is that people who have succeeded in the old paradigm of worldviews hold on to their perspectives (Kuhn, 1970; Ramo 2016). They have been rewarded for their mental models and see no reason to change. There are three strategies that can be used to help an individual shift their worldviews.

The first strategy is to help people to become more aware and conscious of the worldview they are holding (Senge, 1994). When deep background assumptions are named, they can be analyzed to see if they continue to serve the individual. For example, if one believes that they are separate from others and that protecting their self-interest is paramount, they can examine that belief to see if it has made them happier and more fulfilled in their life.

The second strategy flows from the first. As we become more aware of our worldviews, we can examine the external environment to see if our internal map fits the territory we are living in, or if it helps us explain dynamics we see in our life. For example, a colleague of mine recently became a grandfather. This resulted in a shift to a longer time horizon. Time became more visible to him and he began to see how his choices and the organizations he led could help or hinder the quality of life for his grand and great grandchildren.

The third strategy uses painful or frustrating experiences to trigger a reflective practice that causes a shift in worldview. Ramo in his book *The Seventh Sense: Power, fortune, and survival in the age of networks* tells a story of working with one and two star generals at the War College after the Iraq war. The generals thought they had superior intelligence, equipment, strategy and soldiers. What they found was they were fighting a war that used the rules of networks instead of hierarchies. This was a painful experience and triggered an intentional learning practice that led to them to see the world as networked instead of separate. It also helped them development of new strategies that fit this new worldview.

**What changes**

When we shift our worldview, everything changes. Behaviors, actions and decisions that made sense in a closed system that assumes separation, short-term timelines, and inert systems are very different when viewed with a different worldview. Once we see open systems, we realize that our actions affect others and other events will ripple throughout our organization. We understand that we can influence many things but control very few. Power is no longer a zero-sum game.
Connectedness opens us up to being in relationship with each other. To see how our actions impact others and how others impact us. We see ourselves in relationship with others and the world around us. We see our interdependence and how one person’s success is built on relationships with others and our communities. We can no longer stand aside while various parts of our population struggle. Their struggle hurts them and ourselves. When we connect to nature, we notice how our decisions impact the environment and we can no longer make decisions based solely on how it will benefit ourselves alone.

When we extend our time horizon, we notice how actions and decisions might unfold over time. We look at short-term criteria and add longer time horizon questions that need to be asked before a decision can be made. We are no longer naive about the ramifications of choices over time. We become temporally competent. Choices we used to tolerate become intolerable.

Finally, we look to the “livingness” of all our systems. We see the sacredness of our relationships to each other and the larger environment. This shapes the way we think and treat each other. Our worldview and assumptions help us move toward leadership that is sustainable for our businesses, relationships, and the environment.

This chapter started with two stories that reflected different worldviews. If a person becomes aware of their assumptions, it gives them a wonderful opportunity to examine their assumptions and worldviews consciously and to evaluate if they still serve themselves and our world. It also gives us a way of influencing people to lead sustainably. Conversations that reveal deep background assumptions have the power to shift individuals toward sustainable leadership.
Reference


According to "Sustainable leadership: Talent requirements for sustainable enterprises," a study on models of sustainable leaderships from Russell Reynolds Associates and research from VU University, social pressure in society is contributing to a shift in the type of leadership of corporations. And sustainable leadership is not only something that can help end poverty, it can also help a company's bottom line. Society looks to CEOs for innovation. Without a shift in the mindset of private sector leaders, social and environmental responsibility is hard to enforce. Through sustainable leadership the changes necessary for creating a better world with equality for all are much more likely to occur. 3. The entire world benefits! Image: Flickr: Paul VanDerWerf. Sustainable leadership model and conclusions

We present a model for sustainable leadership that brings together the thinking in this report, as well as highlighting the need for a fundamental change in approach toward sustainability in the corporate world in order to facilitate adoption. For sustainable leaders to be effective, they need the support of the board of directors and other stakeholders. How is Sustainability Leadership Created? Sustainable leaders are born out of necessity. Their job is to deploy robust strategies to cultivate a better & healthier environment for the future of humanity. When leaders evaluate the safety and security of their customers, they realize that sustainability of their stakeholders is, ultimately, the sustainability of their organization. While some business leaders identify critical sustainability skills by working in the trenches, others directly earn a degree by following a sustainability-focused academic program. Educated in the surveillance of View Sustainable Leadership Research Papers on Academia.edu for free. Cronbach alpha value of the scale's internal consistency reliability was calculated as 0.950, AVE value was 0.654 and CR value was calculated as 0.950. In the light of these findings, it was concluded that the "Sustainable Leadership Scale" is a valid and reliable measurement tool compatible with the Turkish cultural structure. This paper is aimed at discussing Sustainable Leadership and Poverty Reduction and creates a relationship between sustainable leadership and poverty reduction. A critical element that has been missing in the discussions about Ghana’s development and the eradication of poverty in Ghana has been the role of sustainable leadership.