

# An empirical study of sustainability leaders who hold post-conventional consciousness

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## Abstract

**Purpose:** Document how leaders and change agents with a highly-developed meaning-making system design and engage in sustainability initiatives.

**Methodology/Approach:** Thirty-two sustainability leaders and change agents were assessed for their meaning-making system, or action logic, using a variation of the Washington University Sentence Completion Test. Thirteen were identified as holding the three rarest and most complex action logics able to be assessed to date. Semi-structured, in-depth interviews explored how they design and engage in sustainability initiatives.

**Findings:** These leaders appear to: (1) Design from a deep inner foundation, including grounding their work in transpersonal meaning; (2) Access non-rational ways of knowing, and use systems, complexity, and integral theories; and (3) Adaptively manage through “dialogue” with the system, three distinct roles, and developmental practices. 15 leadership competencies and developmental stage distinctions for three dimensions of leadership were identified.

**Research Limitations:** The limited sample size leads to the findings being propositions that require further validation before broader generalization.

**Practical Implications:** The results provide the most granular view to date of how individuals with complex meaning-making may think and behave with respect to complex change initiatives. This provides insight into the potential future of leadership.

**Social Implications:** This study is an initial exploration of what leader development programs may need to focus on in order to cultivate leadership with the capacity to address very complex social, economic, and environmental challenges.

**Originality/Value:** This paper documents 15 competencies that are: (1) largely new to the leadership literature and (2) that represent the actions and capacities of sustainability leaders and change agents who operate with very rare and complex meaning-making systems.

**Keywords:** Leader development, sustainability, adult development, change management, consciousness

**Category:** Research paper

## 1. Introduction

The overarching purpose of this research has been to better understand how to help address our biggest social, environmental, and economic challenges. The specific area studied is how leaders and change agents with a very complex and rare meaning-making system design and engage with sustainability initiatives. By identifying how such leaders respond to sustainability challenges, we may be able to help future and existing leaders to be more effective. This paper details the context behind the research, describes the methodology and conceptual framework, and highlights the key findings.

If humanity is going to achieve important global objectives like the United Nations’ Millennium Development Goals and mitigating our impact upon the climate, numerous significant

changes in our organizations and social systems are needed. Research and experience suggest that some of our change efforts toward a more sustainable world will work, while many may fail (Kotter, 1995). Amongst the myriad success drivers for a change initiative, a key component is the design of the initiative itself (Kotter, 1996, Doppelt, 2010). In turn, one of the most important influences on the design and implementation of change initiatives is the worldview of the designer(s) (Sharma, 2000, Doppelt, 2010). It is this dynamic – the worldview or meaning-making system of sustainability leaders – that this research focused on.

Decades of research into adult development have shown that the way humans make meaning develops and becomes more complex over time (Loevinger, 1966, Loevinger, 1976, Kegan, 1982, Kegan, 1994, Kegan, 1980, Cook-Greuter, 1999, Cook-Greuter, 2004). With each new stage of meaning-making, new capacities arise such as increased cognitive functioning, strengthened personal and interpersonal awareness, increased understanding of emotions, and more accurate empathy (Kegan, 1994, Loevinger, 1966, Loevinger, 1976, Manners and Durkin, 2001). This increase in overall capacity – in turn – has been correlated with greater leadership effectiveness (Kegan, 1994, Rooke and Torbert, 1998, Torbert et al., 2004, Strang and Kuhnert, 2009, McCauley et al., 2006). Thus, leaders with a more complex meaning-making system seem to have access to enhanced and new capacities that others do not. This appears to strengthen their ability to respond to complex, ambiguous, and sophisticated challenges.

Little is known about the impact of a leader's meaning-making on the design and implementation of change initiatives for sustainability. While the adult development literature (Torbert et al., 2004, Kegan, 1994) offers some insights, there has been no empirical research in this area until this study. In general, there is very little robust research on the intersection of sustainability and leadership (Cox, 2005, van Velsor, 2009). While there is a consistent call for strong and courageous leadership to drive the sustainability agenda (Kakabadse and Kakabadse, 2007, Senge, 2008), few studies describe what such leadership looks like in action. This study helps fill parts of that gap, specifically those relating to the design and engagement of sustainability initiatives.

For this study, I drew upon the action logics framework created by Torbert and colleagues (Torbert, 1987, Fisher et al., 1987, Torbert et al., 2004). This framework is based upon Loevinger's research into ego-development and self-identity (Loevinger, 1966, Loevinger, 1976), which was expanded upon by Cook-Greuter (1999, 2004). An "action logic" fundamentally represents the way that an individual organizes reality. It describes the developmental stage of meaning-making that informs and drives our reasoning and behavior. It includes what we see as the purpose of life, what needs we act upon, what ends we move toward, our emotions and our experience of being in the world, and how we think about ourselves and the world (Cook-Greuter, 1999, Torbert et al., 2004). There are eight action logics prevalent in the adult population. See Table 1 for a summary of action logics as related to sustainability leadership.

I focused my research on very rare sustainability leaders and change agents who hold one of the three latest, or most mature, action logics identified to date (i.e., Strategist, Alchemist, and Ironist). These individuals represent approximately 5-6% of the general adult population (Cook-Greuter, 1999, Cook-Greuter, 2004). At these stages of development, many additional capacities seem to arise, beyond those previously mentioned. These include the ability to: take a systems view and even a unitive view on reality; simultaneously hold and manage conflicting frames, perspectives and emotions; and deeply accept oneself, others, and the moment, without judgment. Research on these stages also suggests that such individuals have a deep access to intuition and perceive their rational mind as a tool, not as the dominant vehicle to understand reality. They appear to deeply tolerate uncertainty and even collaboratively engage with ambiguity to create in the world. Finally, they are subject to frequent "flow" and "witnessing" states of consciousness (Nicolaidis, 2008, Cook-Greuter, 1999, Cook-Greuter, 2000, Cook-Greuter, 2005, Joiner and Josephs, 2007). Ultimately, I was curious about how leaders who hold these late action logics engage in change initiatives.

Table 1

*The eight most prevalent action logics amongst adults, framed for sustainability leadership<sup>1</sup>*

	Action Logic and Focus	Implications for Sustainability Leadership	Strengths & Limitations
Pre-Conventional Stage	<p>The <b>Opportunist</b> focuses on own immediate needs, opportunity, and self-protection</p> <p>5% of adults</p>	<p>Wins any way possible. Self-oriented; manipulative; “might makes right”. Little sensitivity to sustainability issues except when they represent a threat or foreseeable gain for the manager; resistance to pressure from stakeholders, who are viewed as detrimental to economic interests; sporadic and short-term measures.</p> <p><i>Source of power:</i> Coercive (unilaterally), e.g., executive authority</p> <p><i>How influences others:</i> Takes matter into own hands, coerces, wins the fight</p>	<p><i>Strengths:</i> Good in emergencies and sales opportunities. May seize certain sustainability opportunities or react quickly in a crisis; superficial actions may be showcased opportunistically.</p> <p><i>Limitations:</i> Pursuit of individual interests without regard for sustainability impacts; comprehension of sustainability issues limited to immediate benefits or constraints.</p>
	<p>The <b>Diplomat</b> focuses on socially-expected behavior and approval</p> <p>12% of adults</p>	<p>Avoids overt conflict. Wants to belong; obeys group norms; rarely rocks the boat. Supports sustainability questions due to concern for appearances or to follow a trend in established social conventions; concerned with soothing tensions related to sustainability issues within the organization and in relations with stakeholders.</p> <p><i>Source of power:</i> Diplomatic, e.g., persuasive power, peer power</p> <p><i>How influences others:</i> Enforces existing social norms, encourages, cajoles, requires conformity with protocol to get others to follow</p>	<p><i>Strengths:</i> Good as supportive glue within an office; helps bring people together. Reactive attitude with respect to sustainability pressures; consideration of regulatory constraints and the impact on the organizational image.</p> <p><i>Limitations:</i> Superficial conformity to external pressures; absence of real reappraisal of how things are done, statements often contradict actions.</p>
Conventional Stages of Meaning-Making	<p>The <b>Expert</b> focuses on expertise, procedure, and efficiency</p> <p>38% of adults</p>	<p>Rules by logic and expertise; seeks rational efficiency. Considers sustainability issues from a technical, specialized perspective; reinforcement of expertise of sustainability services; seeks scientific certitude before acting; preference for proven technical approaches.</p> <p><i>Source of power:</i> Logistical; e.g. knowledge-based or authoritative power</p> <p><i>How influences others:</i> Gives personal attention to detail and seeks perfection, argues own position and dismisses others’ concerns</p>	<p><i>Strengths:</i> Good as an individual contributor. Development of sustainability knowledge within the organization; implementation of sustainability technologies.</p> <p><i>Limitations:</i> Limited vision and lack of integration of sustainability issues; denial of certain problems; has difficulty with collaboration.</p>
	<p>The <b>Achiever</b> focuses on delivery of results, goals, effectiveness, and success within the system</p> <p>30% of adults</p>	<p>Meets strategic goals. Effectively achieves goals through teams; juggles managerial duties and market demands. Integration of sustainability issues into organizational objectives and procedures; development of sustainability committees integrating different services; response to market concerns with respect to ecological issues; concern for improving performance.</p> <p><i>Source of power:</i> Coordinating (coordinating the sources of power of previous three action logics)</p> <p><i>How influences others:</i> Provides logical argument, data, experience; makes task/goal-oriented contractual agreements</p>	<p><i>Strengths:</i> Well suited to managerial roles; action and goal oriented. Efficient implementation of ISO 14001 type management systems; follow-up of sustainability performance; more widespread employee involvement; pragmatism.</p> <p><i>Limitations:</i> Difficult questioning management systems in place; conventional sustainability goals and measurements; lack of critical detachment with respect to conventions.</p>

<sup>1</sup> The direction of development for action logics goes from the Opportunist to the Ironist (and potentially beyond).

Table compiled from three sources: ROOKE, D. & TORBERT, W. R. (2005) Seven transformations of leadership. *Harvard Business Review*, 83, 66, BOIRAL, O., CAYER, M. & BARON, C. M. (2009) The action logics of environmental leadership: A developmental perspective. *Journal of Business Ethics*, 85, 479-499, COOK-GREUTER, S. R. (2004) Making the case for a developmental perspective. *Industrial and Commercial Training*, 36, 275.

Post-Conventional Stages of Meaning-Making	<p>The <b>Individualist</b> focuses on self in relationship to the system and in interaction with the system</p> <p>10% of adults</p>	<p>Interweaves competing personal and company action logics. Creates unique structures to resolve gaps between strategy and performance. Inclined to develop original and creative sustainability solutions, to question preconceived notions; development of a participative approach requiring greater employee involvement; more systemic and broader vision of issues.</p> <p><i>Source of power:</i> Confronting; used to deconstruct other's frames or world views</p> <p><i>How influences others:</i> Adapts (ignores) rules when needed, or invents new ones; discusses issues and airs differences</p>	<p><i>Strengths:</i> Effective in venture and consulting roles. Active consideration of the ideas and suggestions of diverse stakeholders; personal commitment of the manager; more complex, systemic and integrated approach.</p> <p><i>Limitations:</i> Discussions that may sometimes seem long and unproductive; idealism that may lack pragmatism, useless questioning of issues; possible conflict with Experts and Achievers.</p>
	<p>The <b>Strategist</b> focuses on linking theory and principles with practice; dynamic systems interactions; self-development and self-actualization</p> <p>4% of adults</p>	<p>Generates organizational and personal transformations. Exercises the power of mutual inquiry, vigilance, and vulnerability for both the short and long term. Inclined to propose a pro-sustainability vision and culture for the organization, more in-depth transformation of in-house habits and values; development of a more proactive approach conducive to anticipating long term trends; marked interest for global sustainability issues; integration of economic, social and sustainability aspects.</p> <p><i>Source of power:</i> Integrative; (consciously transformative)</p> <p><i>How influences others:</i> Leads in reframing, reinterpreting situation so that decisions support overall principle, strategy, integrity, and foresight</p>	<p><i>Strengths:</i> Effective as a transformational leader. Changes in values and practices; real integration of the principles of sustainable development; harmonization of the organization with social expectations; long-term perspective.</p> <p><i>Limitations:</i> Approach that may seem difficult to grasp and impractical; risk of disconnect with pressures to produce short-term profits; scarcity of Strategists.</p>
	<p>The <b>Alchemist</b> focuses on the interplay of awareness, thought, action, and effects; transforming self and others</p> <p>1% of adults</p>	<p>Generates social transformations. Integrates material, spiritual, and societal transformation. Re-centering of the organization's mission and vocation with regard to social and environmental responsibilities; activist managerial commitment; involvement in various organizations and events promoting harmonious societal development; support for global humanitarian causes.</p> <p><i>Source of power:</i> Shamanistic (through presence)</p> <p><i>How influences others:</i> Reframes, turns inside-out, upside-down, clowning, holding up mirror to society; often works behind the scenes</p>	<p><i>Strengths:</i> Good at leading society-wide transformations. Active involvement in the comprehensive transformation of the organization and society; concern for authenticity, truth and transparency; complex and integrated vision.</p> <p><i>Limitations:</i> Risk of scattering managerial and organizational efforts, to the benefit of the common good; losing touch with the primary vocation of the organization; extreme rarity of Alchemists.</p>
	<p>The <b>Ironist</b> focuses on being as well as on witnessing the moment to moment flux of experience, states of mind, and arising of consciousness.</p> <p>0.5% of adults</p>	<p>[Under research] <i>Institutionalizes developmental processes</i> through "liberating disciplines." Holds a cosmic or universal perspective; visionary.</p> <p><i>Source of power:</i> [Under research] Unitive worldview, transcendent awareness</p> <p><i>How influences others:</i> [Under research]</p>	<p><i>Strengths:</i> [Under research] Creates the conditions for deep development of individuals and collectives.</p> <p><i>Limitations:</i> [Under research]</p>

## 2. Methodology

I used a variation of the Washington University Sentence Completion Test (WUSCT; Loevinger and Wessler, 1970) to assess the meaning-making capacity, or action logic, of 32 leaders and change agents from business, government, and civil society who are engaged in sustainability work. Over four decades, the WUSCT has been extensively refined and validated (Cohn & Westenberg, 2004; Hauser, 1976; Loevinger, 1979; Manners & Durkin, 2001), and has been revised several times (Cook-Greuter, 1999; Hy & Loevinger, 1996). It is one of the most frequently used measures of human development (Bartunek, et al., 1983; Cohn & Westenberg, 2004; Cook-Greuter, 1999).

From my original sample of 32, I identified 13 who measured at the three latest stages assessed by this instrument. This resulted in a final sample of six Strategists, five Alchemists, and two Ironists. No other leadership study has had as many participants with documented, advanced meaning-making capacity. I conducted semi-structured, in-depth interviews with these participants concerning their experience and process regarding the design and engagement of sustainability initiatives. Through thematic analysis of the interview data, and building upon insights from my literature review, I compiled a set of propositions and findings which are summarized below.

## 3. Drawing upon the theories of constructive-developmentalism and sustainability leadership

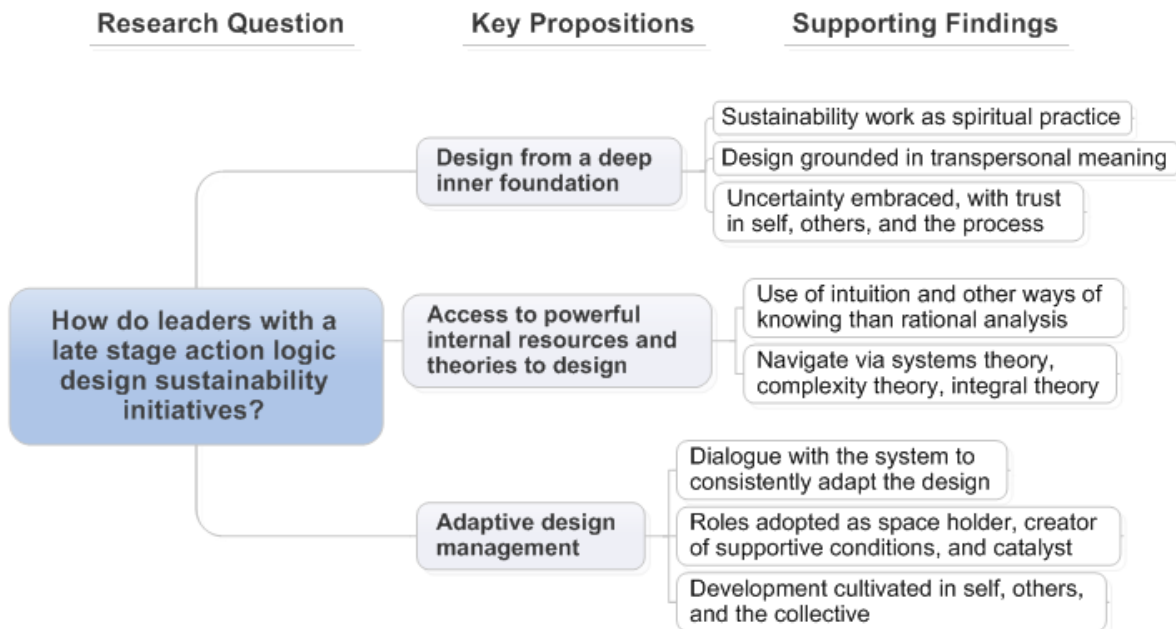
The conceptual framework that guided my inquiry consisted of two theoretical lenses: constructive-developmental theory and sustainability leadership theory. Constructive-developmental theory (Cook-Greuter, 1999, Cook-Greuter, 2004, Kegan, 1982, Kegan, 1994, Loevinger, 1976, Torbert et al., 2004, Torbert, 2003), a branch of psychology, is a stage theory of adult development. Research indicates that there is a range of worldviews, meaning-making structures, or action logics through which adults have the potential to grow. Roughly, each of the stages of development involves the reorganization of meaning-making, perspective, self-identity, and the overall way of knowing. The findings of constructive-developmental theory ground my belief that holding a late action logic, all other factors being equal, may grant a significant advantage to leaders and change agents who design sustainability initiatives. Later action logics offer a broader vision and deeper understanding of the interior (e.g., psychological) and exterior (e.g., systems, socio-cultural) landscapes of leadership (Cook-Greuter, 2004, Torbert et al., 2004). Similar to scaling a mountain, the higher one climbs, the further one can see.

My second theoretical lens is sustainability leadership theory. This field goes by many different names, depending on the perspective it addresses. These titles include corporate social responsibility (CSR) leadership, environmental leadership, and ethical leadership. The most relevant dimensions of this literature for my study are those that identify the *values and worldviews* (Boiral et al., 2009, Shrivastava, 1994, Visser and Crane, 2010), *competencies* (Kakabadse et al., 2009, Hind et al., 2009, Cox, 2005, Wilson et al., 2006, Boiral et al., 2009), and the *behaviors* (Quinn and Dalton, 2009, Doppelt, 2010, Portugal and Yukl, 1994, Hardman, 2009) that sustainability leaders need. Most of this research is exploratory, and, until this study, none of it has empirically measured the influence of complex meaning-making on sustainability leadership. Nonetheless, some studies strongly support the need for sustainability leaders that have a sophisticated worldview (Boiral et al., 2009, Doppelt, 2010, Hames, 2007, Hardman, 2009) or intellect (Waldman et al., 2006) and have begun to document what such qualities look like in practice.

## 4. Summary of findings

There are three major propositions I make based upon the findings of this study. They are: (1) These leaders design from a deep inner foundation; (2) they access powerful internal resources and theories to distill and evolve the design; and (3) they adaptively manage the design. These

propositions, respectively, relate to three different aspects of change agency: Being, Reflecting, and Engaging. “Being” refers to fundamental or essential qualities of these individuals; that is, it has to do with characteristics of *who they are*. “Reflecting” concerns *how they think* about and gain insight into the design. “Engaging” addresses the *actions they take* to develop and manage the design. Each of the three propositions is supported by two or three major findings, and all are summarized in Figure 1 below.



For a complete explanation of these findings, please see the full research results (Brown, 2011). I have consolidated some of the details about these findings into two tables below. The first concerns sustainability leadership competencies, and the second relates to the role and approach of sustainability leaders with a late action logic.

If more complex meaning-making systems are correlated with greater leadership effectiveness (McCauley et al., 2006, Eigel and Kuhnert, 2005, Harris and Kuhnert, 2006, Harris and Kuhnert, 2008, Strang and Kuhnert, 2009, Fisher and Torbert, 1991, Rooke and Torbert, 1998, Baron and Cayer, 2011), then sustainability leadership development should work to strengthen the meaning-making capacity (i.e., action logic) of leaders and change agents. An important implication of this study for sustainability leadership theory is that the existing suite of leadership competencies proposed by the literature (e.g., Kakabadse et al., 2009, Hind et al., 2009) may be insufficient for addressing many sustainability challenges. New leadership competencies are likely needed to help cultivate leaders who can handle complex global issues.

Based upon the results of this study, I propose 15 competencies (see Table 2). These may be most appropriate for change agents and sustainability leaders who hold an Achiever, Individualist or Strategist action logic. Approximately 40-45% of the general population holds these action logics (Cook-Greuter, 2004, Rooke and Torbert, 2005, Cook-Greuter, 1999). Development of these competencies may help facilitate their growth into the later action logics of the Strategist, Alchemist and Ironist, and therefore unlock the capacities offered by those ways of making meaning. This is not intended to be a definitive list of competencies, but rather a first step toward a competency model for sustainability leaders with a late action logic.

Table 2

*15 competencies exhibited by this sample of sustainability leaders with a late action logic*

Sustainability Leadership Competency		Description and Notes
Deeply Connect	<i>Ground sustainability practice in deep meaning</i>	Honor the work of sustainability as a spiritual practice, as a sacred expression. See sustainability work as a vehicle for transformation of self, others, and the world. Act in service of others and on behalf of a greater Other (e.g., universe; spirit; consciousness; god; collective intelligence; emptiness; nature).
	<i>Intuitive decision-making and harvesting</i>	Use ways of knowing other than rational analysis to harvest profound insights and make rapid decisions. Be able to easily access this type of information alone or collectively, and facilitate individuals and groups to do so.
	<i>Embrace uncertainty with profound trust</i>	Willingness to not know, to wonder into the mystery of what will emerge next. Able to humbly rest in the face of the unknown, ambiguity, and unpredictable change, and not need to “push” for an immediate answer or resolution. Deeply trust oneself, co-designers, and the process to navigate through uncertainty.
Know Oneself	<i>Scan and engage the internal environment</i>	Able to quickly become aware of and aptly respond to psychological dynamics in oneself so that they do not inappropriately influence one’s sustainability work. Deep attunement to emotional, shadow, and personality-driven forces; able to “get out of the way” and be “energetically clean” when engaging with others.
	<i>Inhabit multiple perspectives</i>	Able to intellectually and emotionally hold many different perspectives related to a sustainability issue, without being overly attached to any of them. Able to argue the position of and communicate directly from different viewpoints. Be open, curious, and inviting of new perspectives, especially those that challenge or counter one’s own.
Adaptively Manage	<i>Dialogue with the system</i>	Able to repeatedly sense into what is needed to help a system develop (e.g., make it more sustainable), try different interventions (e.g., prototype; experiment; seed ideas), observe the system response, and adapt accordingly (c.f., Snowden and Boone, 2007). Able to look <i>at</i> the system, <i>through</i> the system, and <i>as</i> the system as part of the dialogue.
	<i>Go with the energy</i>	Able to identify and take advantage of openings and opportunities for system changes that are well received by members of the system, thereby building on momentum and moving around obstacles. Also, able to identify blockages or tensions (in individuals, groups, or systems) that hinder progress, and inquire into them.

<b>Cultivate Transformation</b>	<b><i>Self-transformation</i></b>	Able to consistently develop oneself or create the environment for self-development in the intrapersonal, interpersonal, and cognitive domains, as well as other areas. Based upon deep self-knowledge, including personality dynamics and shadow issues. Able to create communities and engage mentors that consistently invite/challenge a deeper self to come forth.
	<b><i>Create developmental conditions</i></b>	Able to create the initial conditions (e.g., environment) that support and/or challenge development of individuals, groups, cultures, and systems. Able to sense what the next developmental step might be for others or a system, and create fertile ground or an intervention that increases the likelihood of development or the emergence of novelty. Requires a general understanding of how individuals, groups, and systems develop.
	<b><i>Hold space</i></b>	Able to effectively create the appropriate (e.g., safe; challenging) space to help a group progress (e.g., work through an inquiry; build trust; self-reflect), holding the tension of the important questions. Able to hold the energetic potential of what is needed in the space, and/or what is needed for development of the individuals and collectives involved, thereby creating the environment for the emergence of answers/outcomes and developmental movement.
	<b><i>Shadow mentoring</i></b>	Able to support others to see and appropriately respond to their psychological shadow issues and their “programming” (e.g., assumptions; limiting beliefs; projections; stories). This is <i>not</i> psychotherapy work, but the use of basic “maintenance” tools like the 3-2-1 process (Wilber et al., 2008) to address shadow issues.
<b>Navigate with Sophisticated Theories, Frameworks</b>	<b><i>Systems theory and systems thinking</i></b>	Understand the fundamental concepts and language of systems theory. Be able to apply systems thinking to better understand sustainability issues and support the development of systems. (c.f., Bertalanffy, 1968, Laszlo, 1972, Senge, 1990)
	<b><i>Complexity theory and complexity thinking</i></b>	Understand the fundamental concepts and language of complexity theory, especially as it relates to leadership. Be able to apply complexity thinking to better understand sustainability issues and support the development of complex adaptive systems. (c.f., Stacey, 1996, Kauffman, 1995, Marion and Uhl-Bien, 2001, Uhl-Bien and Marion, 2008)
	<b><i>Integral theory and integral reflection</i></b>	Understand the fundamental concepts and language of integral theory. Be able to use integral theory to: assess or diagnose a sustainability issue and design an intervention; tailor communications to different worldviews; support the development of oneself, others, groups, cultures, and systems. (c.f., Wilber, 1995, Edwards, 2009, Torbert, 2000, Wilber, 2000, Torbert et al., 2004, Beck and Cowan, 1996)
	<b><i>Polarity management</i></b>	Understand the fundamental concepts and language of polarity management. Be able to recognize and effectively engage important polarities such as: subjective-objective; individual-collective; rational-intuitive; masculine-feminine; structured-dynamic; challenge-support; and big picture-details. (c.f., Johnson, 1993, Johnson, 1992)

This study also revealed variations in how individuals with late action logics perceive and act in three important dimensions. These are: (1) the principal role they take as a change agent; (2) their perspective on service; and (3) the general approach they use when designing change initiatives. None of these dimensions have been articulated in the constructive-developmental literature or sustainability leadership literature before. These findings are synthesized in Table 3.



Table 3

*Differences in role, service, and design approach of this sample of sustainability leaders*

	<b>Principal Role as a Leader or Change Agent</b>	<b>Perspective on Service</b>	<b>Principal Design Approach for Change Initiatives</b>
<b>Strategists</b>	<i>Catalyze.</i> Point toward a greater vision; expose people to new perspectives; push their edges; support and enable their fullest growth and greatest potential; remove problems and barriers; reframe, integrate information for others.	As an individual, be of service <i>to</i> others and the world. Service is grounded largely in <i>personal</i> meaning.	Operate <i>on</i> systems by actively influencing those with authority, power, and influence to make the perceived changes needed in the system.
<b>Alchemists</b>	<i>Create Supportive Conditions.</i> Create space and processes for vital dialogue and development of individuals and collectives; seed new ideas and meaningful connections; address blockages in systems to improve flow; create an energetic field and the spaces for innovation to emerge and group meaning-making to develop.	As an individual, be of service to others, the world, and the development of a greater Other (e.g., spirit, consciousness). Serve <i>on behalf of</i> that greater Other, acting as a vehicle or vessel for its will. Work to alleviate suffering. Service is grounded in <i>trans-personal</i> meaning.	“Dialogue” <i>with</i> systems via experimentation and probing, while concurrently creating conditions that help systems and the individuals that constitute them to develop themselves.
<b>Ironists</b>	<i>Hold and Wonder.</i> Hold a unified perspective with the other as One; hold a partnership of beyond us and them; hold and rest in the tension of not knowing and wonder into the moment – without predefined constructs and perspectives – to allow what is needed to emerge; each time a solution arises, wonder and inquire into it; hold the space for the integrative nature of consciousness to express; hold a mirror up to individuals and groups so that they may see themselves, self-reflect, and wonder; attune to evolving nature of consciousness and wonder “where are we?” “what are we becoming?” and “what is needed and wanted next?”	Serve spirit <i>as</i> spirit itself. Sit with all suffering that is arising from a position “outside” of the space-time continuum. Rest in it as an expression of what is arising. Take action as deemed appropriate. Service is grounded in <i>unitive</i> meaning.	Anchor in Oneness and design <i>as</i> the system. That is, wonder into what the system needs and wants to become next, listen closely, and principally hold the energetic tension for that next stage of maturity to emerge. Support the individuals and the system to bring forth that new way of being, in whatever ways needed.

## 5. Conclusion

In my opinion, the widespread development of meaning-making capacity amongst leaders is an essential piece of the puzzle if we are to achieve the challenging objectives of global sustainability. Constructive-developmental research suggests that postconventional meaning-making offers significant advantages and abilities over earlier worldviews. With this study, I have attempted to accomplish two things. First, I wanted to strengthen the linkage between the fields of leadership development for sustainability and constructive-developmentalism. Secondly, I wanted to empirically identify specific actions and capacities of leaders and change agents who hold the most complex meaning-making systems that science is able to measure. These, in turn, can be used to help guide the development of others into the postconventional realm, thereby aiding them to unlock greater potential. I believe that I have made strong advances in both of these areas.

From a scholarly perspective, I recognize that the propositions, competencies, and practices postulated in this study are hypothetical and subject to validation and refinement. I invite other researchers to take up this work and therefore drive our collective understanding of developmentally

mature leadership. However, from a practitioner standpoint, I believe that now is the time to act. We have enough evidence to make bold strides forward regarding the design of leadership development programs for change agents globally. I have looked closely at the existing research, studied peers who are sustainability leaders, and personally served as a sustainability leader using many of the competencies and practices discussed here. From this empirical and experiential research I can state unequivocally that there are considerable leadership advantages to holding a complex, postconventional meaning-making system. We should, therefore, shift our attention to embedding practices that foster such deep psychological development into leader development programs whenever possible.

About the author. Barrett C. Brown, Ph.D.c., specializes in leader development and change management. For the past two years at the Dutch Sustainable Trade Initiative, he served on the core team to design and execute large-scale multi-stakeholder initiatives that mainstream sustainability into global supply chains. This involved building learning systems within entire sectors and driving cross-organizational alignment and innovation amongst multinational corporations, governments in the North and South, and international NGOs. He has worked on four continents, helped develop and launch a dozen companies, consultancies, and NGOs, built corporate universities, coached senior executives, and delivered leadership initiatives for Global 1000 leaders. Barrett held UN consultative status for four years, and has presented widely, including at the United Nations World Summit on Sustainable Development (side event), US State Department, UNDP headquarters, International Cocoa Organization, and the Bioneers conference. He serves as Co-Director of the Integral Sustainability Center, which supports research and practice concerning application of an integral approach to sustainability and sustainable development. He is an advisory board member for: US-based Kosmos Journal, an integrally informed journal on global issues; the Australian-based Shift Foundation, which develops emerging global leaders; and Canadian-based IntegralCity.com, focusing on urban sustainability issues. His sustainability writings are used in universities in North America and Europe as well as in the UN system. Barrett has also used his fluency in Spanish and Portuguese to translate several business books and lecture on leadership. Barrett's undergraduate studies are in Mechanical Engineering and English Literature through the University of California at Santa Cruz. His Ph.D. and Master's degrees are in Human and Organizational Systems from Fielding Graduate University. He lives in Amsterdam with his wife and daughter and can be reached at [bbrown@integralinstitute.org](mailto:bbrown@integralinstitute.org).

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