

ABUNDANCE AND SCARCITY MENTAL MODELS IN LEADERS

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Laura Freebairn-Smith

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Approval of the Dissertation

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This dissertation by Laura Freebairn-Smith has been approved by the committee members below, who recommend it be accepted by the faculty of Saybrook University in partial fulfillment of requirements for the degree of

Doctor of Philosophy in Organizational Systems

Dissertation Committee:

Kathia Laszlo, Ph.D., Chair

Date

Dennis Jaffe, Ph.D.

Date

John H. Adams, Ph.D.

Date

Abstract

ABUNDANCE AND SCARCITY MENTAL MODELS IN LEADERS

Laura Freebairn-Smith

Saybrook University

Some leaders create more energy, joy, productivity, and dedication in their subordinates than others. About these bosses, subordinates consistently say things like, “I loved working for her.” Leadership research has tried to explain this phenomenon but no model has adequately encompassed the range of leader behaviors expressed by subordinates nor do the models examine the mental models that drive those behaviors. This dissertation was a mixed-methods study which developed an instrument and model for determining where in a spectrum of abundance and scarcity mental models a leader operates. The study examined the effect of a leader’s mental model on the perceived health of their organization.

The research was conducted in three phases: Phase one consisted of a qualitative exploration through online interviews of 16 experts that provided input for the design of the quantitative instrument. Phases Two and Three consisted of applying the quantitative instrument to measure a leader’s position on the abundance-scarcity spectrum, with a focus on the role of leaders as bosses. Phase Two had 192 participants and Phase Three had 102 participants. The data were analyzed through correlation and factor analysis.

Phase Three was conducted to retest items that did not load well in the factor analysis in Phase Two.

The results revealed that bosses with an abundance mental model – seeing the world as resource sufficient and power as shareable – are preferred over scarcity bosses. The subordinates of these bosses saw their organizations as healthier. Their organizations do better at conflict resolution, communication, and teamwork. However, too much abundance can be detrimental by dispersing energy and misplacing optimism.

Scarcity leaders work from fear and control. They often struggle with communication and have trouble delegating. They decrease energy instead of increasing it. Scarcity bosses are difficult to work for and negatively impact their organization's perceived health. The research showed that scarcity and abundance behaviors are more subtle than an on/off switch. Bosses fall along a spectrum and all behaviors must be examined to understand the abundance-scarcity mental model of a leader. This study created a new broader model for understanding effective leadership and its impact on the health of organizations.

Dedication

This dissertation is dedicated to all my teachers, in all the forms they have taken in my life, who helped me discover that questioning and knowing and seeing are endeavors of the highest order, made truly useful only by the addition of soul and compassion.

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Chapter 1: Introduction

Purpose of the Study

Anecdotal evidence and research indicate that certain types of leaders are better to work for than others. Some leaders create more energy and joy, more productivity, more passion and dedication in those below them than others. About these bosses, subordinates consistently say things like, “He was a great boss.” “She made me feel that we could do anything.” Leadership research has tried to explain this phenomenon with numerous conceptual models. Is it the personality of the leader? Social stature? Training? Context? The research has evolved over time to explain great leaders as a mix of personality, experience, context, and serendipity (Burns, 1978). Leadership research is a robust field but it does not cover the impact of leaders’ mental models about resource scarcity or abundance on their subordinates’ experience.

Building on this prior work in leadership and other fields, this study looked at the mental models of leaders along a spectrum from abundance to scarcity models, and the effect these models have on the felt experience of subordinates. Understanding of the mental models provides insights into which leadership behaviors are more effective and how to change ineffective behaviors.

Mental models affect what is seen, how it is reacted to, and how information is interpreted. Mental models are the intellectual road maps we use to navigate our observed and felt environments, and, as maps, they highlight some elements of the environment and information while excluding others (Mathieu, Heffner, Goodwin, Cannon-Bowers, & Cannon-Bowers, 2000). For example, when I ask undergraduate students to draw a map between their home and college, the map is most detailed at the ends of the journey and

usually only has one or two key sign posts along the way. Each student's map of the college emphasizes a different element. For one student it is the parking lot, for another it is the student center.

Essentially, mental models are organized knowledge structures that allow individuals to interact with their environment. Specifically, mental models allow people to predict and explain the behavior of the world around them, to recognize and remember relationships among components of the environment, and to construct expectations for what is likely to occur next (Rouse & Morris, 1986). Furthermore, mental models allow people to draw inferences, make predictions, understand phenomena, decide which actions to take, and experience events vicariously (Johnson-Laird, 1983). Mental models serve three crucial purposes: They help people to describe, explain, and predict events in their environment. (Mathieu et al., 2000, p. 274)

Deeper mental models – the models that explain the world and dictate how we interact with it – arise out of both genetics and personality. We are each born with a distinct personality that is further molded by our environment. This blend of our innate and developed selves gives rise to our deepest mental models and beliefs (McCrae et al., 2000). Is the world a safe place or a dangerous place? Are people basically good at heart? Is rain a cause for celebration or whining? In this dissertation, I examined two particular mental models – abundance and scarcity – that I believe dictate a range of leadership behaviors.

Abundance and scarcity mental models affect behavior at all levels of a system, from the individual, to the leader, to the entire ecosystem. When a system is viewed as abundant, fear of scarcity decreases. Sharing increases. However if the system is seen as limitlessly abundant, waste and disregard occur. On the other hand, scarcity mental models produce hoarding and intra-system stress. If a system is viewed as excessively scarce, violence and intolerance occur.

A leadership abundance/scarcity mental model has the potential to provide new insights into which leadership behaviors enhance staff members' morale, performance and experience within organizations, and which leadership behaviors do not.

Research Questions

The research sought to answer the following questions:

- Which leadership behaviors indicate the degree to which a leader uses an abundance mental model versus a scarcity mental model?
- Is there a consistent connection between a leader's abundance mental model (AMM) and a positive work experience for those under their supervision?

Key Concepts

Leadership comes in many forms, ranging from those with untitled power (e.g., the matriarch of a clan) to those with power through resources (the wealthy) to those with power through conviction (Martin Luther King). In this study, I focused on people whose leadership role is a result of having subordinates and an assigned role in an organization.

Abundance is a term most often seen in the ecology, evolutionary biology, and economics literature. There is no universal definition of abundance, however the term usually implies that there is plenty of any given resource, both material and non-material (e.g., water and love), than is currently needed in that environment.

There is a difference between abundance as a mindset (a choice in perception that influences action) and abundance as a description of the actual landscape (are there really plentiful resources or is it wishful thinking?). Systemic abundance helps to reconcile these two: the physical resources can be abundant if we perceive them as part of an ongoing cycle of renewal. (K. Laszlo, personal communication, October 10, 2005)

In this dissertation I focus on the former, abundance as a mindset, with a focus on the psychological definition of abundance. I look at how the perception by a leader of the

resources available to him or her, as created by personality, habit, and training, influences his or her leadership and thus the experience subordinates have of him or her as a boss.

The abundance mental model I have created here is more closely aligned with the psychological literature around optimism and less so with the sustainability literature on ecosystems. My focus is on whether the bosses rated by the research participants see the world, in emotional, physical and spiritual terms, as an abundant place or not. In the leader's mind, are there enough resources (time, money, power, affection, etc.) so that the leader is magnanimous with his or her energy, attention, and power, in turn creating energy and enthusiasm in his or her subordinates?

The research provides a new conceptual model to understand a spectrum of leadership behavior in a richer way. The research findings can help leaders determine where on the spectrum of abundance-scarcity mental models they are located, and which behaviors related to this spectrum they can change to be more effective leaders.

Chapter 2 reviews the relevant literature from psychology, sustainability, and organizational development. Chapter 3 briefly reviews the methodology, with the results shared in Chapter 4. Chapter 5 discusses the results and implications for future research, as well as the limitations of the current study. An extensive reference list and several appendixes follow.

Chapter 2: Review of the Literature

This chapter reviews four bodies of literature relevant to this dissertation: (a) psychology, (b) organization development, (c) leadership, and (d) economics and sustainability. In psychology, the work on optimism begins to define the behaviors, attributes, and mental models one might expect to see in an abundance-oriented leader. The organization development and leadership literature shows how human beings have come to understand those who lead, and it indicates an evolving view of the nature versus nurture argument for leadership skills, as well as typologies of leadership behavior. Economics and sustainability add definitions of abundance and scarcity and the larger system levels that contribute to understanding abundance and scarcity mental models at the individual level.

There are elements in each body of literature that help support the work of the study, that is, optimism in psychology. Sustainability and economics give useful concepts around abundance in large systems and of course its flip side, scarcity of resources. However, none of the theoretical areas reviewed provides a body of material that is an exact match for the concepts under examination. Thus, as the reader will see, the abundance and scarcity mental models had to be constructed by pulling pieces from diverse fields and rounding those out with input from experts.

Overview of Relevant Literature and Research

The world we inhabit is abundant beyond our wildest imagination. There are trees, dreams, sunrises; there are thunderstorms, shadows, rivers; there are wars, flea bites, love affairs; there are the lives of people, God, entire galaxies.

Paul Feyerabend (Feyerabend, 1999, p. 5)

The earth has enough for every man's need, but not for every man's greed.
Mahatma Gandhi

All sciences and cultures have an underlying assumption about the extent of their resources. The orientation runs along a spectrum from one of scarcity (i.e., there are not enough resources to meet demand), to one of abundance (i.e., there are more than enough resources to meet demand), or myriad steps along the spectrum such as one of adequacy (i.e., there are just enough resources to meet demand). Individuals also have a parallel orientation of abundance or scarcity; they view their lives, organizations, budgets, or the world as inherently resource rich or inherently resource poor, or somewhere on this spectrum.

The scarcity-abundance spectrum is at play in other systems as well, ranging from large, infinite systems to smaller, more bounded systems. For example, the universe and the mind are often viewed as infinite, abundant resources. The planet and its micro-ecosystems are often viewed as finite and prone to scarcity, but they do not necessarily have to be viewed as such. Even smaller systems such as individual organizations can be framed as resource-abundant or resource-scarce systems, depending on many factors.

A mental model of scarcity assumes that the resource in question is part of a closed system with limited and insufficient non-renewable resources. For example, global energy, if viewed only from the perspective of oil reserves, could ultimately create a scarcity mental model as reserves run out if there are no alternative fuels. If viewed through the lens of wind and solar power, an abundance mental model is possible.

Another manifestation of the scarcity mentality is an assumption that even with abundant resources there are not enough for any particular individual. This is one of the basic human fears – not having enough resources to survive or reproduce. The definition of *enough* is problematic for sustainable systems, as we will see later in the section on

economics and sustainability. *Enough* has different meanings to different people based on their experiences and situations. In the Cambodian refugee camp where I worked, on a daily basis the refugees consumed probably one half of the food and water that the Western staff did. To the Cambodians, after years of starvation under Pol Pot, the water and food was abundant. To the Western relief workers, it seemed impossibly insufficient.

I believe that the labeling of any system as either resource scarce or resource abundant depends greatly on the individual perceiver's bias and assumptions. To build on an earlier example, if a person only focuses on oil as an energy source, then the planet is an *energy resource scarce* system. If a person focuses on renewable energy sources, the planet appears as energy abundant, as an almost *energy infinite* system. Where we focus affects our view. "Focusing only on oil means all the eggs are in one basket. Focusing on renewable energy means diversification. I think this diversification is key in the shift toward an abundant mental model" (K. Laszlo, personal communication, October 10, 2005).

Abundance and scarcity orientations have serious implications for science, cultures, organizations, people, and the planet because they affect behavior. A review of the literature indicates that the scarcity-abundance spectrum has affected such disparate fields as economics, sustainability, philosophy, organizational behavior, and politics (Adams, 2000; Covey, 1999; Malthus, 1797/1993; Perry, Griggs, & Griggs, 1996; Rossatto, 2005). These mental models affect leadership and organizational culture and outcomes.

However, I found virtually no research on leadership abundance mental models. This study's research shows that scarcity and abundance models in leaders affect their

behaviors around financial resources, promotion, power, recognition, control, kindness, respect, love, and more. My prediction was that, depending on the leader's dominant mental model, we would expect to see AMM leaders exhibit more of the following behaviors:

- Inspiring
- Sharing information
- Listening
- Protecting staff from abusive conditions
- Asking for resources for staff
- Delegating
- Sharing the limelight
- Keeping criticism to a minimum
- Giving high levels of praise
- Having faith in good outcomes
- Expressing compassion and kindness
- Thinking in the long term
- Encouraging creativity
- Acting locally but thinking globally
- Thinking about whole systems
- Learning
- Focusing on being, not only on doing and having (Adams, 2004, for last six items in list).

Scarcity-mentality leadership would exhibit the opposite of the above abundance behaviors. However, a leader can be realistic about the limitations of resources and still

have an abundance mental model based on optimism about alternative resources and the ability of the staff/organization to problem solve. An abundant leader does not pretend there are no problems or limits; the leader conveys the belief that the organization can meet the challenges successfully.

Levels of Analysis

I based my research on my underlying idea that abundance and scarcity orientations are found at all levels of a system: a person has a character-based orientation to abundance; a family has a family-wide orientation; entire organizations have an orientation in one direction or the other. Each element of the system is influenced by the other elements' abundance orientation. The following chart shows my proposed conceptual map of the confounded and embedded nature of these systems. This chart is my own construct.

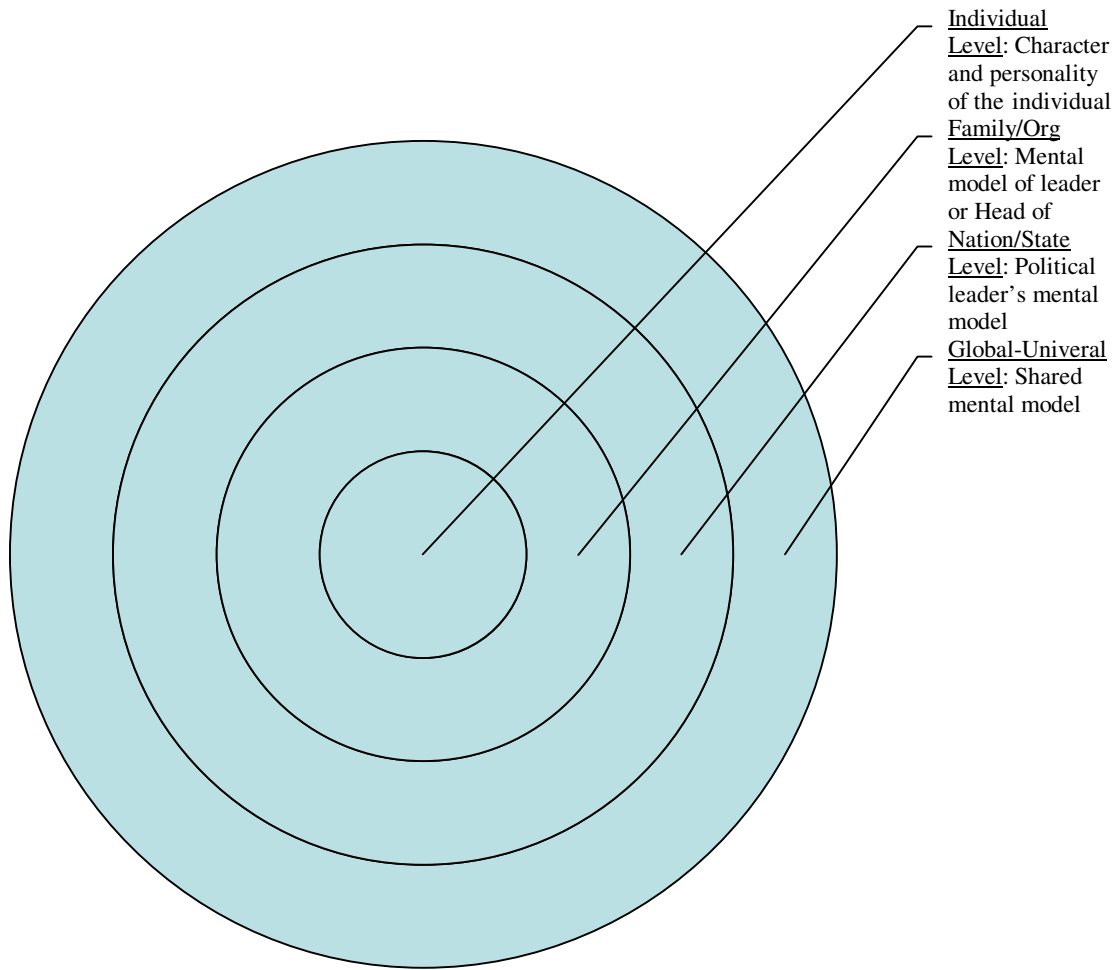


Figure 1. Embedded layers of mental models

The next chart further explicates the first level of analysis (individual) in which feelings, beliefs, and behaviors in individuals are found at either end of the abundance-scarcity spectrum. Each person sees the world and reacts to the world from a mental model. For example, a person might exhibit more courageous behavior on a more consistent basis than another person. Or a person might be prone to stating absolute truths

instead of adapting to individual situations. Where optimism and pessimism are surrogates for abundance and scarcity, we see that

When people confront adversity or difficulty in their lives, they experience a variety of emotions, ranging from excitement and eagerness, to anger, anxiety, and depression. The balance among these feelings appears to relate to people's degree of optimism or pessimism. (Scheier, Carver, & Bridges, 2001, p. 191)

Vroom's and Yetton's (1976) work on leadership decision making styles also supports the idea of a default reaction to the environment. When people have to choose among five decision-making styles in response to a leadership situation in a case, they tend to default to one or two types of decision-making styles instead of employing the full range.

I have constructed the following chart to show what might be predicted ranges of individual level behaviors. The two middle columns show an expected normal range of reactions to life's events. The outer columns show the extremes of each continuum of reactions. It would seem that individuals would thrive psychologically when they find balance and appropriateness between the two ends of the spectrum. For example, at times a scarcity reaction is appropriate, abundance at other times.

Table 1

Proposed Ends of the Scarcity-Abundance Continuum of Emotional Reactions

<i>Extreme</i>	<i>Scarcity</i>	<i>Abundance</i>	<i>Extreme</i>
Paranoia	Fear	Courage	Foolhardiness
Violence	Hate	Compassion	Self-Negation
Despair	Hopelessness	Hope	Fantasy or Delusion
Irreverence	Disrespect	Respect	Moral relativism; obsequiousness
“Isms” and oppression	Absolutes	Connection to detail, specificity of environment and anomalies	Lack of “big picture” thinking
Negativity	Pessimism	Optimism	Naïveté
Isolation	Solitariness/lack of sense of place in the universe	Faith	Fantasy or Illusion

John Adams (2004), in *The Meaning of Wealth*, develops a model with six dimensions to measure a person’s mental models in relation to wealth. Adams’ model provides additional language for this AMM study and is reflected in the behavior list created earlier in this document.

1. Time Orientation: Short-term to long-term
2. Focus of Responsiveness: Reactive to creative
3. Focus of Attention: Local to global
4. Prevailing logic: Separation to systems
5. Problem consideration: Blaming to learning
6. Life orientation: Doing/having to being.

In the next sections, I introduce concepts relevant to this research from the fields of psychology, organizational development, leadership, and economics and sustainability.

*Abundance and Scarcity Mental Models**Psychology*

This section examines the field of psychology and what insights it might provide for the study's questions about leadership styles and mental models. Although there is no psychology research specifically about abundance-scarcity mental models, the field does provide surrogates. The exploration of optimism and pessimism comes close to my proposed definitions of abundance and scarcity behaviors in leaders. The difference between optimism and abundance is subtle. At this point, one might conjecture that optimism could be one element of an abundance orientation. Intuitively, we might assume that those who see their personal life, organization, or the planet as inherently abundant probably have an optimistic attitude. But abundance orientation is broader than optimism.

Abundance mentality includes behaviors that indicate a lack of fear of scarce resources. Abundance behaviors such as sharing resources (e.g., making donations), believing that things will improve (e.g., seeing the glass as half-full), and creating community (e.g., reaching out to neighbors) indicate a faith in one's ability to do well without hoarding. These behaviors are not necessarily those of an optimist. One can be optimistic and not abundant, although I would conjecture that this is infrequent.

As the following section will show, positive thinking and optimism are heralded throughout the psychology literature as desirable attributes, ones that produce greater health, better relationships, and better managers. Much has been written about optimism, a character trait that seems to provide numerous benefits for people and is closely

correlated to the proposed abundance behaviors. Optimism is well defined by Seligman in his description of an optimist.

The optimists, who are confronted with the same hard knocks of this world, think about misfortune in the opposite way. They tend to believe defeat is just a temporary setback, that its causes are confined to this one case. The optimists believe defeat is not their fault: Circumstances, bad luck, or other people brought it about. (Seligman, 1990, pp. 4-5)

Optimism is that uncanny ability to see the best and assume the best of the moment and the future. Optimists place the locus of control in the appropriate place, the place that gives them the most hope and the ability to sustain energy and action.

In works such as *The Skills of Encouragement*, we hear the call to be positive:

The next time you are with a group of people, look for the encourager. He or she is the one whose arrival lights up the atmosphere, who circulates good news, who mobilizes the resources of each person, and who conveys that energy-giving optimism that raises the group “will” over the “won’t.” (Dinkmeyer & Losoncy, 1996, p. 1)

There is a significant body of literature similar to the Dinkmeyer and Losoncy book dedicated to the idea that you can become and should be an optimistic, encouraging person. The self-help books in this vein run into the hundreds. An online search on Amazon bookstore of “optimism” produced 605 results with titles such as *Optimism, Struggle and Growth* (Carriker & Farmer-Kaiser, 2002) and *The Road to Optimism: Change Your Language, Change Your Life* (Perry et al., 1996).

Given the desirability of optimistic behavior, there is extensive research on how it is manifested, its sources, and its opposite behavior, namely pessimism. Edward Chang’s (2001) edited book of articles covers a wide range of material on the subject of optimism and pessimism, giving a good history of research in this area. The first article covers the history and conceptual foundations of optimism and pessimism studies, beginning with Descartes up to James. The articles then go on to review the physical or biological factors

involved in a person's pessimism or optimism orientation and then the psychological factors and socio-cultural factors. For example, Scheier et al. (2001) state, "Optimism has also been studied in the context of adjusting to the diagnosis and treatment for cancer.... Optimism predicted not just lower initial distress, but also resilience to distress during the year following surgery" (p. 195).

Martin Seligman's work on optimism and pessimism marks a middle point in the last 80 years of research on this topic; it reflects the history of the field, but is also referenced in many works that follow. If we assume optimism is one important element of an abundance mentality, his work also provides a nice backdrop for a partial explanation of the psychological basis of abundance behavior. In Seligman's work one can see a launching point for explanations of why some people – and thus some leaders – see the world through a positive abundance mental model versus a negative scarcity mental model (Seligman, 1990). His work merits closer examination.

Seligman (1990) argues that there are three important ways people explain events, especially misfortune and good fortune. He calls these our habits of explanation. Depending where on the spectrum of each habit you land, this indicates your level of optimism or pessimism. The methods of explanation are permanence, pervasiveness, and personalization.

Permanence has to do with how persistent a person views a problem to be. "People who give up easily believe the causes of the bad events that happen to them are permanent: The bad events will persist, will always be there to affect their lives" (Seligman, 1990, p. 44). Optimistic people see negative circumstances as temporary and

thus surmountable; they do not surrender to hopelessness (a core aspect of pessimism). Optimistic people see positive events as more likely to persist.

The second habit is pervasiveness. “Pervasiveness is about space ... (Pessimists) catastrophize. When one thread of their lives snaps, the whole fabric unravels” (Seligman, 1990, p. 46). A person can see a problem as pervasive and widespread or discrete and contained. Seligman gives the example in a contrast of two sentences (p. 47):

“All teachers are unfair.”

“Professor Seligman is unfair.”

The first sentence creates a feeling that all teachers now, in the past, and into the future will be unfair. This in turn creates a sense of fatalism and hopelessness – a classic sign of a pessimist (Seligman, 1990). The latter sentence is an optimist’s view of the situation. It is only this professor at this moment who is unfair.

The third and final habit that indicates optimism or pessimism is personalization.

When bad things happen, we can blame ourselves (internalize) or we can blame other people or circumstances (externalize). People who blame themselves when they fail have low self-esteem as a consequence.... People who blame external events do not lose self-esteem when bad events strike. (Seligman, 1990, p. 49)

Seligman (1990) again gives some examples:

“I have no talent at poker.” (internal)

“I have no luck at poker.” (external)

Seligman says that personalization controls what we feel, while permanence and pervasiveness control what we do. It is easy to give personalization too much credit for influencing our optimism/pessimism. “Personalization is the only dimension simple to fake. If I tell you to talk about your troubles in an external way now, you will be able to do it” (Seligman, 1990, p. 50). It is harder to switch from seeing things as all pervasive

and permanent to seeing them as bounded and time-limited than to depersonalize sources of events (Seligman, 1990).

Pessimism is the view that what can go wrong will go wrong consistently over an extended period of time. Pessimists do not imagine an oasis as they trek across a desert. They are certain that every lump is cancer, all people are of ill-will, and no good shall come of it, no matter what the “it” is. To some extent, pessimism correlates to a scarcity mentality but, like abundance and optimism, it is not a one-for-one match.

Pessimism, in moderation, serves a crucial role for human beings. Seligman describes pessimism’s constructive role in our lives. “Pessimism serves the purpose of pulling us back a bit from the risky exaggerations of our optimism, making us think twice, keeping us from making rash, foolhardy gestures” (Seligman, 1990, p. 114). He makes the important argument that pessimism is fully merited at times, such as when there is great danger involved. Pessimism makes us more risk averse and better at realistically calculating the costs of a decision.

Other authors have built on Seligman’s work and there is a robust body of material on optimism and pessimism. One author in this area, Susan Vaughan, a psychiatrist, focuses on the individual’s internal source of optimism. Her argument is that our ability to control feelings without squashing the feelings gives us the capacity for an optimistic view (Vaughan, 2000).

Vaughan says that optimism depends on the ability to construct and sustain the illusion of ‘an island’ (a positive end state coming in the near future); optimism is the result of an internal process of illusion building. For example, a person who is

undergoing chemotherapy is able to imagine a point in the future when they will be healthy again.

She makes an intriguing argument that being overly connected to reality leads to depression. Vaughan (2000) feels that if we knew the odds against us or the odds of future difficulties, we would be depressed. As an optimist, I found it disheartening to think that reality is so depressing. As a Buddhist, the thought of ongoing future challenges, ups and downs, seems to be just the natural state of being human, neither positive or negative.

Vaughan (2000) adds some other nuances to Seligman's work. She points out that optimists persevere. This part of Vaughan's work reminded me of a Marge Piercy poem, "To Be of Use," whose opening stanza so clearly defines the persistence of an optimist:

The people I love the best
jump into work head first
without dallying in the shallows
and swim off with sure strokes almost out of sight.
They seem to become natives of that element,
The black sleek heads of seals
Bouncing like half-submerged balls. (Piercy, 1991, p. 172)

Vaughan (2000) argues that the beacon of hope an optimist maintains must be internal, not just external since our lens filters reality. Optimism comes from an internal sense of control over our own inner states. This argument is slightly different than Seligman (1990) who argues that optimism comes from how we make sense of external events.

On a broader sociological and political tack, Paulo Freire's view of optimism is nicely elucidated in Rossatto's (2005) work, *Engaging Paulo Freire's Pedagogy of Possibility: From Blind to Transformative Optimism*. The book is a study of how people experience schooling in relation to their sense of time and optimism. It is important to remember that Freire is always interested in how political and social systems oppress people's consciousness, so his work is less internally focused and more concerned with how an individual can overcome external oppression.

Freire has four categories of optimism: blind, fatalistic, resilient, and transformative (Rossatto, 2005). I share two definitions here that exemplify his work. "Blind optimism is a naïve embracement of meritocratic ideologies. It indicates a state of oblivion that prevents consciousness of self-determination and collective action or struggle" (p. 24). And, transformative optimism, Rossato says,

Is an expression of a deep sense of emancipatory hope; the transformative optimist does not merely hope for or believe in the opportunity for emancipation from hegemonic and repressive socioeconomic structures, but indeed sees himself or herself as a necessary and viable participant in the collective process of social change. The transformative optimist not only hopes for the best possible outcomes, but sees himself or herself as a vital instrument in the realization of those outcomes. (p. 81)

Freire's political tone comes through so clearly here. His focus on our reaction to social structures and how we work within, around or against them is the backdrop for his discussion of optimism.

On a less political note, lay psychology is replete with references to abundance, with spokesmen like Wayne Dyer and Laurence Boldt. The underlying theme of these authors' work is that abundance is available to anyone if you are willing to work on your consciousness. This raises an ancillary question of whether an abundant mental model is

more evolved than a scarcity one. This study does not address this question but it could be addressed in future research.

Consequently, abundance, with its absence of limits and boundaries, is the very watchword of the universe. It applies to us as much as it does to everything else in the One song. We should be conscious of abundance and prosperity and not make scarcity the cornerstone of our lives.

If we have a scarcity mentality, it means that we believe in scarcity, that we evaluate our life in terms of its lacks.... The first step toward discarding a scarcity mentality involves giving thanks for everything that you are and everything that you have. (Dyer, 1990, p.1)

Lawrence Boldt writes in a similar vein:

To live in abundance is to be fully alive, free of any sense of lack or desperation. ... The art of abundance is not the art of making money, but the art of knowing how to live. This knowing how to live is the essence of what I call the 'Tao of Abundance.' The Tao of Abundance is not a 'get rich quick' or 'think your way to riches' approach to prosperity. It does not encourage you 'think like a millionaire,' 'dress for success,' or 'climb the corporate ladder.' It speaks to a deeper experience of abundance than can be realized by the mere accumulation of goods or by amassing an impressive balance sheet. Applying the eight principles discussed in The Tao of Abundance may, in time, bring greater material abundance into your life. (Boldt, 2005, para. 4-6)

Despite the current faddishness of this material, the lay psychology material, although often focused on material goods, can help people move from a scarcity to an abundance mental model.

In summary, psychology gives a strong foundation, via research on optimism and pessimism, on which to build a model of leadership abundance and scarcity behaviors. The investigation of the internal management of external realities bears directly on how a leader does this for his or her organization and staff. Optimism and pessimism behaviors come close to modeling the predicted leadership behaviors.

Organizational Development

Given the copious material in psychology on optimism/pessimism (which are close relatives of abundance and scarcity), and given that psychology is one of the two founding fields of organizational behavior, the other being sociology, I expected to find some material on abundance or scarcity in organizational behavior/development (OD). This was not the case.

OD uses the terms abundance and scarcity in strategic planning texts and in relatively few other places. The terms are used to analyze the environment and are best represented in the work of authors like Michael Porter (1980). Porter's work is based on the assumption that an organization is an open system that is affected by its external environment, as well as being a system that can change the external environment to some extent. Given the interaction between external and internal environments, an organization needs to proactively scan and respond to changes in its environment (Mintzberg, 1994).

Strategic planning texts suggest scanning the environment to see if it is resource rich or resource scarce. In turn, organizations adjust their strategies to adapt to the environmental resource level or decide to go into new environments. This strategic literature is not directly related to the core question of this study.

Moving away from strategic planning texts, the leadership literature, a robust area in OD, provides no answer to my original questions. I asked Richard Hackman, an authority in the field of motivation, organization development, and teams, who teaches at Harvard University, if he had ever encountered the terms "abundance" or "scarcity" in any depth in the leadership literature. His answer was a resounding, "No" (R. Hackman,

personal communication, September 12, 2005). However, there are a few minor pieces worth a look.

Stephen Covey (2004), the guru of effective habits, wrote a brief two-page piece on “primary greatness” which is one of the only texts that actually ties abundance to leadership. Covey has a pop psychology style that saves itself from platitudes by being grounded in a deeply compassionate human ethic, and this style comes through in this small but pithy piece. Covey argues that “primary greatness,” the deepest and most sustainable form of greatness, is based on three personality traits: integrity, maturity, and abundance mentality. The last is of interest here.

Covey’s (2004) definition of “abundance mentality” provides an excellent description of the behaviors this chapter has been exploring and ones this study measured.

Most people are deeply scripted in the scarcity mentality. They see life as a finite pie: If someone gets a big piece of pie, it means less for everyone else – and most importantly, for them. Our thinking should be that there is plenty out there for everybody. This abundance mentality flows out of a deep sense of personal worth and security. It results in sharing recognition, profits and responsibility. It opens up and creates new options and alternatives. It turns personal joy and fulfillment outward. It recognizes unlimited possibilities for positive interactions, growth and development. (p. 219)

Covey (1999) also suggests that a combination of humility, courage and integrity produces wisdom and abundance mentality. Covey goes on to suggest the source of the “scarcity mentality” so many people have.

I think the reason why so many people buy into the scarcity mind-set is because they grow up with conditional love. Love makes the world go round, and if from early childhood your feelings of worth and acceptance come from comparison and competition, the scarcity mind-set is wired into you. (p. 13)

Here Covey is skating on thin theoretical ice because of his focus on nurture alone. Seligman and others would argue that two children from the same household can

have different pessimism and optimism orientations. In psychology, the hypothesized sources of these behaviors are both nature and nurture (Seligman, 1990). Covey's argument that abundance mentality comes only from the nurture side of the equation goes against a substantial body of psychology research.

Psychology and organization development, with their foci on individuals and organizations, give us the glimmers of abundance-scarcity theory but it is never fully developed. We see the possibility of constructing a framework that would include a measure of the leader's attitudes and behaviors associated with these mental models.

Leadership

This study focused on a leader's abundance mental model, based on the assumption that the leader has a special role and impact on those around her, and thus a review of leadership research and literature helps support this assumption.

Leadership occupies a significant part of the American psyche and thus, since the mid-1900s, a significant part of the management literature, and yet researchers still wonder if leadership matters.

The studies ... in this article would leave readers in little doubt that leaders do matter – to their organizations and to their followers – they do make a difference. ... (The articles) frequently point to the capacity of many leaders to overcome obstacles and to elevate their followers to higher levels of commitment. (Bryman, 2004, p. 761)

Daw's (1996) dissertation chapter on leadership provides a thorough review of the major strands of thinking around leadership and highlights how much attention the topic has received.

The flow of words [about leadership] has continued unabated ever since [ancient times], leading Burns to comment that leadership is "one of the most observed and least understood phenomenon on earth."... At the publication of his influential tome in 1978 it was still possible for Burns to write that despite an

“immense reservoir of data and analyses and theories ... no central concept or general theory has emerged” (Daw, 1996, p. 13).

Wielkiewicz and Stelzner (2005) summarize the competing values represented in leadership literature that contribute to a robust conversation:

Many contrasting sets of competing values appear in the leadership literature: transactional versus transformational leadership (Pearce & Sims, 2002), democratic versus autocratic leadership (Gastil, 1994), loose versus tight styles of positional leadership (Sagie, 1997), organic versus mechanistic systems (Courtright, Fairhurst, and Rogers, 1989), exploration versus exploitation (March, 1991), individual versus relationship orientation (Rost, 1997), open versus closed leadership processes (Allen et al., 1998), and the paradoxical roles of organizational cultures as both stabilizing forces and forces for change (Schein, 1992). (Wielkiewicz & Stelzner, 2005, p. 331)

At this point in time, two major spectra that explain leadership behavior have evolved: (a) situational leadership versus trait-based leadership and (b) transactional versus transformational leadership. Although both spectra are similar to one another there are subtle differences. Situational leaders adapt their leadership style to the situation at hand, reading the characteristics of the situation to determine whether to be authoritarian or consensus-driven or to use another form of leadership. Transactional leaders use rewards and punishments to elicit the desired behavior to move the organization forward. Pay, time off, bonuses, and other rewards are typical methods of motivation with a transactional leader. In a transactional interaction the leader is promoting a simple exchange. A reward is given for a specific performance. The leader is meeting (and possibly exceeding) the material needs of the followers in return for their cooperation.

Transformational and trait-based leadership have the strongest overlap but are not necessarily a one-to-one match. Both look at the leader's character and traits but transformational leadership is universally seen as a positive uplifting of the employees and organizations to higher order behaviors.

Transformational leadership, which is (in Burns' original formulation) built on the mutual elevation of the leader and the followers' needs up the scale of Maslow's hierarchy of needs (Maslow, 1954). Both the leader and the led are transformed by the experience. (Daw, 1996, p. 17)

Transformational leaders are often visionary and inspiring or charismatic.

Charismatic leaders are those who develop and implement a vision that generates follower enthusiasm by presenting novel ideas or solutions, identifying new opportunities in the environment, delineating a better future for dissatisfied followers, and connecting followers' needs to greater values, goals, or meanings (Cha & Edmondson, 2006, p. 62) .

A trait-based leader is not necessarily positive and might use negative traits such as anger to lead and control, not just positive traits. These different types of leadership behaviors are not mutually exclusive. A transformational leader can use transactional methods when needed.

The following table highlights the differences between situational and trait-based leadership theories on key factors.

Table 2

Key Factors in Two Primary Explanations for Leadership Behavior

	Situational Leadership	Trait-Based Leadership
Source of Aptitude	Learned	Innate
Portability	Adaptable	Fixed
Point of Effectiveness	Context-Specific	Transcendent of context
Channel	Instrumental, Transactional	Symbolic, Transformational
Sources of Power	Skills, Position, Effectiveness	Charisma, Position
Risks		Cult of personality
Measures of Effectiveness	Fairness, Honesty	Social change; Meeting higher order needs of subordinates; Liberty; Equality
Key Authors	Vroom, Blanchard,	Machiavelli (to some extent), DePree, Bass, Greenleaf

Note. Adapted from “Leadership and Decision Making,” by V. Vroom & P. Yetton, 1976, Pittsburgh: University of Pittsburgh Press; and from “Creating a Transformational Environment in a Public Senior College,” by C. D. Daw, 1996. *Dissertation Abstracts International*, 57(3), 941A.

Another summary of the leadership literature is provided by Pearce and Sims

(2002) in the following table:

Table 3

Theoretical Bases and Representative Behaviors of Five Types of Leader Behavior

Leader Type	Theoretical Bases	Representative Behaviors
Aversive	<ul style="list-style-type: none"> • Punishment research (e.g. Arvey & Ivancevitch, 1980) 	<ul style="list-style-type: none"> • Engaging in intimidation • Dispensing reprimands
Directive	<ul style="list-style-type: none"> • Theory X management (McGregor, 1960) • Initiating structure behavior from Ohio State studies (e.g. Fleishman, 1953) • Task oriented behavior from Michigan studies (e.g. Bass, 1967) 	<ul style="list-style-type: none"> • Issuing instructions and commands • Assigning goals
Transactional	<ul style="list-style-type: none"> • Expectancy theory (e.g. Vroom, 1964) • Equity theory (e.g. Adams, 1963) • Path goal theory (e.g. House, 1971) • Exchange theory (e.g. Homans, 1958) 	<ul style="list-style-type: none"> • Providing personal rewards • Providing material rewards • Managing by exception (active) • Managing by exception (passive)
Transformational	<ul style="list-style-type: none"> • Sociology of charisma (e.g. Weber, 1946, 1947) • Charismatic leadership (e.g. House, 1977) • Transforming leadership (e.g. Burns, 1978) • Transformational leadership (e.g. Bass, 1985) 	<ul style="list-style-type: none"> • Providing visions • Expressing idealism • Using inspirational communication • Having high performance expectations
Empowering	<ul style="list-style-type: none"> • Behavioral self-management (e.g. Thorenson & Mahoney, 1974) • Social cognitive theory (e.g. Bandura, 1986) • Cognitive behavior modification (e.g. Meichenbaum, 1977) • Participative goal setting (e.g. Locke and Latham, 1990) 	<ul style="list-style-type: none"> • Encouraging independent action • Encouraging opportunity thinking • Encouraging teamwork • Encouraging self-development • Participative goal setting • Encouraging self-reward

Note. From “Vertical Versus Shared Leadership as Predictors of the Effectiveness of Change Management Teams: An Examination of Aversive, Directive, Transactional, Transformational, and Empowering Leader Behaviors,” by L. Pearce & J. H. Sims, 2002, *Group Dynamics: Theory, Research, and practice*, 6(2), 173.

Recent leadership research has asked more nuanced questions about leadership behavior as well as taking into account the open systems nature of organizations, acknowledging that the leader is one of many elements affecting subordinates' experience and effectiveness. The organizational culture, comprised of its history, industry, financing streams, labor market, and more, affects the leader's ability to lead and whether the leader's style will be a good fit with the organization.

Researchers have also become interested in how leadership behaviors and environment interact. Research is moving toward a blended understanding of leadership – trait and situation matter but so do the larger organizational system and context. Several recent articles are of interest in both these areas – blended models and ecological perspectives.

In *Petty Tyranny in Organizations*, Ashforth (1994) examines what provokes tyranny, defines tyrannical behaviors, and looks at individual predispositions and situational factors that produce tyrannical behavior. According to Ashforth, a tyrant “is one who lords his or her power over others” (p. 755). A tyrant arises when she has individual predispositions in the following areas: beliefs about the organization (bureaucratic orientation), beliefs about subordinates (theory x), beliefs about self (low self-confidence), and preferences for action (construct of directiveness).

These individual predispositions combine with situational factors to produce tyrannical behavior. Situational factors include: (a) macro-level factors (organizational values and norms conducive to tyranny – mechanistic and entrepreneurial organizations), (b) micro-level factors (powerlessness, over-control, too much power), and (c) stressors.

Ashforth notes that there are five effects of tyranny on employees:

1. Leader endorsement;
2. Frustration, stress, and reactance;
3. Helplessness and work alienation;
4. Self-esteem and performance;
5. Work unit cohesiveness. (Ashforth, 1994, p. 766)

In Ashforth's work we see the recognition that it is not sufficient to blame tyrannical behavior on traits alone. The organizational factors must exist that combine with the traits to elicit the behavior.

In the popular press, transformational leadership still holds a great deal of appeal. Bolman and Deal (1995) and Collins (2001) continue the focus on transformational leadership. Bolman and Deal (1995) lay out a prescription for bringing spirit and élan into the workplace. "Leaders with soul bring spirit to organizations" (p. 10). They write about reconnecting to a whole part of ourselves, transcendent of science and materialism. According to Bolman and Deal, leaders should help employees transcend fear, engage in dialogue, and have an increased sense of community.

Collins' tone is similar with a focus on how the leader can make a company great but he encourages more of a tough love transformational stance (Collins, 2001). He creates his classic "hedgehog" concept – "the good-to-great companies are more like hedgehogs – simple, dowdy creatures that know 'one big thing' and stick to it" (p. 118). Collins says that disciplined people (or leaders) "get the right people on the bus, the wrong people off the bus" (p. 127), use disciplined thought and disciplined action.

Researchers continue to raise the problems inherent in transformational leadership. Cha and Edmondson (2006) argue that charismatic leadership can backfire

when the leader's walk does not match the talk. They call the process of disenchantment "hypocrisy attribution dynamic." "We define disenchantment as a transition in which feelings of isolation – a particular blend of disappointment and anger emotions – and loss of trust in the leader have undermined enthusiasm generated earlier by the leader's emphasis on organizational values" (Cha & Edmondson, 2006, p. 60). Analysis showed "sent values" (articulated by leader) and "expanded values" (those described by employees) did not match, resulting in incongruence in the psychological contract between the leader and the employees (p. 61). This dynamic is moderated by value expansion, organizational tenure, and perceived benefit/harm. "Value expansion may be a double edged sword – heightening followers' experience of meaning at work but also increasing the risk of subsequent disenchantment" (p. 57).

Other researchers are incorporating ecological and systems approaches into their studies of leadership. In their article, *An Ecological Perspective on Leadership Theory, Research, and Practice*, which is a superb example of this type of analysis, Wielkiewicz and Stelzner (2005) argue for a new view of leadership – the ecological view – to replace the old industrial view. The authors emphasize a need to balance the industrial view of leadership (control and individual focused) with the ecological view (leadership as an emergent process with many participants).

The industrial mental model is "a perspective that emphasizes the preeminence of leaders and the machine-like qualities of organizations" (Wielkiewicz & Stelzner, 2005, p. 326). The ecological mental model has four principles: interdependence, open systems and feedback loops, cycling of resources, and adaptation. The "ecological side of the

tension sees organizations as complex systems in which an infinite number of variables, including positional leader behaviors, influence adaptation” (p. 327).

The authors articulate six premises about leadership:

Premise 1: Leadership is an emergent process.

Premise 2: “The cognitive task of adaptive organization members is to optimize the tension between the ‘old school’/industrial perspective and the ‘new school’/ecological perspective. This premise argues that a balance between the industrial perspective and the ecological perspective is necessary for effective adaptation” (Wielkiewicz & Stelzner, 2005, p. 331).

Premise 3: Leadership occurs in a web of interdependent social and biological systems (p. 332).

Premise 4: Adaptability is determined by the richness and variability of feedback loops allowed to influence leadership processes.

Premise 5: A tension exists between a need for human and social diversity within the organization and single-minded pursuit of common goals and objectives.

Premise 6. Leadership processes need to be evaluated in terms of how adaptively an organization responds to its long-term challenges (p. 335).

Out of the four theoretical areas reviewed for this study, the literature on leadership provides the richest source of ideas and behaviors for the research. The transformational-transactional behaviors make sense to explore in light of abundance and scarcity mental models.

Issues regarding leadership research.

As in the leadership models, there are also different approaches to conducting leadership research. The struggle to balance qualitative and quantitative research, as well as to build on past work, continues.

Bass, in his role as the new editor of the second edition of the *Handbook*, wrote that he felt a significant portion of this failure was attributable to the failure of researchers to work theoretically. The desire to investigate only those elements of leadership which could be measured empirically had limited leadership studies to relatively trivial matters which could be easily sampled and measured. (Daw, 1996, p. 16)

Alan Bryman (2004) in “Qualitative Research on Leadership: A Critical but Appreciative Review” does an excellent job reviewing the history of leadership research with a special focus on the dilemmas of using qualitative research. He

Reviews a large number of articles that derive from qualitative research on leadership that were published prior to 2004 in peer-reviewed journals. The article then goes on to examine critically but appreciatively the ways in which qualitative research on leadership is and is not distinctive. (Bryman, 2004, p. 729)

Bryman (2004) points out that leadership research is more optimistic now and there is more methodological diversity than in 1970s and 1980s. In the 70s some authors thought the concept of leadership did not help explain organizational behavior. Now leadership research is more “confident, self-assured, and fertile.” This has come about because of “better measurement techniques, more meta-analysis, and interest in charismatic/transformational leadership” (pp. 730-731).

Pettigrew’s 1979 article, a mere 30 years ago, is the first leadership article to include qualitative research (Bryman, 2004; Pettigrew, 1979). Bryman points out that a few key trends changed this antipathy toward qualitative research:

- In the late 1980s, there was an increased interest in organizational symbolism;

- *Leadership Quarterly* starts in 1990 and has a section called “Qualitative Methods;”
- The credibility of peer-reviewed articles helps qualitative research use grow. (Bryman, 2004, p. 749)

Quantitative and qualitative leadership research studies have differences that are worth noting in evaluating which techniques to use. Quantitative research is linear; compares samples for similarities or differences; has inputs and outputs, and looks at more levels of leadership. It tends to focus on charismatic behaviors and is more cumulative, building on prior studies.

Qualitative research emphasizes context – it explores the deeper meanings and nuances of leader behavior – how leadership styles respond to different settings, and it has a tendency to focus on senior leaders. It focuses on more mundane behaviors in addition to the charismatic focus of quantitative research, e.g. ability to get resources, the need for good communication and trust, and how leaders draw on subordinates’ values, beliefs and recycle them back (Bryman, 2004; Gronn, 1999).

In the next section, I explore how the fields of economics and sustainability provide additional language and concepts for the exploration of abundance mental models in leaders.

Economics and Sustainability

*Now in the people
that were meant to be green,
there is no more life of any kind.
There is only shriveled barrenness.*

*The winds are burdened
by the utterly awful stink of evil,
selfish goings-on.*

*Thunderstorms menace.
The air belches out*

the filthy uncleanliness of the people.

*There pours forth an unnatural,
a loathsome darkness,
that withers the green,
and wizens the fruit
that was to serve as food for the people.*

*Sometimes this layer of air
is full,
full of a fog that is the source
of many destructive and barren creatures,
that destroy and damage the earth,
rendering it incapable
of sustaining humanity.*

Excerpt from “Meditations with Hildegard of Bingen” (Uhlein, 1983).

The topics of economics and sustainability generate more discussion about scarcity and abundance from a broader vantage point than psychology and organizational development. Economics and sustainability work at the global level (see Figure 1). Economics, since Malthus’s (1797/1993) chapter on population, has included a strong focus on issues of abundance and scarcity, especially the balance between what has been traditionally defined as progress versus the limitation of the planet’s resources to support both human population growth and the growth of per capita consumption (Malthus, 1797/1993).

Thomas Robert Malthus’ (1797/1993) work on population growth was an unintended sentinel piece for the field of sustainability. He posed the fundamental problem for humankind – if we keep growing and utilizing the earth’s resources, at some point the populations’ needs will outstrip the earth’s capacity to provide. Since then many writers and scientists have taken up this essential problem.

The significance of Thomas Robert Malthus' work was not in his solution to the problem of natural resource scarcity, but in the manner that he framed the problem. Because Malthus discussed the dynamics of population growth and the limitations of the earth's resources, social scientists had to acknowledge that the problem of mankind's survival on a fixed, limited, and delicate environmental base was critical, particularly in view of the growing population and expanding industry. (Finnin, 1979, p. 108)

The concept of sustainability was created to meet this challenge. Sustainability research is focused on the earth's capacity to meet the needs of human beings without destroying the delicate balance and interactions that keep the earth's ecosystem functioning, while sustaining the quality of choices for future generations. In the late 1950s and early 1960s, economists, and then environmentalists and others, turned their attention to understanding, proving, and discussing Malthus's work. One of the primary catalysts of this revived and heated dialogue was Rachel Carson's 1962 book, *Silent Spring*, which is mentioned in the academic conference proceedings and essays around that time.

The clear decline in the quality and quantity of the world's natural resources continues to push theorists to examine the implications of human consumption and economics. "To the Malthusian all solutions will eventually require a less wasteful, more rational use of our finite resources" (Finnin, 1979, p. 3). And, in *The Morality of Scarcity*, a collection of lectures given in 1976-1977, the topics on scarcity range from the American health care system to foreign policy – covering a wide range of human activities (Finnin, 1979).

Once the concern about achieving a dynamic and sustainable global balance took root in the sciences, the very definition of progress was and continues to be called into question. What constitutes abundance? What constitutes progress and when is enough enough? Bookchin (1971) makes a lengthy but eloquent argument for a new conception

of progress, questioning capitalism's materialism and its negative effect on individuals and communities.

For one thing, scarcity is more than a condition of scarce resources: the word, if it is to mean anything in human terms, must encompass the social relations and cultural apparatus that foster insecurity in the psyche. In organic societies this insecurity may be a function of the oppressive limits established by a precarious natural world; in a hierarchical society it is a function of the repressive limits established by an exploitative class structure. By the same token, the word "post-scarcity" means fundamentally more than a mere abundance of the means of life: it decidedly includes the *kind* of life these means support. The human relationships and psyche of the individual in a post-scarcity society must fully reflect the freedom, security and self-expression that this abundance makes possible. Post-scarcity society, in short, is the fulfillment of the social and cultural potentialities latent in a technology of abundance. (p. 11)

Here Bookchin is arguing that a post-scarcity society is not about having more material goods, but about using our technological advances to create a quality of life (psychological, communal, spiritual) that is abundant.

There is an alternative view of economic abundance, seen less in the academic environment and more in popular literature that suggests that material abundance is inherently good and overlooks the high cost of excessive abundance to the planet and human culture. One such example is a brief article by John Keeble (2001), a financial planner, in which he states,

The abundance mentality holds that wealth is being created all the time by free people who are highly motivated. Whenever a person achieves or acquires something, it causes more wealth and more prosperity for more people. The free enterprise system of the United States has generated more wealth and abundance for more people than any system in history and has created the best system for distributing it fairly, although that system certainly can and should be improved. (Abstract)

There are several problems with the above argument. First is a naiveté about the "fairness" of the U.S. system of distribution which has been called into question by

hundreds of writers and researchers ranging from Malcolm X (X & Haley, 1973) to Jonathan Kozol (1991).

A third problem with Keeble's definition is an unawareness of the corollary social costs of material abundance. When a culture has grown accustomed to having all its wants (versus needs) filled, to wanting more than it needs, and to learning to have new wants met on a regular basis, the end result is degradation of the system's sustainability. There is also a real human cost to many of the means of production. Unregulated factories with child labor or harsh conditions in less developed countries that produce the goods for more developed countries have a real cost for all of us. In addition, the disposable trinkets, like those given out by McDonald's to children, ultimately end up degrading the environment in landfills around the country.

Keeble's work so clearly highlights the importance of defining "enough" for an individual. If "enough" is dramatically more than a person needs and is gained through systems that damage the ecology, then "enough" can only result in degradation of the environment.

Overall, economists and sustainability theorists are now struggling with ways to manage the impact of capitalism, industrialism, and materialism. Fricker (1998) says,

Stripped of its finery economics is about how we exchange our surpluses, whereas as a science it has somehow been transformed into an economics of scarcity where everything is expressed in monetary terms.... The third party to an economic transaction is the earth, the Great Mother ... We have created the shadow of scarcity, the polar shadow of which is greed. This is fuelled by the dominant world mental model based on rationality and self-interest. We have conveniently forgotten the paradox of cooperation. *Rational, self-interested individuals will not act to achieve the common or group interests.* Fortunately we are not always rational and will cooperate when we really come to know and trust each other and have the power and resources to implement solutions. This is a foundation to an economics of abundance - of labour, goodwill, and renewable resources, even though the latter now occupies a tenuous position. Alternative

world views are emerging to facilitate the change in mind set, from George Soros through Richard Douthwaite to Ken Wilber. (Abstract)

Other theorists echo this call to integrate theories and practice to move toward real change.

It is quite clear that actions are firmly, if subliminally, grounded in theories of ecology and evolution, economics and free markets, and social and institutional dynamics. These theories have been developed in separate disciplines with distinctive habits of mind. Each set of theories can point to remarkable successes within its own domain. Each set of theories is necessary, yet insufficient, to develop a theory of sustainability. Academics encounter many incentives to maintain the purity of the disciplines, and few incentives for integration, yet integration is essential to solve the sustainability problem. (Gunderson & Holling, 2001, p. 124)

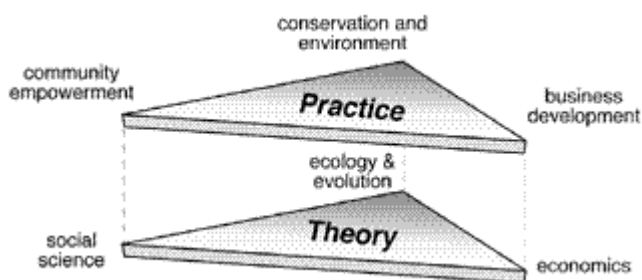


Figure 2. Relationship of practice to theory in sustainability

Note. From "Panarchy: Understanding Transformation in Human and Natural Systems," by L. H. Gunderson & C. S. Holling, 2001, p. 124. Washington, DC: Island Press.

Paul Hawken's (1993) clear and cogent work, *Ecology of Commerce*, represents one of the best syntheses of ecology and economics through a sustainability lens. It is a clear response to Malthus' challenge, and to some extent the challenge posed by Marx and Engels (Tucker, 1972). Hawken's (1993) writing has the wonderful and rare mix of depth, elegance, and accessibility. Without bashing free market economies wholesale,

Hawken articulates the problems that have arisen over the last 100 years as a result of those economies and calls us to rethink our core definitions of success.

His work begins with a laying out of the problem. “We have reached an unsettling and portentous turning point in industrial civilization” (Hawken, 1993, p. 1). Hawken lays out the usual grim statistics of industry’s impact on the earth’s ecosystem:

5.5 billion people are breeding exponentially... We know we have decimated ninety-seven percent of the ancient forests in North America; the Ogalala Aquifer ... will dry up within thirty to forty years at present rates of extraction ... Businesspeople must either dedicate themselves to transforming commerce to a restorative undertaking, or march society to the undertaker. (p. xi)

He argues that corporations are the dominant form of organization on the planet and so we must fundamentally rethink what the purpose of business is. In the very first chapter he lays out a quiet but powerful vision for what business could accomplish.

The promise of business is not, or should not be, simply to make money. Nor is it merely a system of making and selling things. The promise of business is to increase the general well-being of humankind through service, a creative invention and ethical philosophy. (p. 1)

Hawken (1993) notes that “rather than a management problem, we have a design problem, a flaw that runs through all business” (p. xiii). He points out that most businesses are designed to maximize profits without taking into account the real costs to the environment and society as a whole.

To create an enduring society, we will need a system of commerce and production where each and every act is inherently sustainable and restorative. Business will need to integrate economic, biologic, and human systems to create a sustainable method of commerce. (p. xiv)

He proposes a fundamental mental model shift where “more and faster” are not the measurements of organizational success. Restorative and in-balance become the guides.

Hawken (1993) is above all practical and concrete and to that end he proposes eight objectives:

1. Reduce absolute consumption of energy and natural resources in the North by 80% within the next half century.
2. Provide secure, stable, and meaningful employment for people everywhere.
3. Be self-actuating as opposed to regulated or morally mandated.
4. Honor market principles.
5. Be more rewarding than our present way of life.
6. Exceed sustainability by restoring degraded habitats and ecosystems to their fullest biological capacity.
7. Rely on current income.
8. Be fun and engaging. (pp. xiv-xvi)

In the final analysis, Hawken asks us to rethink our underlying mental models about business, about wants and needs, and about success.

John Adams' (2000) work, *Thinking Today as if Tomorrow Mattered*, is an excellent complement to Hawken's work. Adams enhances the spiritual elements of Hawken's work and suggests that a deeper consciousness, a new consciousness, is required. He first echoes Hawken's call for organizations and individuals to take action.

And today, financial enterprise has become the dominant institution all over the world. The church took responsibility when it was dominant; the state took responsibility when it was dominant, and now there is really nobody taking responsibility for the whole, which is now the eco-system of the planet. (p. 98)

Adams (2000) then takes the systems view of the situation. He notes that it is "normal" in a system for extreme views to appear before a breakthrough to a new way of thinking and being takes hold. "As environmentalist groups become stronger and more vocal, so too do militia groups.... Behavior patterns seem to be polarizing and becoming more extreme in every walk of life" (p. 156). In these extremes, Adams, clearly an optimist, sees "the seeds of a successful way ahead."

Adams (2000), based on the work of Paul Ray, Ken Wilber, and even Einstein, argues that a new group of people, the “Cultural Creatives” (p. 158), are emerging and will help take the planet in a whole new direction. According to Ray (1996), this kind of sea change occurs only once or twice every thousand years. This group of people will help design and introduce a new way of structuring our economy and our interaction with the planet. Ray’s Cultural Creatives have a parallel in Richard Dawkins’ (1990) memes. Memes are ideas that move through and change a culture, similar to physical characteristics that survive and spread through generations of a species.

In summary, economics and sustainability offer innumerable examples of scarcity and abundance ideas, issues, and system characteristics. The field’s underlying dilemma, so beautifully articulated in Malthus’ chapter over 200 years ago, has not been solved. It is more completely understood; yet, the movement toward a recovered environment, not just the sustaining of the currently degraded environment, has barely begun. The field of sustainability calls into question the fundamental architecture of our social systems and economic structures such as capitalism.

The struggle for the research was to utilize these economics and sustainability ideas in relation to an individual leader. There is a possibly elegant connection or parallel between the world’s need to shift core mental models and structures and the leader’s need to do the same in the microcosm of his or her organization. If sustainable abundance mental models are inherently healthier for the organization and its staff, how does abundance avoid degrading the organizational eco-system? Is a leadership mental model of sustainability a better base for leadership behaviors? These questions could be answered with further research.

The strength of the abundance and scarcity concepts found in economics and sustainability is not yet mirrored in organizational development and leadership studies. There is great potential for exploring this area in the hopes that it will improve leadership and thus organizational cultures, staff morale, and productivity.

Conclusion

After review of several significant bodies of literature – psychology, organizational development, leadership, and economics and sustainability – the questions that this study tackled remain unanswered:

- Which leadership behaviors indicate the degree to which a leader uses an abundance mental model versus a scarcity mental model?
- Is there a consistent connection between a leader's abundance mental model (AMM) and a positive work experience for those under their supervision?

The literature review explores fields that help define the key words and concepts in the questions, and it shows glimmers of answers in the fields explored. Psychology points to optimism, leadership to transformational behavior, and economics and sustainability to concepts of balance. None of the fields provides an explicit set of tools or conceptual models that parallels this study's questions; yet, the reviewed fields provide ideas that formed some of the questions asked in the research.

In the end, a scarcity-abundance lexicon and tool kit might also encourage business leaders to rethink the underlying structures of the economy, their organizations, and the affect of both on the planet's gorgeous and fragile eco-system.

Chapter 3: Methodology

The research was done in three phases using a mixed methods approach (Creswell, 2003, p. 20): (a) generation of abundance and scarcity leadership behaviors and characteristics by a group of experts, (b) a first survey to test the behaviors and characteristics, and to test the relationship between abundance and scarcity behaviors and the health of the leader's organization; and (c) a second survey to correct for statistical issues found in the first survey.

The survey was designed to take qualitative concepts from a group of experts and high level practitioners, and then test those concepts using quantitative tools such as a survey and statistical analysis (Creswell, 2003). The third phase was conducted because of the results in the second phase (weak factor loading). If the second phase survey results had loaded more clearly into 2-4 distinct factors, I would not have conducted phase 3 (Thurstone, 1947).

This section reviews each phase of the research's methodology in sequence since each phase's results informed and altered the subsequent phase's content. The results of each phase can be found in Chapter 4.

Phase 1 Research

The first challenge was to generate a set of behaviors and characteristics that indicate whether a leader uses a scarcity or abundance mental model. To meet the challenge, in January of 2009, a group of 50 organizational development professionals and leaders were asked to respond to two open-ended questions and one scaled question in an online survey using SurveyMonkey (Appendix A). Invitees were selected because they have a senior role in the field of organizational development or they are high-level

leaders in their organizations and have a special interest in organizational development work in their organization.

The questions in the “expert survey” included:

1. When you think of a leader who operates from an abundance mental model, what behaviors come to mind?
2. When you think of a leader who operates from a scarcity mental model, what behaviors come to mind?
3. For each of the following behaviors or characteristics, indicate whether you would expect to see it from an abundance mental model leader or a scarcity mental model leader or in either type of leader (the neutral middle of the scale).

The behaviors in question 3 came from my literature review and research, and included items such as: sharing information, giving praise, withholding information, exhibiting optimism, and exhibiting pessimism (Appendix B)

The data were analyzed using the following steps:

1. Downloaded the quantitative data from Question #3 from SurveyMonkey to an Excel spreadsheet;
2. For the quantitative data, added columns to cluster answers on either side of neutral; looked for items with high or low averages;
3. Sorted the qualitative data from questions 1 and 2 into initial categories on an Excel spreadsheet;
4. Imported qualitative data into Word and further sorted into more granular categories as well as broader categories; I generated the categories based on my interpretation of the answers. I then defined each category based on my understanding and interpretation of the answers within each category.
5. Counted items in each qualitative category;
6. Sorted qualitative categories from highest to lowest counts.

Phase 2 Methodology

In Phase 2, an online survey (Appendix C) was created to measure (a) the reliability of the behaviors and characteristics generated by the experts in Phase 1, and (b)

the correlation between abundance and scarcity behaviors and perceived organizational health. An online survey using SurveyMonkey was constructed. Emails requesting participation were sent to people who had had or currently have a boss. Ideally they would be over 21 years of age so that they would have enough work experience to draw from as they answered the questions. There were few other limitations on the type of respondent.

Emails were originally sent to my network of colleagues (approximately 300 people) because all fit the minimum requirements of having worked for someone and being over 21. That network was encouraged to take the survey and send the request on to others. I also posted the survey on the professional networking site, LinkedIn (<http://www.linkedin.com>) in the organizational development interest group section. I do not know how many people saw the request or responded to it from the LinkedIn posting since the survey did not track the source of the respondent's interest in the survey. I also sent it to the President of the Organizational Development Network (ODN) but it is unclear whether it was sent out to ODN members or not.

The survey was left open for approximately 3-4 weeks. I had hoped for over 200 responses. It had four primary sections (excluding the consent form). In this survey, I incorporated a survey of organizational health that I had developed in the Research Methods course at Saybrook Graduate School and Research Center; it became the first question in this survey. The survey sections were as follows:

- Consent Form
- Section 1 asked about the health of the organization (Health Measure).
- Section 2 asked the participant to rate their boss on the behaviors generated from Phase 1. Individual attributes, instead of the clusters, were used on the survey (Abundance and Scarcity Measures)

- Section 3 asked for demographic information about the boss.
- Section 4 asked for demographic information about the participant.
- The final page asked if people wanted to receive the results.

The Phase 2 survey results (see Appendix D, Table D1) were downloaded into Excel and then into the statistical software package, Statistical Package for Social Sciences (SPSS), version 14.0. A statistics research associate, Agata Gluszek, a PhD student in Yale University's Psychology Department, assisted me in running the analyses, using the following steps:

1. Named each organizational attribute in the organizational health section of the survey for SPSS.
2. Gave each scarcity or abundance behavior a name and number in SPSS as follows, "abundance#name" or "scarcity#name."
3. For the organizational health measure analysis, performed a factor analysis to see how many underlying factors the data implied.
4. Examined how reliably the items measured assessed the concept (health of the organization).
5. Examined how well the items correlated with each other.
6. Calculated the mean (average) of all items to create the "Health Measure."
7. For the abundance and scarcity leadership behaviors, performed factor analysis to see how many underlying factors the data implied.
8. Performed factor analysis and forced the items to converge on two factors.
9. Performed correlation analysis to see how the items correlated with each other.
10. Examined how reliably the measures assessed the two concepts of abundance and scarcity.
11. Calculated the mean (average) of all items to create the scarcity and abundance measures (if there were missing values for items, the mean was calculated on the remaining items).

Phase 3 Methodology

For Phase 3 of the research, the Phase 2 survey was modified. First, twelve items were chosen from two other surveys to confirm or disconfirm whether the items on the Phase 3 survey were valid as compared to measures from other surveys. Six of the items were selected because they were expected to correlate positively or negatively with the abundance or scarcity items. Six items were selected because they were not inherently viewed as either abundance or scarcity (Ekvall & Arvonen, 1991; Podsakoff, MacKenzie, Moorman, & Fetter, 1990).

The reliable and valid items from the other two surveys which were expected to confirm the abundance and scarcity items, by being either positively or negatively correlated, were:

- Sees possibilities rather than problems;
- Is friendly;
- Is controlling in his/her supervision;
- Acts without considering my feelings;
- Is always seeking new opportunities for the organization;
- Develops a team attitude and spirit among employees.

The six items expected to be neutral, not correlated with either abundance or scarcity items, were:

- Pushes for growth;
- Makes quick decisions when necessary;
- Plans carefully;
- Is very exacting about plans being followed;

- Defines and explains the work requirements clearly to the subordinates;
- Creates order.

Second, the items that did not load well in the factor analysis from the Phase 2 data were put into a separate section of the survey to make it easier to review them when the Phase 3 survey results were reviewed. The following items were put in their own section:

- Protects staff from abusive conditions;
- Is rarely ruffled and keeps an even tone and affect in most situations;
- Takes chances and gets overburdened too easily;
- Focuses on the bottom line – is financially savvy;
- Cares about social issues (e.g., justice, poverty, education, etc.);
- Has low emotional or social intelligence;
- Escalates disagreements fast;
- Does not do much in the way of coaching and developing her or his employees;
- Doesn't delegate and micromanages others;
- Is lazy.

Third, the two negatively correlated Abundance items were left in to retest their correlations. These items were: (a) lacks focus and can be recklessly optimistic, and (b) takes chances and gets overburdened too easily.

Fourth, the scale used for rating the boss's behaviors was changed. The original scale was:

- Don't agree at all (behavior is never observed)

- Agree to a minimal extent (behavior is rarely observed)
- Agree to a low extent (behavior is observed inconsistently)
- Agree to moderate extent (behavior is observed occasionally)
- Agree to a great extent (behavior is observed often)
- Completely agree (behavior is observed regularly).

The new scale was:

- Strongly disagree
- Moderately disagree
- Slightly disagree
- Slightly agree
- Moderately agree
- Strongly agree.

Fifth, the format of the question about the boss's organization's industry changed from open-ended to a drop-down list. In addition the drop-down list allowed multiple choices, including an "other" option in which the participant could write in the industry.

The survey was conducted online using SurveyMonkey. Emails were sent to my network of colleagues, roughly 300 people, asking for people who had not participated in the Phase 2 survey to take the Phase 3 survey. The network was also asked to forward the survey to others. In addition, ads were posted on Craigslist in New Haven, San Francisco, and New York in the "Volunteers" section (see Appendix E for the ad text). Participation in a raffle for a \$50 Amazon gift certificate was offered as inducement to participate. The winner was selected by a random draw of names from an Excel spreadsheet.

The survey was open for 2 weeks in late April 2009. The data were downloaded from SurveyMonkey into Excel, and then into SPSS.

Similar statistical procedures as Phase 2 were used to analyze the data, as follows:

1. For the “Health Measure,” performed factor analysis to see how many underlying factors the data implied;
2. Examined how reliably the Health Measure assessed the concept, using Cronbach’s alpha;
3. Calculated the mean of all items to create the “Health Measure” (if there were missing values for items, the mean was calculated on the remaining items);
4. For the “Leadership Measure,” performed factor analysis on all items to see how many underlying factors the data implied;
5. Performed factor analysis on all items and forced the items to converge on two factors;
6. Examined how reliably the measures assessed the two concepts (scarcity and abundance) using Cronbach’s alpha;
7. Calculated the mean of all items to create the “Scarcity Measure” and the “Abundance Measure” (if there are missing values for items, the mean is calculated on the remaining items);
8. Performed correlation analysis to see how the three measures (Abundance, Scarcity, Health) correlated with each other;
9. Performed correlation analysis to how the measures (Abundance, Scarcity, Health) correlated with each other and whether the participant liked working for the boss (the “Liking” question);
10. Performed factor analysis after removing items that did not load well on the Phase 2 survey and the Phase 3 survey (items were removed if they did not load well on both surveys) to see how many underlying factors the data implied;
11. Reviewed demographic data for any patterns of interest, looking for correlations between demographic characteristics and type of leader in particular.

Chapter 4: Results

As mentioned in Chapter 3, the research was done in three phases: (a) generation of a list of abundance and scarcity leadership behaviors and characteristics by a group of experts; (b) a first survey of people with work experience to test the behaviors and characteristics, and to test the relationship between abundance and scarcity behaviors and the health of the leader's organization; and (c) a second survey of additional people with work experience to correct for statistical issues found in the first survey. The results were encouraging in many ways and also offered up challenges for future research on the topic of abundance and scarcity mental models in leaders.

Phase 1 Results

In the first phase, 16 participants completed the expert survey and 15 shared their name and were willing to have attributions made. Participants were all high-level leaders or senior organizational development practitioners. Several have a Ph.D. and were connected to academe in some way. There were a few respondents from the private sector (see Appendix A for a full list of participants). Their comments were categorized based on an analysis of the content of each comment. Within the two main concepts, abundance and scarcity, several categories of behaviors emerged. Category names were created by the researcher.

Abundance Behavior Categories (Question 2)

The following 17 categories (see Appendix F) emerged for abundance behaviors:

Protector: Protects staff from abusive conditions by defending and ensuring that environment, resources, schedules, and other factors are not detrimental to the staff's physical or mental well-being.

Visionary Thinker: Thinks in the long-term and the big picture; builds on the past but is not constrained by it and focuses on the future; has a compelling vision that they are able to communicate and around which they build their organization.

Authentic Learner: Seeks out feedback and receives it with openness, and willingly learns from mistakes.

Avid Communicator: Proactively shares as much information as possible, as frequently as possible, and as clearly as possible; sees information as a resource that enhances his or her team's effectiveness.

Compassionate Soul: Demonstrates empathy and compassion for others, understanding the complexity of life as a journey, which is different for each individual.

Challenging Mentor: Guides and challenges employees so that they develop and grow skills which matter to them and make them more effective in their work

Limelight Sharer: Understands and articulates the role others play in the success of the team, and knows that it is rare that she or he can take sole credit for any success.

Divergent Thinker: Seeks creative and alternative ways of solving problems, but also seeks new ways of doing things that are accepted as the status quo; encourages and supports staff to do the same, allowing mistakes to be learning moments.

Enthusiastic Optimist: Exudes and conveys energy and hope for good outcomes in a way that allows fear to be heard but not to dominate.

Generous Spirit: Gives their attention, compassion, and kindness without effort and in a genuine way.

Moral Compassion: Has a strong moral compass that is evident in their language, actions and decisions; will do the right thing even if there are organizational costs.

Inclusive Partner: Seeks out the opinion and energy of others when appropriate; looks for opportunities to build teams; uses consensus when appropriate but doesn't settle for mediocrity.

Calm Reflector: Is rarely ruffled and keeps an even tone and affect in most situations; manages their time well.

Resource Hound: Seeks out resources and is able to work within the organizational system to gain resources for their staff.

Visible Walker: Manages by walking around, does stay in their office, makes contact with subordinates on a regularly basis.

Weak Focuser: Doesn't focus and can be recklessly optimistic, taking chances and getting overburdened too easily.

Results Oriented: Focuses on the bottom line – is financially savvy.

Scarcity Behavior Categories (Question 2)

The following 19 categories (see Appendix G) emerged for scarcity behaviors:

Down Talker: Is sarcastic or condescending in response to differences of opinion; is combative, disempowering.

Information Hoarder: Has a tendency to guard information, to be too confidential; hoards ideas, access, and knowledge; is selfish; communicates on a need-to-know basis.

Scaredy Cat: Is fearful; seems to promote fear; is cautious and skeptical.

Risk Avoider: Sticks to what is known and settles for old ways of doing things without questioning protocol.

Me, Me, Me: Has an egocentric ethical framework; has a “me first” attitude and looks out for #1; is self-oriented (“what’s in it for me”); is not good at sharing and is not collegial.

Myopic Viewer: Is myopic and has short-term concerns; lacks understanding, appreciation and vision regarding issues of sustainability and sustainability stewardship.

People Skeptic: Sees people as having limited ability, is suspicious, is elitist, tends to mistrust others, especially optimists or those with high levels of self-confidence; judges and finds blame.

Power Abuser: Covets and uses power to accomplish things; openly favors certain employees by giving the same people plum work or projects.

Unsettled Panicker: Is physically and verbally unsettled, easily angered, and appears rattled.

Machiavellian: Is calculating and manipulative.

Untrustworthy: Cannot be trusted; doesn’t follow through or earn trust.

Blaming: Blames others for failures.

Suspicious: Is paranoid.

Lazy: Passes the buck; does not work as hard as they expect their employees to work.

Nitpicker: Does not delegate; micromanages others while hovering.

King/Queen of All They Survey: Controls communication and discourages contact between others while making dictatorial decisions.

Conflict Avoider: Avoids conflict.

Cave Dweller: Hides in his/her office, minimizing contact with others.

Low Intelligence (especially emotional intelligence): Easily offended but also prone to give offense easily.

Lousy People and Team Manager: Does not advocate for employees and does not do much in the way of coaching and developing employees; doesn't take time to celebrate successes; escalates disagreements fast; tolerates sub-standard performance; does not encourage a work/life balance.

Risk Taker: Plays the odds.

Behavior Rating Results (Scaled Question 3)

Based on the literature review and research conducted before the survey, I generated a list of 22 possible abundance and scarcity behaviors. The experts were asked to indicate whether they would expect to see that behavior in a scarcity or abundance mental model leader. Only four behaviors were more likely in a scarcity leader (see Table 4). Only one behavior was decidedly neutral (neither abundance nor scarcity): "Seeking Resources" (9 counts).

Table 4

Expert Ratings of Leadership Behaviors as More or Less Likely in Scarcity or Abundance Leaders

<i>Behavior</i>	<i>Rating Average**</i>	<i>Scarcity Count</i>	<i>Neutral Count</i>	<i>Abundance Count</i>
Exhibiting pessimism	-2.13	15	0	1
Behaving in petty ways	-2.00	14	1	1
Withholding information	-1.94	13	1	2
Exhibiting fear	-1.94	13	1	2
Seeking resources	0.63	1	10	5
Delegating	1.31	2	3	11
Minimizing criticism	1.31	2	2	12
Protecting staff from abusive conditions	1.44	1	5	10
Learning	1.44	0	4	12
Expressing compassion	1.50	1	2	13
Acting locally but thinking globally	1.50	0	4	12
Thinking in the long-term	1.56	0	4	12
Giving praise	1.69	1	2	13
Listening	1.69	0	2	14
Sharing information	1.81	2	1	13
Demonstrating faith in good outcomes	1.87	0	2	13
Thinking in terms of the whole system	1.88	1	2	13
Encouraging creativity	1.94	1	1	14
Focusing on being, not only on doing and having	2.13	1	0	15
Sharing the limelight	2.25	0	2	14
Inspiring Others	2.31	1	1	14
Exhibiting optimism	2.38	1	0	15

Note. ** -3 = high scarcity; +3 = high abundance)

Other Thoughts From Experts (Question 4)

The last question on the survey asked the “experts” for final thoughts on the proposed model. Sample remarks particularly relevant to the research were as follows:

- o “Shallow thinking abundance model might lead to inaction at a time when action is needed – for example, responding in a timely fashion to climate change, peak oil, rather than assuming limitlessness and persisting in the status quo.”
- o “Some leaders with an abundance mentality can minimize obstacles to the point of not facing some real problems. There is some danger in having a Pollyanna view. However, having a positive outlook can be very effective in getting positive results.”
- o “The previous list made me think of two things – one, the effects of under versus over-bounded organizations create a different content for these two types – and secondly there must be a way to have a good scarcity and a bad abundance leader or at least variations within or I think you lose a lot of nuance.”
- o “An interesting aspect of this study could include how leaders engage in relationships with their peers, managers, direct reports. While there is some indication of the relationship factors in the survey, there might be some interesting differences between the various relationship categories.”
- o “Many different contexts for each type of behavior – longevity of company, type of industry, level of regulation, financial pressures, time pressures (might be worth studying).”
- o “How much can an abundance leader impact a team in which most of the people operate from a scarcity model? What would be the tipping point to help the team move to abundance?”
- o “I would agree with the premise that a leader’s mental model or world view informs how s/he behaves. Leaders who assume others are good, well meaning and operate from a place of abundance tend to focus on what’s working and how to share the good fortune. The climate they create is much different than a leader who operates from a point of view of scarcity. Good luck with your research.”

Discussion of Phase 1 Results

Phase 1 results were helpful in many ways. The specific behaviors generated by the experts easily lent themselves to categorization. The model made sense to the experts,

and the underlying concepts of abundance and scarcity leadership behaviors were intuitively grasped with minimal preliminary instruction.

There were only a few items related to a short-term strategic view in the scarcity behaviors but the countervailing attribute – big picture thinking – had many behaviors in the abundance mental model.

There were almost no “neutral” behaviors. Only one behavior was decidedly neutral, “Seeking Resources.”

Limitations of Phase 1 Data

The data in Phase 1 had the following limitations: (a) a small number of respondents (16); (b) the type of respondents (narrow expertise represented); (c) method of invitation (broadcast email to selected people on my list of contacts); (d) the categories of behaviors were not validated by other raters (although the categories were not ultimately used in Phase 3 – behaviors were left unclustered); (e) the qualitative nature of the responses limits replicability, and (f) the choice to use only my contacts instead of casting a wider net for experts whom I did not know.

Phase 2 Results

In this Phase, 192 people took the online survey. Twenty-two surveys that did not have answers to every question were excluded for some statistical tests such as reliability and factor analysis. This left a total of 170 valid surveys for those tests. For other measures such as means, all surveys were used.

In organizational health (or the “Health Measure”) all items loaded on one factor, which was a positive outcome because this means the items all converged on the same concept (here defined as health of the organization). One attribute “sense of hierarchy –

how hierarchical is the organization?” loaded the least well. It had the lowest result (.549) when an extracted component analysis was run. It also never went over a .5 correlation with any other attribute, unlike all the other Health Measure attributes, which correlated higher with one another.

The reliability of the Health Measure was high with a Cronbach’s alpha (or Cronbach’s α) = .965, and none of the items lowered it considerably. The correlations between the items were all significant and positive. The mean (average) of all items to create the Health Measure was $M = 4.138$, with a standard deviation of .066 on a scale of 1-6. The data was skewed to the left (majority of the scores in the upper end of the scale), which implied the need to transform the data or fix the scale.

The reliability of the “Scarcity Measure” was high (Cronbach’s alpha, or Cronbach’s $\alpha = .958$), and none of the items lowered it considerably. The reliability of the Abundance Measure was high (Cronbach’s alpha, or Cronbach’s $\alpha = .944$) and none of the items lowered it considerably. The alphas were high because there were many items and they were fairly well correlated with each other.

Two abundance items were negatively correlated with abundance so they would need to be deleted or moved to scarcity: (a) lacks focus and can be recklessly optimistic, and (b) takes chances and gets overburdened too easily.

The means of all the items to create the Scarcity Measure and the Abundance Measure was as follows: Abundance Measure: $M = -.0648$, $SD = 1.00985$. The abundance data was slightly skewed to the left (majority of the scores in the upper end of the scale), which suggests transforming the data.

Scarcity Measure: $M = -1.5142$, $SD = 1.08552$. The scarcity data was very skewed to the left (majority of the scores in the lower end of the scale), which strongly suggested transforming the data to eliminate the skew. Correlations with demographics were not run because it became clear that a revised survey would be needed.

For the “Leadership Measure,” (Appendix H) items loaded on eight factors, which was not an ideal outcome because this meant the questions did not converge on the two concepts I was trying to measure (scarcity and abundance mental models). A factor analysis forced the leadership items to converge on two factors. The factors did not fit well, mainly for the scarcity attributes. The first factor accounted for most of the variance and thus was not given a title.

A correlation analysis showed that the items in the “Leadership Measure” correlated with each other fairly well, and the abundance and scarcity items tended to be negatively correlated, with a few not correlated. Two items were an exception: “Lacks focus and can be recklessly optimistic,” and “Takes chances and gets overburdened too easily” unexpectedly correlated positively with scarcity items and negatively with abundance items.

Discussion of Phase 2 Results

There were some strong results for Phase 2, and it also raised some challenges. The sample size was large enough which helped create a strong data set. The high level of reliability of each scarcity and abundance item was exciting to see – indicating that each item does measure abundance or scarcity.

The Phase 2 survey did indicate some challenges that the final survey (Phase 3) had to attempt to remedy. The scarcity and abundance behaviors’ inability to load neatly

on to two factors was disappointing. It indicated that there might be multiple ways that participants would bundle the scarcity and abundance behaviors into categories. To remedy this, the number of items could be reduced to include only the items that loaded on the first two factors (Neter, Wasserman, & Kutner, 1990). However, because the items were based on expert input, the lack of a two-factor result in factor analysis could be overlooked because the reliability of each item was so high.

In summary, the Phase 2 research affirmed the power of the Health Measure and the reliability of the individual attributes in the abundance and scarcity measures. The research in this phase raised questions about whether attributes could be bundled into two discrete categories, that is, abundance and scarcity.

Limitations of Phase 2 Data

Phase 2 could have used an even larger sample population. A pool of over 300 might have helped with the factor loading issue for the Scarcity and Abundance Measures. With so many items on the survey, a larger sample population might reduce the number of factors. As pointed out by both a few respondents and Agata (the statistical research assistant), the scale used for the question on the boss's behavior was not well worded and needed revising.

Implications for Phase 3

The skew in the data for the abundance and scarcity items suggested that a new scale was needed or the data would have to be transformed. Changing the scale was selected over transforming the data since data transformation might obscure problems with the scale – fixing the scale first to see if it remedied the skew seemed to be the right next step.

It was also determined that the survey items needed to be tested against existing reliable and valid items from other surveys for confirmation and disconfirmation (Rosenthal & Rosnow, 1991). The two negatively correlated Abundance items were left in to retest their correlations.

Phase 3 Results

In Phase 3, 102 people completed the revised survey (Appendix I). For the “Health Measure,” the items loaded on three factors instead of two. This might be attributable to the smaller sample size. The reliability of the Health Measure was high with a Cronbach’s alpha, or Cronbach’s $\alpha = .949$, and none of the items lowered it considerably. The mean of all the Health Measure items was $M = 3.907$, with a standard deviation of $SD = .990$. The data was not skewed in a significant way, which is good, indicating a normal distribution of the results.

The reliability of the items in the “Leadership Measure” (Appendix J) was high with a Cronbach’s alpha, or Cronbach’s $\alpha = .939$, and none of the items lowered it considerably. However, “lacks focus and can be recklessly optimistic” and “takes chances and gets overburdened too easily,” remained negatively correlated with abundance.

The reliability of the scarcity measure was high, with a Cronbach’s alpha, or Cronbach’s $\alpha = .952$, and none of the items lowered it considerably. The Cronbach alphas were high because there were many items and they were fairly well correlated with each other.

The means of the scarcity items and the abundance items were as follows:

Abundance: $M = 3.8374$, $SD = 1.02452$, Scarcity: $M = 2.8410$, $SD = 1.17243$.

The data were not skewed for either measure. The Abundance Measure significantly and negatively correlated with the Scarcity Measure and significantly and positively correlated with the Health Measure. The Scarcity Measure negatively and significantly correlated with the Health Measure, which indicates that abundance leaders have healthier organizations (see Tables 5 & 6).

Table 5

Correlations Between Health, Scarcity, and Abundance Measures (N = 102)

		<i>Scarcity_AVG</i>	<i>Abundance_AVG</i>	<i>Health_AVG</i>
Scarcity Average	Pearson Correlation Sig. (2-tailed)	1	-.853(**) .000	-.758(**) .000
Abundance Average	Pearson Correlation Sig. (2-tailed)	-.853(**) .000	1	.845(**) .000
Health Average	Pearson Correlation Sig. (2-tailed)	-.758(**) .000	.845(**) .000	1

** Correlation is significant at the 0.01 level (2-tailed)

Table 6

Health Measure Average by Type of Leader

<i>Type of Leader</i>	<i>Average Organizational "Health Measure" Score</i>
Scarcity	2.9
Abundance	4.7
A mix of abundance and scarcity	3.6
Neither scarcity nor abundance	3.4
Not sure	2.4

Note. Scale is 1-6; 1 = not healthy; 6 = healthy

For the "Leadership Measure," the factor analysis did not produce the hoped for results of all the items loading on two factors, converging on abundance and scarcity.

Instead, initially 10 factors showed up. Forcing the factors to converge on two factors did not produce good results either, with many items having a score below .500. The factors did not fit well again, mainly for the scarcity factor. The first factor accounted for most of the variance.

The correlation analysis to see how the measures (Abundance, Scarcity, Health) correlated with each other and “liking to work for the boss” (“Liking”) showed that the Abundance and Health Measures significantly and positively correlated with “Liking.” “Scarcity” is negatively correlated with “Liking” at a statistically significant level (see Table 7).

Table 7

Correlations Between Scarcity, Abundance, Health and “Liking to work for the boss” (N = 102)

		<i>Scarcity Average</i>	<i>Abundance Average</i>	<i>Health Average</i>	<i>(Liked Working) How did you feel about working for this boss?</i>
Scarcity Average	Pearson Correlation Sig. (2-tailed)	1	-.853(**) .000	-.758(**) .000	-.824(**) .000
Abundance Average	Pearson Correlation Sig. (2-tailed)	-.853(**) .000	1	.845(**) .000	.810(**) .000
Health Average	Pearson Correlation Sig. (2-tailed)	-.758(**) .000	.845(**) .000	1	.760(**) .000
(Liked Working) How did you feel about working for this boss?	Pearson Correlation Sig. (2-tailed)	-.824(**) .000	.810(**) .000	.760(**) .000	1

** Correlation is significant at the .01 level (2-tailed)

For the Leadership Measure, a factor analysis was performed without items that did not load well on the Phase 2 and Phase 3 surveys (meaning items were removed if they did not load well on the Phase 2 Survey and also did not load well on Phase 3 Survey). However, if they loaded well on the Phase 3 Survey but not on Phase 2 Survey, they were left in to see how many underlying factors the data implied. Items then loaded on nine factors, still an unsatisfactory result. The items did not converge on the two concepts – scarcity and abundance, – which indicates that rather than two discrete concepts, this is a continuum of behaviors that needs further exploration.

The next factor analysis, removing items that did not load well on both surveys (meaning all that did not load well on the Phase 2 Survey and all items that did not load well on the Phase 3 Survey were removed) produced eight factors. Again, this was an unsatisfactory outcome because items did not converge on the two concepts of interest. However the reliability of each item on the survey was very high.

The items from other surveys used to confirm and disconfirm the survey's validity and reliability had mixed results. The items expected to confirm reliability by correlating positively with abundance and negatively with scarcity did so. However the items expected to remain neutral did not. They all correlated with either abundance or scarcity (see Appendix K, Table K1).

Participants focused on two types of leaders – abundance and a mix of the two models. When asked, “What model does the leader you're rating use: an abundance model, a scarcity model, a mix, neither, or not sure,” the results were:

Scarcity = 18.6%

Abundance = 39.2%

A mix of the two mental models = 37.3%

Neither = 3.9%

Not sure = 1.0%.

The data showed that the participants' rating of their boss matched the model they chose for the boss. This was a good outcome confirming that the participants' choice of individual behaviors matched their view of the boss' overall mental model (see Table 8).

Table 8

Boss' Mental Model and Average Scarcity and Abundance Ratings

<i>Choice of boss' mental model</i>	<i>Average <u>scarcity</u> rating on scaled items</i>	<i>Average <u>abundance</u> rating on scaled items</i>
Abundance	1.7	4.7
Scarcity	4.3	2.4
Mixed	3.1	3.5

Demographic Statistics

The survey participant demographics of interest include:

Table 9

Demographic Characteristics of Phase 3 Survey Participants

Demographic	% of Respondents	
	Phase 3	Phase 2
Women	74.3%	59.8%
White	90.0%	91.0%
Top 3 of 6 levels of hierarchy	58.0%	65.6%
41-70 years old	75.0%	75.3%
Education industry*	44.0%	39.2%

Note. Additional details on participants' industries can be found in Appendix L

Analysis of the participant demographics and answers to survey items produced the following results of interest, some of which need more data to confirm statistical significance:

- 57.7% of men picked abundance leaders to rate while only 33.3% of women did so. A slight majority of women (38.7%) picked “mix of models” leaders to rate. More data is needed to show whether this is a statistically significant finding.
- Male leaders had a lower scarcity average (2.6) than female leaders (3.0), and a higher abundance average (4.0) than female leaders (3.6) – in other words, men had a broader range of average scores than women.
- Male leaders were perceived to have healthier organizations than female leaders: 4.1 average health score for organizations run by men versus 3.6 for organizations run by women on the 6-point organizational health scale.
- Women survey participants rated their bosses higher on scarcity and lower on abundance items than men did, giving their bosses a narrow range of scores.
- 71.4% of people lowest in the hierarchy (the lowest of six levels in the organizational hierarchy) picked a boss they saw as using the scarcity mental model. 62.5% of people at the highest level in the hierarchy selected abundance mental model bosses to rate.
- People lower in the organization see the organization as less healthy than those higher up (see Table 10).

Table 10

Means for Organizational Health Ratings Sorted by Respondent’s Place in Hierarchy

<i>In the boss’ organization, where were or are you in the hierarchy?</i>	<i>Mean</i>	<i>Std. Error</i>	<i>95% Confidence Interval</i>	
			<i>Lower Bound</i>	<i>Upper Bound</i>
1 lowest level	3.338	.371	2.602	4.075
2 lower mid-level	3.587	.245	3.100	4.074
3 mid-level	3.992	.219	3.557	4.428
4 upper mid-level	3.897	.205	3.490	4.303
5 upper level	4.042	.185	3.674	4.410
6 top level	4.395	.347	3.706	5.084

- Age had an inconsistent impact on the choice of leader to rate. The strongest statistics related to age include: 63.6% of those aged 31-40 focused on leaders with a mix of styles; 45.5% of those aged 51-60 picked abundance leaders; 60% of those aged 61-70 picked abundance leaders. In all age groups with $n > 1$, scarcity leaders were the lowest percentage of rated leaders.
- The choice of leader to rate varied by organizational size with the biggest difference in the choice of scarcity leaders – participants from organizations with 101-1000 employees were least likely to choose a scarcity leader to rate (see Table 11).

Table 11

Size of Organization and Percentage of Participants by Choice of Leader to Rate

<i>Number of Employees</i>	<i>Leader Type</i>				
	<i>Scarcity</i>	<i>Abundance</i>	<i>A Mix</i>	<i>Neither</i>	<i>Not Sure</i>
1-100	21.2	34.6	36.5	5.8	1.9
101-1000	9.1	40.9	45.5	4.5	0.0
>1000	21.4	46.4	32.1	0.0	0.0

Phase 3 Discussion

As in Phase 2, the Health Measure held up well under statistical analysis.

Abundance and scarcity leadership behaviors were almost perfectly negatively correlated, which raises again the question of whether the model creates too polarized a view.

Other changes to the survey from Phase 2 results produced the following results:

- (a) changing the scale for the boss' behavior items eliminated the skew; (b) Abundance 21 (lacks focus and can be recklessly optimistic) is still significantly negatively correlated with the Abundance Measure; it should be labeled as a Scarcity item in future surveys; (c) Abundance 22 (takes chances and gets overburdened too easily) remains negatively correlated to the Abundance Measure but not at a significant level; it should be dropped from future surveys; (d) the nine items that did not load well on the Phase 2 Survey

continued to not load well on the Phase 3 Survey. This prompts a choice. If factor loading is ignored, the items could remain in the survey. If loading to two factors is a primary goal, the items should be dropped.

Limitations of Phase 3 Data

Phase 3 data had the following limitations:

1. Whites, particularly middle-aged White women, were over-represented.
2. Education was over-represented in the industry data; 40% of respondents (40 out of 91 who answered the question) were working in the field of education.
3. The scale used for the “liking to work for this boss” question was not as rigorous as it could be and possibly subject to too wide an interpretation.
4. The size of the sample population could be increased.

Chapter 5: Discussion

This study has reviewed literature in four fields – psychology, sustainability and economics, organization development, and leadership. Drawing from those fields, the study constructed a mixed-methods set of research activities to explore whether scarcity and abundance mental models were a useful way of bundling and understanding leadership behavior, and whether the models had any effect on organizational health.

The study's findings are most easily tied back to the literature of optimism in psychology and sustainability in economics. Many of the attributes listed by the experts tie closely to Seligman (1990) and Vaughan's (2000) work on optimism. The study showed that abundance leaders have an energy and optimism (seeing the possibilities, a calmness in the face of adversity) that is an integral part of optimism.

In addition, the study found that leaders have a similar attitude toward their organization and staff as those leaders that follow Hawken's advice for running organizations that create a sustainable future for the planet (Hawken, 1993).

“Provide secure, stable, and meaningful employment for people everywhere” is reflected in the survey item “coaching and developing employees.” “Be self-actuating as opposed to regulated or morally mandated” has parallels in “is moral.” “Be more rewarding than our present way of life” is similar to “Honors the past but is not constrained by it.”

The research in this study provides an empirical foundation for the anecdotal and felt experience for many subordinates. Participants in the study quickly grasped the concepts of abundance and scarcity mental models in leadership and did not struggle to

rate their boss on the behaviors. The model provides a meaningful set of attributes by which we can understand a boss' style and his or her impact on subordinates.

There are three primary areas for discussion:

1. The "Health Measure"
2. The "Leadership Measure," and in particular:
 - Liking to work for an abundant boss
 - Gender questions
3. The instrument's design
4. Implications for future research.

The "Health Measure"

One of the most exciting outcomes of the Phase 2 survey was the strong statistical validity of the Health Measure, a scale created for another doctoral course prior to this dissertation research. All the items loaded on one factor and had high reliability. Only one item on the organizational health portion of the survey, "sense of hierarchy – how hierarchical is the organization?" loaded at a low level. It had the lowest result (.549) when an extracted component analysis was run.

The statistical strength of the Health Measure will allow it to be used in other surveys to find correlations between the health of an organization and other factors. The Health Measure is a valid and reliable measure of organizational health. By itself, this is an extremely useful tool for leaders and consultants.

Even better, the measure showed that organizational health correlates positively with abundance behaviors and negatively with scarcity behaviors in bosses. This provides a reason to care about abundance and scarcity behaviors. If the behaviors had no impact

on the organization, why bother? Given the direct correlation, bosses are well served to determine their scarcity/abundance tendencies and to work on managing those toward a more abundance model.

Tying this study's results to the work of Seligman, Vaughan, Adams and other authors on optimism and abundance, one can say that an optimistic or abundance mental model does matter in a leader. It has a positive impact on individuals working for such a boss and it makes for a healthier organization. By this study's measures, a healthy organization has better communication, conflict resolution, teamwork, supervision, and other characteristics. A healthy organization is often more effective whether measured in profitability or service delivery, and is often an asset to the larger community by creating more satisfied and productive staff.

The Health Measure will provide a meaningful and useful tool for practitioners to measure the perceived health of an organization. It could be contrasted with more quantitative measures such as data from balance sheets or income statements to see if perceived health and financial health co-exist.

The "Leadership Measure"

Bosses are easily identified as a scarcity, abundance, or "mix" boss, and their mental model affects subordinates.

Liking to Work for an Abundant Boss

The correlation analysis to see how the measures (Abundance, Scarcity, Health) correlated with "liking to work for the boss" ("Liking") showed that the Abundance and Health Measures significantly and positively correlated with "Liking." Scarcity negatively and significantly correlated with "Liking." In general, bosses with an

abundance paradigm – seeing the world as resource sufficient and power as shareable – are preferred over scarcity bosses, and they have healthier organizations to show for it. Their organizations resolve conflict better, have better communication patterns, and better team work. There is a caveat here, as noted by some of the comments in the survey responses. Too much abundance can be detrimental by dispersing energy, losing focus, and misplaced optimism.

Scarcity bosses are more difficult to work for and negatively impact their organization's perceived health. Subordinates did not unilaterally dislike working for scarcity bosses but it was hard to find a subordinate who liked their scarcity boss.

I also discovered that scarcity and abundance behaviors are more subtle than an on/off switch. Bosses fall along a spectrum and it is only the entire picture, looking at all behaviors, that indicates the general abundance-scarcity paradigm of the leader.

Gender Questions

Of great interest to me, because of my much earlier studies in gender, were the outcomes around gender. The fact that women leaders had a narrower range between their scarcity and abundance averages is of note. In addition, the fact that abundance male leaders were rated higher on their abundance average and scarcity male leaders were rated lower on their scarcity average raises some questions. Why were men seen as more extreme in their behaviors on both sides of the scale? Do men exhibit behaviors more strongly than women? Have women leaders learned to moderate their affect more?

The Instrument's Design

The Phase I results implied that the scale or overall concept “lacks subtlety,” as one expert put it. Constructing an instrument that evokes more subtle ratings of the

presence of an attribute along a continuum might be useful since we can hypothesize that leaders rarely exhibit extremes in all behaviors. In Phase 3, the abundance and scarcity leadership behaviors were almost perfectly negatively correlated which raises again the question of whether the model creates too polarized a view. Should items be paired at the ends of a spectrum? Or should they at least be paired at the time of data analysis? For example, a continuum from “Is visible” to “Hides in their office” would allow raters to place the observed behavior along a continuum.

One of the odd outcomes of the data was that the one behavior that focuses on environmental issues – “cares about the natural environment (e.g. recycling, alternative energy, global warming, etc.)” – was not statistically reliable. One of my assumptions was that this behavior would be a critical aspect of an abundance leadership mental model and would have strong correlations and reliability. One possible explanation for the weakness of this item is that “caring about the natural environment” is not particularly obvious in the daily experience of the boss by employees. Raters might have focused more on their own personal interactions and observations of the boss versus the boss’ philosophies about the environment. The same might hold true for political views and larger moral questions if I had asked about those. If I had asked about the impact of the leadership mental model on long-term strategy or impact on the community, this behavior might show up in a more statistically significant way.

There were only a few behaviors related to a short-term strategic view in the scarcity mental model but the countervailing attribute – big picture thinking – had many items in the abundance mental model. This imbalance between items in a category might indicate that a category is more important or powerful in one type of leader versus

another. For example, big picture thinking is a striking attribute of abundance leaders while lack of it is not particularly definitive of a scarcity leader.

Implications for Future Research

The outcomes of the research were exciting and create many other research questions:

- Does the “Organizational Health Measure” correlate with other methods of measuring organizational health and effectiveness, e.g. financial outcomes, service measures?
- Are the preliminary demographic findings supported by a larger pool of participants? Does race influence any of the behaviors? Do the initial findings for gender hold up?
- If a leader was rated by more than one subordinate, would the findings be consistent? Would multi-rater data change any of the data?
- Do certain demographics tend to exhibit one mental model over another, for example, do young women use an abundance mental model more often?
- If the leader were self-assessing, would the findings be consistent with the ratings of their subordinates?
- Do some professions, such as management coaches, doctors, architects, require more of either type of mental model?
- Can we say that one mental model is better than another? Is an abundance mental model a more “evolved” model than a scarcity mental model? Besides producing better work climates, does it also produce other measures of health, that is, the triple bottom line (people, profits, planet)?
- Does industry matter? Do certain industries attract certain mental models in bosses? What about other contextual factors such as longevity of the company, level of regulation, financial pressures, or time pressures?
- Is there a causal relationship between an abundance mental model leader and a healthy organization? If so in which direction and to what extent?
- Is abundance teachable? Is it learnable?
- Are some abundance behaviors strategic versus tactical?

- With a larger pool, would a factor analysis work? Even if more than two factors emerge, there might be 8 factors of which 4 are abundance and 4 are scarcity.
- How much can an abundance leader impact a team in which most of the people operate from a scarcity mental model and vice versa?
- Abundance-scarcity mental models could be compared with other leadership styles such as autocratic, democratic, and so forth.
- Are some attributes more beneficial or more detrimental than others? Do some have more negative or positive weight than others? For example, is “hiding in your office” a relatively low impact scarcity behavior as compared to “not developing staff”?

This is not an exhaustive list but these questions emerged from this initial research.

Conclusion

This study makes a unique contribution to the literature on and understanding of leadership by providing a new conceptual model that integrates a variety of personality traits and behaviors. The Abundance-Scarcity Leadership Model created by this study helps explain an overall zeitgeist experienced by subordinates. In addition the Model shows that certain attributes are linked to organizational health and thus encourages leaders to work on increasing abundance type behaviors.

Many organizations can benefit by having a leader learn and exhibit abundance behaviors. They should be able to tie these behaviors to organizational health and see how increased abundance behaviors improve the health of the organization. If the behaviors are learnable, it will be possible to teach leaders new behaviors and thus improve their organizations.

Researchers can take many of the concepts and measures developed here and pursue the lines of inquiry outlined above in the section *Implications for Future Research*.

Without this study, we would have a continued lack of response or explanation for the experience of subordinates embodied in the phrases, “She made me feel anything was possible.” “He was just not fun to work for.” This study allows us to explain, explore, and expand the abundant, optimistic potential of joyful leadership.

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APPENDIXES

Appendix A

Phase 1 Survey Questions and Contributors

1. When you think of a leader who operates from an abundance mental model, what behaviors come to mind?
2. When you think of a leader who operates from a scarcity mental model, what behaviors come to mind?
3. For each of the following behaviors or characteristics, indicate whether you would expect to see it from an abundance mental model leader or a scarcity mental model leader or in either type of leader (the neutral middle of the scale). (These behaviors came from my literature review and research.)

Sharing information
 Giving praise
 Withholding information
 Exhibiting optimism
 Exhibiting pessimism
 Behaving in petty ways
 Exhibiting fear
 Expressing compassion
 Inspiring Others
 Listening
 Protecting staff from abusive conditions
 Seeking resources
 Delegating
 Sharing the limelight
 Minimizing criticism
 Demonstrating faith in good outcomes
 Thinking in the long-term
 Encouraging creativity
 Acting locally but thinking globally
 Thinking in terms of the whole system
 Learning
 Focusing on being, not only on doing and having

Question 3 used the following scale:

- Much more likely in a scarcity leader
- Somewhat more likely in a scarcity leader
- Slightly more likely in a scarcity leader
- Equally likely in either type of leader
- Slightly more likely in an abundance leader
- Somewhat more likely in an abundance leader
- Much more likely in an abundance leader

Contributors (with self-identified titles) included:

- Alexander Laszlo, Ph.D., co-founder and President of Syntony Quest and professor of Systems Science & Evolutionary Development.
- (Dr) Alice Prochaska
- John Adams, Ph.D.
- Paul F. Crotty, Principal, Odyssey Consulting, LLC
- Jonathon Gillette, Professor, Yale University
- Nancy L. Southern
- Laurie Schnepf, Sr. Organization Effectiveness Consultant
- Sandra LaJeunesse. Principal/Odyssey Consulting
- Tom Horvath
- Kathleen M. Forbush, Director of Human Resources
- Deene Morris
- Peter S. DeBiasi
- Lynne Yeannakis, Ed.D
- Gary S. Metcalf, PhD
- Jim Doyle, Human Resources Consultant

Appendix B

*Complete Phase 2 Survey*Research and Survey Introduction

Dear Colleague,

I am working on my dissertation in Organizational Systems at Saybrook Graduate School. I'm writing to ask for your participation and assistance in the second phase of my research. Your involvement would be to answer questions on a survey. My dissertation is focused on leadership, and I am hoping you will take a few minutes to answer questions about a boss you have worked for at some point in your life or for whom you are working now. The survey asks you to answer a few questions about what it felt like to work for that boss (or the subjective experience of working for him or her), and then to rate the boss on a variety of behaviors and skills.

The survey can be completed in a relatively short period of time, or longer if you prefer. You can stop and return to the survey at a later time. Before answering the questions, the survey will ask you to accept the terms of a consent form. The consent form is long but is required for conducting research.

I am hoping to have all responses in by March 31. Thank you in advance for your time.

Regards,

Laura

Laura Freebairn-Smith

[phone]

[email]

Consent Form (please decline or accept at bottom of page)

Purpose:

The purpose of this research is to create an instrument to measure a leader's position on the abundance-scarcity spectrum of mental models, with a focus on leaders as bosses. I am asking people, like you, with work experience to rate a current or past leader and to report on how it felt to work for that leader. I will then look for correlations between abundance or scarcity behaviors and the affective experience of working for a leader. My hypothesis is that abundance mental model leaders provide a more positive work experience. This project is being conducted by Laura Freebairn-Smith, MPPM, a

graduate student of Saybrook Graduate School and Research Center, as part of the dissertation requirements.

Principal Researcher:

Laura Freebairn-Smith

[address]

[phone]

[email]

Procedures:

[1] This study involves filling out an online survey; this will take approximately 30 minutes.

Possible Risks and Safeguards:

This study is designed to minimize, as much as possible, any potential physical, psychological, and social risks to you. Although very unlikely, there are always risks in research. You are entitled to be aware of this in advance of giving your consent, as well as to know that safeguards have been taken by the researcher to minimize these risks.

I understand that:

[1] My participation shall in no way have any bearing on employment status, academic standing, course grade, or alter or deprive me of any or all services presently received in the institution and setting in which I participate, as well as those provided by the institutions sponsoring, funding, and providing oversight, inclusively, for this research project.

[2] My responses to the questions will be pooled with others and all identifiers, such as names, addresses, employers, and related information which might be used to identify me, will be given a number.

[3] This consent form will be kept separate from the data I provide, in a locked file for three years, known only to the principal after which, it too, will be destroyed.

[4] The data collected in its raw and transcribed forms are to be kept anonymous, stored in a locked file accessible only to the principal researcher.

[5] Transcribed data in the form of anonymous response listings from all participants to each question will be kept indefinitely for future research.

[6] All the information I give will be kept confidential to the extent permitted by law. The information obtained from me will be examined in terms of group findings, and will be reported anonymously.

[7] There is to be no individual feedback regarding my research project. Only general findings will be presented in a summary report, to which I am entitled a copy. My individual responses are to remain anonymous.

[8] No personal information I provide associated with my identity will be released to any other party without my explicit written permission.

[9] If quotes of my responses are used in the research report for the dissertation as well as any and all future publications of these quotations, my identity shall remain anonymous unless I provide written permission to use my name at the end of the survey.

[10] I have the right to refuse to answer any question asked of me.

[11] I have the right to refuse at any time to engage in any procedure requested of me.

[12] I have the right to withdraw from participation at any time for any reason without stating my reason.

[13] I have the right to participate without prejudice on the part of the principal researcher and other persons assisting the principal researcher.

[14] It is possible that the procedures may bring to my mind thoughts of an emotional nature which may upset me. In the unlikely event that I should become upset or experience emotional distress from my participation, the principal researcher present shall be available to me. She shall make every effort to minimize such an occurrence. However, should an upset occur and become sufficiently serious to warrant professional attention, as a condition of my participation in this study, I understand that a licensed professional will be made available to me. If I do not have such a person, the principal researcher will refer me and reasonable costs up to the first two visits will be paid by the principal researcher.

[15] By my consent, I understand I am required to notify the principal researcher at the time of any serious emotional upset that may cause me to seek therapy and compensation for this upset. Regarding any concern and serious upset, you may contact the principal researcher at: [email]. You may also contact the research supervisor of the project, Dr. Kathia Laszlo at [email]. Should you have any concerns regarding the conduct and procedures of this research project that are not addressed to your satisfaction by the principal researcher or her research supervisor, you may report and discuss them with M. Willson Williams, Ph.D., Chair of the Saybrook Institutional Review Board at Saybrook Graduate School and Research Center [email].

Benefits:

I understand that my participation in this study may have possible and potential benefits.

[1] I may find reflection on the topics of abundance, scarcity, and work culture useful.

[2] The information will likely serve as the basis for further research on leadership mental models for the researcher's dissertation, and thus might provide future benefits to others.

[3] My participation may enable the principal researcher and others working in the topic area to make a contribution to knowledge and theory of abundance and scarcity mental models in leaders. The researcher has examined the potential risks related to the research and believes that the ethical issues can be satisfactorily addressed without harm to participants. The potential benefits outweigh the potential concerns regarding the research.

Summary Report:

Upon conclusion of this study, a summary report of the general findings will become available. If you would like a copy of the report, at the end of the survey, please provide the address to which you would like it sent.

Disclaimer:

Participation in this study puts participants at minimal physical, psychological, and social risk. Saybrook Graduate School and Research Center will not provide compensation or medical care in the unlikely event it can be established that injuries are incurred as a result of participation in this research project.

Consent of Principal Investigator:

I have explained the above procedures and conditions to this study, and provided an opportunity for the research participant to ask questions and have attempted to provide satisfactory answers to all questions that have been asked in the course of this explanation.

Signed electronically, Laura Freebairn-Smith

*1. Do you agree to participate in the survey?

Yes, I will participate in the survey.

No, I will not participate.

Your Boss' Organization

On this page, you'll rate the effect of a boss for whom you worked, or for whom you are currently working, on his/her organization (the company or organization or department over which she/he had or has authority). The focus here is on the organization's work culture and internal effectiveness.

2. Remember or think of a boss for whom you've worked or for whom you are working. How would you rate his/her organization/company on each of the following organizational attributes?

- Communication in the organization
- Conflict resolution -how well is conflict addressed?
- Sense of hierarchy -how hierarchical is the organization?
- Teamwork and camaraderie
- Timeliness of decision making
- Decision-making processes
- Supervision and management of employees

- Responsibility and accountability of people in the organization to their work and to each other
- Information flow -does information flow in a timely manner and is enough information shared
- Productivity -are people generally productive in the organization
- Promotion -are people promoted from within in a reasonable time frame
- Creativity -is the organization creative and does it encourage creativity in its staff
- Appropriate use of power: do people in the organization use their power appropriately without abusing it
- Leadership's energy: does the leadership have enthusiasm or energy (versus being burned out)
- Empowerment of lower level employees
- Dealing with failure in a positive, non-punitive way
- Morale -Is morale in the organization high, with people feeling generally positive about work
- Development and support of employees

Ratings of Behaviors and Characteristics

In this section, you will rate the boss on a variety of observed behaviors.

3. For each of the following behaviors or characteristics, indicate to what extent you agree that the boss exhibits the listed behavior.

- Has a negative view of others; sees people as having limited ability and tends to mistrust others
- Is humble
- Manages his or her time well
- Acts out of fear; is fearful
- Cares about social issues (e.g. justice, poverty, education, etc.)
- Does not do much in the way of coaching and developing her or his employees
- Protects staff from abusive conditions
- Is untrustworthy
- Thinks in the long-term and the big picture
- Seeks alternative ways of solving problems
- Abuses power
- Manages by walking around; is visible to staff
- Hides in his or her office, minimizes contact with others
- Openly favors certain employees by giving the same people plum work or projects
- Settles for old ways of doing things, without questioning protocol
- Is lazy
- Blames others
- Doesn't delegate and micromanages others
- Is suspicious
- Seeks out feedback and receives it with openness, and willingly learns from mistakes
- Takes chances and gets overburdened too easily
- Is egocentric; has a me, me, me attitude
- Proactively shares as much information as possible
- Doesn't take time to celebrate successes
- Is calculating and manipulative
- Does not encourage a work/life balance
- Guides and challenges employees so that they develop
- Looks for opportunities to build teams
- Lacks vision and has a myopic view of the future
- Demonstrates empathy and compassion for others
- Lacks focus and can be recklessly optimistic
- Tolerates sub-standard performance
- Seeks out the opinion and energy of others when appropriate

- Has low emotional or social intelligence
- Understands and articulates the role others play in the success of the team
- Exudes and conveys energy and hope for good outcomes
- Is physically and verbally unsettled, easily angered, and appears rattled
- Escalates disagreements fast
- Focuses on the bottom line -is financially savvy
- Builds on the past but is not constrained by it
- Talks down to people; is condescending
- Has a strong moral compass that is evident in his or her language and actions
- Controls communication and discourages contact between others
- Makes dictatorial decisions
- Gives his or her attention and kindness without effort
- Hoards information
- Is easily offended but also prone to give offense easily
- Has a compelling vision that she or he is able to communicate and around which she or he builds her or his organization
- Has high cognitive or technical intelligence
- Does not advocate for her or his employees
- Cares about the natural environment (e.g. recycling, alternative energy, global warming, etc.)
- Is rarely ruffled and keeps an even tone and affect in most situations
- Seeks out resources and is able to gain resources for his or her staff
- Avoids conflict

A Final Two Questions About Your Boss

Please remember or think of the same boss that you have been using for the entire survey to answer the question below.

4. How did you feel about working for this boss?

- I hated it.
- I tolerated it.
- It was good to work for him/her.
- I liked working for him/her a lot.
- I loved working for him/her.

5. Would you say the boss you've remembered or thought of is someone who leads from an abundance mental model or a scarcity mental model? Use your intuitive or gut reaction to answer this question.

- Scarcity mental model leader
- Abundance mental model leader
- A mix of the two mental models
- Neither mental model
- Not sure

Please share some information about you. Information on this page will help me see if different demographics experience leaders differently.

6. What is your gender?

Male
Female
Other

7. What is your age range?

21-30
31-40
41-50
51-60
61-70
over 70

8. How big is the organization, in terms of staff, that the boss you rated oversaw?

1-50 employees
51-100 employees
101-500 employees
501-1000 employees
more than 1000 employees

9. What is your race?

Black
White
Hispanic (non-White)
Asian
Pacific Islander
Native American
Bi-or Multi-racial
Other

10. In the boss' organization, where were or are you in the hierarchy?

Lowest level
Lower mid-level
Mid-level
Upper mid-level
Upper level
Top

11. In what type of industry is/was the boss' organization? (e.g. education, manufacturing, construction, agriculture, government, entertainment, financial, etc.)?

Thank You!

Thank you very much for your time and input. Your answers will be used to create an instrument for measuring a leader's place on the abundance-scarcity spectrum. If you have any questions, please do not hesitate to call me at [phone] or email me at [email address].

Many thanks, Laura

12. If you would like a copy of the survey results sent to you, please provide your email address below.

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Appendix C

Research Phases 2 and 3: Organizational Health Question, Items, and Scale

Question:

Remember or think of a boss for whom you've worked or for whom you are working. How would you rate his/her organization/company on each of the following organizational attributes?

Items:

OrgAttr1 Communication in the organization?

OrgAttr2 Conflict resolution - how well is conflict addressed?

OrgAttr3 Sense of hierarchy - how hierarchical is the organization?

OrgAttr4 Teamwork and camaraderie

OrgAttr5 Timeliness of decision making

OrgAttr6 Decision-making processes

OrgAttr7 Supervision and management of employees

OrgAttr8 Responsibility and accountability of people in the organization to their work and to each other

OrgAttr9 Information flow - does information flow in a timely manner and is enough information shared

OrgAttr10 Productivity - are people generally productive in the organization

OrgAttr11 Promotion - are people promoted from within in a reasonable timeframe

OrgAttr12 Creativity - is the organization creative and does it encourage creativity in its staff

OrgAttr13 Appropriate use of power - do people in the organization use their power appropriately without abusing it

OrgAttr14 Leadership's energy - does the leadership have enthusiasm or energy (versus being burned out)

OrgAttr15 Empowerment of lower level employees

OrgAttr16 Dealing with failure in a positive, non-punitive way

OrgAttr17 Morale - Is morale in the organization high, with people feeling generally positive about work

OrgAttr18 Development and support of employees

Scale

Terrible

Not good

Only Tolerable

Fair

Good

Fantastic

Appendix D: Rotated Component Matrix of Scarcity and Abundance Behaviors from the Phase 2

Table D1

Rotated Component Matrix of Scarcity and Abundance Behaviors from the Phase 2 Survey

	<i>Rotated Component</i>							
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
Scarcity20 Is egocentric; has a me, me, me attitude	.832	-.198	-.022	.053	.147	.066	-.168	-.019
Scarcity23 Abuses power	.810	-.168	.064	.036	.261	.097	-.263	.039
Scarcity14 Is calculating and manipulative	.804	-.173	.059	.266	.018	.097	-.155	-.024
Scarcity11 Controls communication and discourages contact between others	.773	-.192	.298	.180	.062	.107	-.019	.111
Scarcity28 Talks down to people; is condescending	.771	-.292	.146	.025	.066	.121	-.186	-.069
Scarcity15 Is untrustworthy	.765	-.149	.180	-.058	.206	.002	-.123	-.162
Scarcity8 Is easily offended but also prone to give offense easily	.719	-.298	.137	.157	.039	.060	-.025	.206
Scarcity17 Is suspicious	.690	-.255	.308	.193	.055	.179	-.064	.237
Scarcity16 Blames others	.659	-.390	.116	.127	.283	.061	-.259	.139
Scarcity12 Makes dictatorial decisions	.658	-.203	.155	.241	.268	.208	-.092	.044
Abundance14 Has a strong moral compass that is evident in his or her language and actions	-.640	.505	-.063	.017	-.158	-.063	.222	.159
Scarcity22 Has a negative view of others; sees people as having	.637	-.156	.297	.071	.191	.306	-.039	.082

	<i>Rotated Component</i>							
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
limited ability and tends to mistrust others								
Abundance7 Demonstrates empathy and compassion for others	-.588	.354	-.140	.017	-.046	-.276	.497	-.007
Abundance10 Is humble	-.583	.300	.122	-.076	-.118	-.082	.411	.127
Scarcity27 Acts out of fear; is fearful	.580	-.147	.473	.301	.237	.002	.142	-.040
Abundance6 Proactively shares as much information as possible	-.562	.549	-.212	-.198	-.019	-.177	.091	.065
Abundance5 Seeks out feedback and receives it with openness, and willingly learns from mistakes	-.555	.463	-.157	-.059	-.121	-.297	.199	.042
Scarcity24 Openly favors certain employees by giving the same people plum work or projects	.555	-.399	.067	.199	.065	.247	.035	.078
Scarcity6 Does not advocate for her or his employees	.545	-.180	.236	.393	.069	.278	-.247	-.150
Scarcity19 Is physically and verbally unsettled, easily angered, and appears rattled	.544	-.128	.333	.225	.375	.150	.047	.319
Scarcity26 Hoards information	.529	-.267	.462	.285	-.057	.123	-.055	.053
Abundance17 Is rarely ruffled and keeps an even tone and affect in most situations	-.457	.420	-.237	-.089	-.357	-.019	-.080	-.258
Abundance1 Protects staff from abusive conditions	-.449	.428	-.173	-.018	-.174	-.304	.243	-.127

	<i>Rotated Component</i>							
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
Scarcity7 Does not do much in the way of coaching and developing her or his employees	.401	-.261	.308	.282	.098	.361	-.029	-.309
Abundance4 Has a compelling vision that she or he is able to communicate and around which she or he builds her or his organization	-.306	.722	-.232	-.233	.025	-.096	.011	.165
Abundance26 Has high cognitive or technical intelligence	-.106	.709	-.120	-.084	-.025	.240	-.018	-.016
Abundance2 Thinks in the long-term and the big picture	-.317	.683	-.151	-.319	-.155	-.057	.179	.058
Abundance18 Manages his or her time well	-.073	.635	-.160	-.145	-.331	-.064	.289	.049
Abundance9 Understands and articulates the role others play in the success of the team	-.381	.627	-.145	-.170	-.187	-.241	.089	.035
Abundance3 Builds on the past but is not constrained by it	-.293	.623	-.018	-.067	-.211	-.178	.238	.200
Abundance8 Guides and challenges employees so that they develop	-.338	.613	-.166	-.262	-.193	-.312	.107	.180
Abundance11 Seeks creative and alternative ways of solving problems	-.429	.597	-.210	-.346	-.002	-.074	.134	.102
Abundance15 Seeks out the opinion and energy of others	-.487	.590	-.244	-.121	-.042	-.231	.154	-.025

	<i>Rotated Component</i>							
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
when appropriate								
Abundance13 Gives his or her attention and kindness without effort	-.554	.578	-.264	.071	-.071	-.183	.127	.045
Abundance19 Seeks out resources and is able to gain resources for his or her staff	-.212	.561	-.126	-.292	-.206	-.237	.252	-.143
Abundance16 Looks for opportunities to build teams	-.462	.553	-.166	-.240	-.100	-.330	.055	.146
Abundance12 Exudes and conveys energy and hope for good outcomes	-.400	.533	-.468	-.203	.050	-.130	.118	-.134
Abundance23 Focuses on the bottom line - is financially savvy	-.018	.498	-.008	-.090	-.405	-.164	.026	.284
Scarcity18 Is lazy	.380	-.468	.016	.127	.184	-.430	.008	-.104
Scarcity9 Hides in his or her office, minimizes contact with others	.199	-.246	.737	.195	.198	.094	-.047	-.070
Abundance20 Manages by walking around; is visible to staff	-.123	.263	-.588	.093	.000	-.019	.116	.388
Scarcity1 Has low emotional or social intelligence	.435	-.290	.450	.084	.263	.141	-.106	-.069
Scarcity3 Tolerates sub-standard performance	.032	-.323	-.043	.732	.050	-.058	.058	-.016
Scarcity25 Settles for old ways of doing things, without questioning protocol	.217	-.215	.222	.647	.129	.161	-.107	-.092

	<i>Rotated Component</i>							
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
Scarcity21 Lacks vision and has a myopic view of the future	.348	-.341	.203	.516	.283	.178	-.157	.009
Abundance21 Lacks focus and can be recklessly optimistic	.241	-.188	-.007	.124	.768	.080	-.137	-.065
Abundance22 Takes chances and gets overburdened too easily	.163	-.115	.154	.048	.722	.117	-.037	.059
Scarcity5 Does not encourage a work/life balance	.358	-.075	.029	.107	.323	.669	-.078	.079
Scarcity4 Doesn't take time to celebrate successes	.270	-.324	.167	.056	.116	.574	-.198	.158
Scarcity13 Doesn't delegate and micromanages others	.397	-.147	.057	.130	.091	.411	.094	-.269
Abundance25 Cares about the natural environment (e.g. recycling, alternative energy, global warming, etc.)	-.344	.304	-.020	-.150	-.160	-.071	.694	.099
Abundance24 Cares about social issues (e.g. justice, poverty, education, etc.)	-.397	.373	-.341	.144	.005	-.005	.492	-.063
Scarcity10 Avoids conflict	-.073	-.131	.193	.146	.033	-.056	-.073	-.689
Scarcity2 Escalates disagreements fast	.285	.121	.253	.259	.216	.105	-.344	.452

Appendix E

*Sample Text of Ads Placed on Craigslist*Sample 1

“I am looking for people who have worked for someone at some point in time to volunteer to complete a 15-20 minute online study on types of bosses. All volunteers get a chance to win a \$50 gift certificate for Amazon com!

Your answers are anonymous. You must be at least 18 years old to participate.

If you are interested in participating in this study, please email me and I will send you a link to the survey.

Thanks!”

Sample 2

“Participate in online research on bosses. Anyone over 18 years of age is eligible to participate!

The study will take only about 15-20 minutes, and all volunteers can enter into a prize drawing for a \$50 Amazon gift certificate.

Email me to receive a link to the study.”

Appendix F

Abundance Behavior Categories

The following categories emerged for abundance behaviors (Question 2) in the experts' survey:

Protector

Protects staff from abusive conditions by defending and ensuring that environment, resources, schedules, and other factors are not detrimental to the staff's physical or mental well-being

- Protects others from overwork -the balance of openness
- Consistently advocates for her team

Visionary Thinker

Thinks in the long-term and the big picture; Builds on the past but is not constrained by it and focuses on the future; Has a compelling vision that s/he or is able to communicate and around which s/he builds her organization

- Future Oriented. This does not mean ignoring the past or disavowing tradition and heritage. Quite the contrary, it involves creating a coherent and integral path from past to future. But the point is that the destination is arrived at through innovation, not through seeking to recapture some glorious golden past of organizational success. Neither is it oriented to affirming or maintaining the status quo. Strategy is set with an evolutionary eye.
- Communicates a compelling & inspired vision or sense of core purpose
- Sees possibilities
- Concrete framework with inspirational overview

- Is proactive; thinks beyond the current situation
- Looking for anyone who “gets it” (the vision) to be on the team instead of a person’s past experiences/expertise
- Visionary
- Opportunity Increasing. To the extent that business strategy creates more opportunity to have more opportunities, it can be said to be opportunity increasing. This builds directly on the work of Karl-Henrik Robèrt and The Natural Step framework that he developed (see Natrass and Altomare, 1999). Rather than just leveling off both the demands on the natural environment created by business practices and the rate at which ecosystem services are being diminished in the hope of stabilizing human activity within sustainable parameters of the planet’s carrying capacity, the idea is to operate in such a way as to create an ever more robust and supportive environment.
- Motivated by the success of the cause (not motivated by money, power...)
- Focuses on how the present relates to future goals or aspirations
- Investing in the future
- Big picture perspective
- Life Affirming. This means that both the products and the processes of the organization are non-destructive of life and the ecosystem services upon which they depend. The organization does not engage in utilitarian strategies that sacrifice the interests of a few for those of the many (or vice-versa, as is more common in actual practice). This ethic applies to dealings with both external as well as internal clients.

- Systemic and relational thinking

Authentic Learner

Seeks out feedback and receives it with openness, and willingly learns from mistakes

- Welcomes new ideas from all people and responds with appreciation
- Asks for feedback on working relationships and performance
- Is open to feedback and push back
- Accepts mistakes and failure as part of the learning experience
- Responds gracefully when his/her ideas are challenged
- Shows willingness to admit mistakes
- Shares their own frustrations, doesn't always "tow the party line"
- Trusts themselves to do the right thing
- Isn't stuck in past experiences/failures/learning
- Open to feedback
- Is not defensive - not protecting turf or image
- projects an openness to inquiry even if it takes longer

Avid Communicator

Proactively shares as much information as possible, as frequently as possible, as clearly as possible; sees information as a resource that enhances his/her team's effectiveness

- shares information
- Communicates honestly, openly and proactively about what's going on
- communicates honestly & directly
- Good communication

- Authentic in communication
- Is present in all communication (attentive, listening, responsive, etc)
- Takes time to explain needs, opportunities, changes
- Listens well and often listens actively
- Builds on others points of view
- Actively listens
- Active Listener
- Allows/encourages her employee to discuss anything with her without being critical or judgmental
- Uses appreciative inquiry skills

Compassionate Soul

Demonstrates empathy and compassion for others, understanding the complexity of life as a journey which is different for each individual

- Kindness
- Compassion (love is abundant)
- Tolerance
- Non-blaming

Challenging Mentor

Guides and challenges employees so that they develop and grow skills which matter to them and make them more effective in their work

- Challenges employees in their thinking and perceptions
- Expects excellence from her team and herself; provides her team with the necessary support to become excellent

- Give subordinates opportunities to learn
- Asks subordinates to exert extra effort
- Continually coaches and provides constructive feedback to her employees
- Allows/encourages her employees to take risks without negative consequences. If mistakes are made, the leader discusses the learnings gained from the risk as opposed to consequences
- Sets clear expectations; consistently pushes himself & others for results
- Expresses confidence in people's ability to be successful
- Supportive, encouraging words
- Encouraging
- Encourages others to do their best
- Gives stretch or high visibility projects/assignments to her employees
- Doesn't suffer the details
- Has trust in people and in process
- gives positive feedback whenever possible
- Treats people with care - so that they know they are appreciated

Limelight Sharer

Understands and articulates the role others play in the success of the team, and knows that it is rare that she or he can take sole credit for any success

- Shares praise and recognition for work of others
- Humble ("credit" is abundant)
- supporting others (rather than hoarding for self)

Divergent Thinker

Seeks creative and alternative ways of solving problems, but also seeks new ways of doing things that are accepted as the status quo; encourages and supports staff to do the same, allowing mistakes to be learning moments

- divergent, creative thinking (ideas are abundant)
- encourages and makes it safe to take calculated risks
- encourages mistakes - errors are not catastrophic
- explores diverse ideas for the greater good; proactively identifies opportunities for improvement; consistently challenges the status-quo
- Passion to transform conflict into creative solutions
- Takes risks to try out unusual approaches
- Taking risks
- Is open to new ideas
- Seeking new possibilities rather than focusing on fixing old problems
- Encourages creativity and out-of-the box thinking
- Encourages staff to bring suggestions for solutions

Enthusiastic Optimist

Exudes and conveys energy and hope for good outcomes in a way that allows fear to be heard but not to dominate

- Yes We Can! Mentality
- Enthusiastic
- demonstrates that he loves what he does
- Optimism
- Expressions of optimism, hope, possibilities

- Is more optimistic than pessimistic
- Optimistic
- Accepts/Embraces change
- Smiles
- Focuses on the positive, assumes positive intent

Generous Spirit

Gives his or her attention, compassion, and kindness without effort and in a genuine way

- Generosity
- Generosity of Spirit
- Generosity
- Service orientation

Moral Compass

Has a strong moral compass that is evident in his or her language, actions and decisions; will do the right thing even if there are organizational costs

- Strong conscience
- Is guided by doing the right thing for the organization and her employees
- Is genuine
- Trustworthy
- Is always honest and truthful
- Demonstrates highest levels of integrity
- Respectful
- Fair-mindedness

Inclusive Partner

Seeks out the opinion and energy of others when appropriate; looks for opportunities to build teams; uses consensus when appropriate but doesn't settle for mediocrity

- Actively involves her employees in important discussions and decision-making
- Engages people in the change process
- Creates a we, not me, ethos
- Encourages participation in planning and decision making
- Inclusiveness
- Problem Solver by engaging multiple view points
- Prioritizes time for sr. leaders to meet and connect on a human level; really likes his team
- Is collaborative
- Brings people together to support networking and collaboration
- Develops teams where it is safe to openly communicate

Calm Reflector

Is rarely ruffled and keeps an even tone and affect in most situations; manages his/her time well

- The practice of praxis = reflection and action combined
- Beingness (as opposed to Doingness)
- Perseveres when faced with disappointment
- Patience + Discipline + Articulated Vision
- Tolerates/embraces ambiguity
- Not-rushed (time is abundant)

- Shares time - does not seem hurried
- Owns emotions, makes “I” statements
- Doesn’t pre-judge or blame
- Grounded in reality, the facts of a situation

Resource Hound

Seeks out resources and is able to work within the organizational system to gain resources for his/her staff

- Has real resources to offer or can see resources in an environment where others discern scarcity
- Provides necessary tools and resources to her employees so that they can build their capability
- Continually removes obstacles/barriers for her employees
- Not constrained by obstacles (dates, finances, relationships...)
- Sees difficulties as challenges, not as defeat
- Is not overwhelmed by obstacles; treats obstacles as challenges
- Sees challenges as opportunities rather than threats
- Is realistic about barriers, and looks for ways to overcome them

Visible Walker

Manages by walking around

- Is visible throughout the whole organization; people know him by name and he knows most by first name
- Doesn’t avoid unpleasant situations
- Accessible, engages others versus avoids them

Weak Focuser

Doesn't focus and can be recklessly optimistic, taking chances and getting overburdened too easily

- Reckless
- Scattered
- Likely to take on too much personally
- Tendency to be too gentle with difficult staff

Other

- Since this is the first time I've heard of this model, the only behaviors that come to mind are those you mention in your introductory letter.
- Focuses on the bottom line - is financially savvy

Appendix G

Scarcity Behavior Categories

The following categories emerged for scarcity behaviors (Question 2) in the experts' survey.

Down Talker

- Sarcastic
- Condescending in response to differences of opinion
- Continually reminds staff of what they can not do
- Combative
- Disempowering
- Spends more time criticizing her employees' work rather than praising them for their good work
- Focuses on what's missing, what's wrong
- Tends to blame others
- Rarely praises others

Information Hoarder

- Tendency to guard information, to be too confidential
- Hoards ideas, access, knowledge
- Selfishness
- Communicates on a need-to-know basis
- Keeps critical information to himself
- Hordes information and resources
- Hordes resources even in a rich environment

- Hoarding resources
- Keeps information to him/herself
- Limits creativity by evoking the lack of money, time, and so forth
- Withholds important information

Scared-y Cat

- Fearful
- Expresses worry or fear
- Seems to promote fear
- Cautious/Skeptical

Risk Avoider

Sticks to what is known and settles for old ways of doing things, without questioning protocol

- Business as usual (BAU) mentality
- Not “thinking outside the box”
- Focuses on worst-case scenarios
- Stifles creativity
- Is afraid to take risks
- Avoiding risk
- Does not encourage risk taking from her employees
- Limits creativity by evoking the lack of money, time, and so forth
- Is easily threatened by new and different ideas
- Inflexible or tradition bound
- Relies on rules, procedures, policies

- Assuming that “what is, just is”

Me, Me, Me

- Egocentric ethical framework
- Me first -- look out for #1
- Self oriented (“what”'s in it for me”)
- Not good at sharing, uncollegial
- Me, me, me, my people, my organization
- Exploitative (takes but does not give in proportion)
- Possessiveness/territoriality
- Protecting self first
- Win-Lose
- Pushes own agenda at the sake of others point of view
- Assumes and acts as if others share their feelings, especially pessimism or hopelessness
- Values “loyalty” over “truth”
- Competes even when competition is not called for
- Punishes for lack of loyalty

Myopic Viewer

- Myopic and short-term concern
- Lack of understanding, appreciation and vision regarding issues of sustainability and sustainability stewardship
- Not sure where he’s headed
- Lacks vision

People Skeptic

- Sees people as having limited ability
- Suspicious
- Elitism
- Tends to mistrust others, especially optimists or those with high levels of self-confidence, judges and finds blame
- Resentful of others' successes
- Ungenerous in attitude to colleagues' behavior
- Doesn't trust others to do what's right

Power Abuser

- Covets and uses power to accomplish things (*should this be in #5?*)
- Openly favors certain employees by giving the same people plum work/projects

Unsettled Panicker

Is physically and verbally unsettled, easily angered, and appears rattled

- Impatient
- Never at peace
- Easily Irritated
- Easily Angered
- Gets rattled about time, money, information, power
- Can panic under pressure
- Doingness (as opposed to beingness)

Machiavelli

- Calculated

- Is manipulative

Untrustworthy

- Cannot be trusted
- Doesn't follow through or earn trust
- Indirect, even untruthful at times

Blaming

- Blames others for failures

Suspicious

- Is paranoid

Lazy

- Passes the buck
- Does not work as hard as she expects her employees to work

Nitpicker

Doesn't delegate and micromanages others, while hovering

- Doesn't empower others
- Is overly directive
- Requires input or final say on many decisions
- Does not delegate well
- Micro manager
- Needs to see that people are working
- Constantly tells people what they should do and how they should do it; seldom uses the participative management style

King/Queen of All S/he Surveys

Controls communication and discourages contact between others while making dictatorial decisions

- Controls conflict through autocratic decisions
- Discourages disagreement or different points of view
- My way or the highway
- Tries to control communication
- Controls situations rather than facilitates
- Inflexible with decisions
- Controlling
- Tries to control everything,
- Discourages collaboration
- Acts as if they have “all the answers”
- Does not want to be challenged
- Stifles open dialogue
- Doesn't listen or seem to believe anyone else has valuable ideas or insight
- Has little value for teamwork or collaboration; often is the source of division

Conflict Avoider

Avoids conflict

- Avoids direct conflict
- Avoids conflict

Cave Dweller

Hides in his/her office, minimizing contact with others

- Keeps to himself; is not visible
- Stays in her office and seldom affiliates with her employees
- Keeps others at a distance
- Closed to others
- Tries to not draw attention to self or work of unit
- Behaves more like an individual contributor
- Reserved

Other

- Low intelligence, especially emotional intelligence
- Plays the odds
- Escalates disagreements fast
- Tolerates sub-standard performance
- Doesn't take time to celebrate successes
- Does not encourage a work/life balance
- Does not advocate for her employees
- Does not do much in the way of coaching and developing her employees
- Easily offended but also prone to give offense easily

Appendix H

Phase 2 Leadership Measure Items

- Abundance1 Protects staff from abusive conditions
- Abundance2 Thinks in the long-term and the big picture
- Abundance3 Builds on the past but is not constrained by it
- Abundance4 Has a compelling vision that she or he is able to communicate and around which she or he builds her or his organization
- Abundance5 Seeks out feedback and receives it with openness, and willingly learns from mistakes
- Abundance6 Proactively shares as much information as possible
- Abundance7 Demonstrates empathy and compassion for others
- Abundance8 Guides and challenges employees so that they develop
- Abundance9 Understands and articulates the role others play in the success of the team
- Abundance10 Is humble
- Abundance11 Seeks creative and alternative ways of solving problems
- Abundance12 Exudes and conveys energy and hope for good outcomes
- Abundance13 Gives his or her attention and kindness without effort
- Abundance14 Has a strong moral compass that is evident in his or her language and actions
- Abundance15 Seeks out the opinion and energy of others when appropriate
- Abundance16 Looks for opportunities to build teams
- Abundance17 Is rarely ruffled and keeps an even tone and affect in most situations
- Abundance18 Manages his or her time well

Abundance19 Seeks out resources and is able to gain resources for his or her staff

Abundance20 Manages by walking around; is visible to staff

Abundance21 Lacks focus and can be recklessly optimistic

Abundance22 Takes chances and gets overburdened too easily

Abundance23 Focuses on the bottom line - is financially savvy

Abundance24 Cares about social issues (e.g. justice, poverty, education, etc.)

Abundance25 Cares about the natural environment (e.g. recycling, alternative energy, global warming, etc.)

Abundance26 Has high cognitive or technical intelligence

Scarcity1 Has low emotional or social intelligence

Scarcity2 Escalates disagreements fast

Scarcity3 Tolerates sub-standard performance

Scarcity4 Doesn't take time to celebrate successes

Scarcity5 Does not encourage a work/life balance

Scarcity6 Does not advocate for her or his employees

Scarcity7 Does not do much in the way of coaching and developing her or his employees

Scarcity8 Is easily offended but also prone to give offense easily

Scarcity9 Hides in his or her office, minimizes contact with others

Scarcity10 Avoids conflict

Scarcity11 Controls communication and discourages contact between others

Scarcity12 Makes dictatorial decisions

Scarcity13 Doesn't delegate and micromanages others

Scarcity14 Is calculating and manipulative

Scarcity15 Is untrustworthy

Scarcity16 Blames others

Scarcity17 Is suspicious

Scarcity18 Is lazy

Scarcity19 Is physically and verbally unsettled, easily angered, and appears rattled

Scarcity20 Is egocentric; has a me, me, me attitude

Scarcity21 Lacks vision and has a myopic view of the future

Scarcity22 Has a negative view of others; sees people as having limited ability and tends to mistrust others

Scarcity23 Abuses power

Scarcity24 Openly favors certain employees by giving the same people plum work or projects

Scarcity25 Settles for old ways of doing things, without questioning protocol

Scarcity26 Hoards information

Scarcity27 Acts out of fear; is fearful

Scarcity28 Talks down to people; is condescending

Appendix I

Complete Phase 3 Survey

Dear Colleague –

I am working on my dissertation in Organizational Systems at Saybrook Graduate School. I'm writing to ask for your participation and assistance in the third phase of my research. Your involvement would be to answer questions on a survey. My dissertation is focused on leadership, and I am hoping you will take a few minutes (10-15) to answer questions about a boss for whom you have worked for at some point in your life or for whom you are working now. The survey asks you to answer a few questions about what it felt like to work for that boss (the subjective experience of working for him or her), and then to rate the boss on a variety of behaviors and skills. The survey ends with a few questions about your demographics.

The survey can be completed in a relatively short period of time, or longer if you prefer. You can stop and return to the survey at a later time. Before answering the questions, the survey will ask you to accept the terms of a consent form. The consent form is long but is required for conducting research. You can accept at the bottom of the consent form page. I am hoping to have all responses in by April 30. Thank you in advance for your time, and please feel free to forward the survey to others.

As compensation for your time, at the end of the survey, you will have a chance to enter a raffle for a \$50 gift certificate for Amazon.com.

Regards,

Laura

Laura Freebairn-Smith

[phone]

[email]

Purpose:

The purpose of this research is to create an instrument to measure a leader's position on the abundance-scarcity spectrum of mental models, with a focus on leaders as bosses. I am asking people, like you, with work experience to rate a current or past leader and to report on how it felt to work for that leader. I will then look for correlations between abundance or scarcity behaviors and the affective experience of working for a leader. This project is being conducted by Laura Freebairn-Smith, MPPM, a graduate student of Saybrook Graduate School and Research Center, as part of the dissertation requirements.

Principal Researcher:

Laura Freebairn-Smith

[address]

[phone]

[email]

Procedures:

[1] This study involves filling out an online survey; this will take approximately 10-15 minutes.

Possible Risks and Safeguards:

This study is designed to minimize, as much as possible, any potential physical, psychological, and social risks to you. Although very unlikely, there are always risks in research. You are entitled to be aware of this in advance of giving your consent, as well as to know that safeguards have been taken by the researcher to minimize these risks.

I understand that:

[1] My participation shall in no way have any bearing on employment status, academic standing, course grade, or alter or deprive me of any or all services presently received in the institution and setting in which I participate, as well as those provided by the institutions sponsoring, funding, and providing oversight, inclusively, for this research project.

[2] My responses to the questions will be pooled with others and all identifiers, such as names, addresses, employers, and related information which might be used to identify me, will be given a number

[3] This consent form will be kept separate from the data I provide, in a locked file for three years, known only to the principal after which, it too, will be destroyed.

[4] The data collected in its raw and transcribed forms are to be kept anonymous, stored in a locked file accessible only to the principal researcher.

[5] Transcribed data in the form of anonymous response listings from all participants to each question will be kept indefinitely for future research.

[6] All the information I give will be kept confidential to the extent permitted by law. The information obtained from me will be examined in terms of group findings, and will be reported anonymously.

[7] There is to be no individual feedback regarding my research project. Only general findings will be presented in a summary report, to which I am entitled a copy. My individual responses are to remain anonymous.

[8] No personal information I provide associated with my identity will be released to any other party without my explicit written permission.

[9] If quotes of my responses are used in the research report for the dissertation as well as any and all future publications of these quotations, my identity shall remain anonymous unless I provide written permission to use my name at the end of the survey.

[10] I have the right to refuse to answer any question asked of me.

[11] I have the right to refuse at any time to engage in any procedure requested of me.

[12] I have the right to withdraw from participation at any time for any reason without stating my reason.

[13] I have the right to participate without prejudice on the part of the principal researcher and other persons assisting the principal researcher.

[14] It is possible that the procedures may bring to my mind thoughts of an emotional nature which may upset me. In the unlikely event that I should become upset or experience emotional distress from my participation, the principal researcher present shall be available to me. She shall make every effort to minimize such an occurrence. However, should an upset occur and become sufficiently serious to warrant professional attention, as a condition of my participation in this study, I understand that a licensed professional will be made available to me. If I do not have such a person, the principal researcher will refer me and reasonable costs up to the first two visits will be paid by the principal researcher.

[15] By my consent, I understand I am required to notify the principal researcher at the time of any serious emotional upset that may cause me to seek therapy and compensation for this upset. Regarding any concern and serious upset, you may contact the principal researcher at: [phone]. You may also contact the research supervisor of the project, Dr. Kathia Laszlo at [email]. Should you have any concerns regarding the conduct and procedures of this research project that are not addressed to your satisfaction by the principal researcher or her research supervisor, you may report and discuss them with M. Willson Williams, Ph.D., Chair of the Saybrook Institutional Review Board at Saybrook Graduate School and Research Center [email].

Benefits:

I understand that my participation in this study may have possible and potential benefits.

[1] I may find reflection on the topics of abundance, scarcity, and work culture useful.

[2] The information will likely serve as the basis for further research on leadership mental models for the researcher's dissertation,

and thus might provide future benefits to others.

[3] My participation may enable the principal researcher and others working in the topic area to make a contribution to knowledge and theory of abundance and scarcity mental models in leaders.

The researcher has examined the potential risks related to the research and believes that the ethical issues can be satisfactorily addressed without harm to participants. The potential benefits outweigh the potential concerns regarding the research.

Summary Report:

Upon conclusion of this study, a summary report of the general findings will become available. If you would like a copy of the report, at the end of the survey, please provide the address to which you would like it sent.

Disclaimer:

Participation in this study puts participants at minimal physical, psychological, and social risk. Saybrook Graduate School and Research Center will not provide compensation or medical care in the unlikely event it can be established that injuries are incurred as a result of participation in this research project.

Consent of Principal Investigator:

I have explained the above procedures and conditions to this study, and provided an opportunity for the research participant to ask questions and have attempted to provide satisfactory answers to all questions that have been asked in the course of this explanation.

Signed electronically,

Laura Freebairn-Smith

Do you agree to participate in the survey?*

Yes, I will participate in the survey.

No, I will not participate.

Please think of a boss for whom you are working right now or have worked for in the past. Think about this person for a moment and how it was or is to work for him/her. On the following pages, you will be asked to make judgements about that boss and his/her organization. The instructions will guide you through the survey.

On this page, you'll rate the effect of a boss for whom you worked, or for whom you are currently working, on his/her organization (the company or organization or department over which she/he had or has authority). The focus here is on the organization's work culture and internal effectiveness.

Remember or think of a boss for whom you've worked or for whom you are working. How would you rate his/her organization or company on each of the following organizational attributes?

- Communication in the organization
- Conflict resolution -how well is conflict addressed?
- Sense of hierarchy -how hierarchical is the organization?

- Teamwork and camaraderie
- Timeliness of decision making
- Decision-making processes
- Supervision and management of employees
- Responsibility and accountability of people in the organization to their work and to each other
- Information flow -does information flow in a timely manner and is enough information
- shared
- Productivity -are people generally productive in the organization
- Promotion -are people promoted from within in a reasonable time frame
- Creativity -is the organization creative and does it encourage creativity in its staff
- Appropriate use of power: do people in the organization use their power appropriately without abusing it
- Leadership's energy: does the leadership have enthusiasm or energy (versus being burned out)
- Empowerment of lower level employees
- Dealing with failure in a positive, non-punitive way
- Morale -Is morale in the organization high, with people feeling generally positive about work
- Development and support of employees

In this section, you will rate the same boss as you used for the prior ratings on a variety of observed behaviors.

For each of the following behaviors or characteristics, indicate to what extent you agree that the boss exhibits it:

- Builds on the past but is not constrained by it
- Thinks in the long-term and the big picture
- Seeks out feedback and receives it with openness, and willingly learns from mistakes
- Proactively shares as much information as possible
- Demonstrates empathy and compassion for others
- Is humble
- Has a compelling vision that she or he is able to communicate and around which she or he builds her or his organization
- Understands and articulates the role others play in the success of the team
- Guides and challenges employees so that they develop
- Lacks focus and can be recklessly optimistic
- Takes chances and gets overburdened too easily
- Seeks creative and alternative ways of solving problems
- Seeks out resources and is able to gain resources for his or her staff

- Manages by walking around; is visible to staff
- Exudes and conveys energy and hope for good outcomes
- Doesn't take time to celebrate successes
- Tolerates sub-standard performance
- Has high cognitive or technical intelligence
- Does not advocate for her or his employees
- Is easily offended but also prone to give offense easily
- Does not encourage a work/life balance
- Hides in his or her office, minimizes contact with others
- Gives his or her attention and kindness without effort
- Looks for opportunities to build teams
- Has a strong moral compass that is evident in his or her language and actions
- Seeks out the opinion and energy of others when appropriate
- Manages his or her time well
- Hoards information
- Is egocentric; has a me, me, me attitude
- Lacks vision and has a myopic view of the future
- Has a negative view of others; sees people as having limited ability and tends to mistrust others
- Settles for old ways of doing things, without questioning protocol
- Makes dictatorial decisions
- Blames others
- Avoids conflict
- Is untrustworthy
- Controls communication and discourages contact between others
- Is physically and verbally unsettled, easily angered, and appears rattled
- Cares about the natural environment (e.g. recycling, alternative energy, global warming, etc.)
- Openly favors certain employees by giving the same people plum work or projects
- Talks down to people; is condescending
- Abuses power
- Is suspicious
- Is calculating and manipulative
- Acts out of fear; is fearful
- Is lazy
- Is rarely ruffled and keeps an even tone and affect in most situations
- Has low emotional or social intelligence
- Protects staff from abusive conditions
- Does not do much in the way of coaching and developing her or his employees
- Focuses on the bottom line - is financially savvy
- Doesn't delegate and micromanages others
- Cares about social issues (e.g. justice, poverty, education, etc.)
- Escalates disagreements fast

- Defines and explains the work requirements clearly to subordinates
- Is very exacting about plans being followed
- Plans carefully
- Acts without considering my feelings
- Sees possibilities rather than problems
- Creates order
- Is always seeking new opportunities for the organization
- Pushes for growth
- Develops a team attitude and spirit among employees
- Makes quick decisions when necessary
- Is controlling in his/her supervision of the work
- Is friendly

Please remember or think of the same boss that you have been using for the entire survey to answer the question below.

How did you feel about working for this boss?

I hated it.

I did not like it.

I liked working for him/her a lot.

It was good to work for him/her.

I loved working for him/her.

Would you say the boss you've remembered or thought of is someone who leads or led from an abundance mental model or a scarcity mental model? An abundance mental model leader sees the world in a positive, optimistic way. She or he shares resources and information, helps develop staff, is visible, compassionate, and open-minded.

A scarcity mental model leader views the world as having limited resources and is generally pessimistic. She or he hoards information and resources, tends to be more controlling, less visible, and takes a short-term view when making decisions.

Scarcity mental model leader

Abundance mental model leader

A mix of the two mental models

Neither mental model

Not sure

What gender is the boss whom you've been rating?

Male

Female

Other

Information on this page will help me see if people with different demographics experience leaders differently.

What is your gender?

Male
Female
Other

What is your age range?

21-30
31-40
41-50
51-60
61-70
over 70

How big is the organization, in terms of staff, that the boss you rated oversaw?

1-100 employees
101-1000 employees
more than 1000 employees

What is your race?

Black
White
Hispanic (non-White)
Asian
Pacific Islander
Native American
Bi- or Multi-racial
Other

In the boss' organization, where were or are you in the hierarchy?

Lowest level
Lower mid-level
Mid-level
Upper mid-level
Upper level
Top

In what type of industry is/was the boss' organization? You can check as many as apply.

- Agriculture
- Arts
- Construction
- Consulting
- Education
- Energy
- Engineering
- Entertainment/travel
- Financial
- Food/restaurant
- Government
- Insurance
- Manufacturing
- Medical/dental
- Military
- Publishing
- Religious
- Research
- Retail
- Services, professional general
- Social services/human services
- Other (please specify)

Thank you very much for your time and input. Your answers will be used to create an instrument for measuring a leader's place on the abundance-scarcity spectrum. If you have any questions, please do not hesitate to call me at [phone] or email me at [email address].

Many thanks,

Laura

If you would like a copy of the survey results sent to you, please provide your email address below. Your email address will not be connected to your survey responses in any way.

If you would like to be entered in a raffle to win a \$50 gift certificate, please provide your email address below. Your email address will not be connected to your survey responses in any way.

Appendix J

Phase 3 Leadership Measure Items

- Abundance1 Protects staff from abusive conditions
- Abundance2 Thinks in the long-term and the big picture
- Abundance3 Builds on the past but is not constrained by it
- Abundance4 Has a compelling vision that she or he is able to communicate and around which she or he builds her or his organization
- Abundance5 Seeks out feedback and receives it with openness, and willingly learns from mistakes
- Abundance6 Proactively shares as much information as possible
- Abundance7 Demonstrates empathy and compassion for others
- Abundance8 Guides and challenges employees so that they develop
- Abundance9 Understands and articulates the role others play in the success of the team
- Abundance10 Is humble
- Abundance11 Seeks creative and alternative ways of solving problems
- Abundance12 Exudes and conveys energy and hope for good outcomes
- Abundance13 Gives his or her attention and kindness without effort
- Abundance14 Has a strong moral compass that is evident in his or her language and actions
- Abundance15 Seeks out the opinion and energy of others when appropriate
- Abundance16 Looks for opportunities to build teams
- Abundance17 Is rarely ruffled and keeps an even tone and affect in most situations
- Abundance18 Manages his or her time well
- Abundance19 Seeks out resources and is able to gain resources for his or her staff
- Abundance20 Manages by walking around; is visible to staff
- Abundance21 Lacks focus and can be recklessly optimistic
- Abundance22 Takes chances and gets overburdened too easily
- Abundance23 Focuses on the bottom line - is financially savvy
- Abundance24 Cares about social issues (e.g. justice, poverty, education, etc.)
- Abundance25 Cares about the natural environment (e.g. recycling, alternative energy, global warming, etc.)
- Abundance26 Has high cognitive or technical intelligence
- Scarcity1 Has low emotional or social intelligence
- Scarcity2 Escalates disagreements fast
- Scarcity3 Tolerates sub-standard performance
- Scarcity4 Doesn't take time to celebrate successes
- Scarcity5 Does not encourage a work/life balance
- Scarcity6 Does not advocate for her or his employees
- Scarcity7 Does not do much in the way of coaching and developing her or his employees
- Scarcity8 Is easily offended but also prone to give offense easily
- Scarcity9 Hides in his or her office, minimizes contact with others
- Scarcity10 Avoids conflict
- Scarcity11 Controls communication and discourages contact between others
- Scarcity12 Makes dictatorial decisions

- Scarcity13 Doesn't delegate and micromanages others
- Scarcity14 Is calculating and manipulative
- Scarcity15 Is untrustworthy
- Scarcity16 Blames others
- Scarcity17 Is suspicious
- Scarcity18 Is lazy
- Scarcity19 Is physically and verbally unsettled, easily angered, and appears rattled
- Scarcity20 Is egocentric; has a me, me, me attitude
- Scarcity21 Lacks vision and has a myopic view of the future
- Scarcity22 Has a negative view of others; sees people as having limited ability and tends to mistrust others
- Scarcity23 Abuses power
- Scarcity24 Openly favors certain employees by giving the same people plum work or projects
- Scarcity25 Settles for old ways of doing things, without questioning protocol
- Scarcity26 Hoards information
- Scarcity27 Acts out of fear; is fearful
- Scarcity28 Talks down to people; is condescending

Appendix K

Correlation Results of Confirming and Disconfirming Test With Attributes From Other Reliable and Valid Surveys

		Abundance_AVG_NEW	Scarcity_AVG_NEW
Abundance_AVG_NEW	Pearson Correlation	1.000	-.820**
	Sig. (2-tailed)		.000
	N	102	102
Scarcity_AVG_NEW	Pearson Correlation	-.820**	1.000
	Sig. (2-tailed)	.000	
	N	102	102
Sees possibilities rather than problems	Pearson Correlation	.738**	-.676**
	Sig. (2-tailed)	.000	.000
	N	102	102
Is friendly	Pearson Correlation	.665**	-.683**
	Sig. (2-tailed)	.000	.000
	N	102	102
Is controlling in his/her supervision of the work	Pearson Correlation	-.582**	.629**
	Sig. (2-tailed)	.000	.000
	N	102	102
Develops a team attitude and spirit among employees	Pearson Correlation	.796**	-.677**
	Sig. (2-tailed)	.000	.000
	N	102	102
Acts without considering my feelings	Pearson Correlation	-.653**	.704**
	Sig. (2-tailed)	.000	.000
	N	102	102
Is always seeking new opportunities for the organization	Pearson Correlation	.508**	-.377**
	Sig. (2-tailed)	.000	.000
	N	102	102

** Correlation is significant at the .01 level (2-tailed)

The six items expected to be neutral, not correlated with either abundance or scarcity items:

		Abundance_AVG_ NEW	Scarcity_AVG_ NEW
Abundance_AVG_NEW	Pearson Correlation	1.000	-.820**
	Sig. (2-tailed)		.000
	<i>N</i>	102	102
Pushes for growth	Pearson Correlation	.670**	-.541**
	Sig. (2-tailed)	.000	.000
	<i>N</i>	102	102
Makes quick decisions when necessary	Pearson Correlation	.460**	-.360**
	Sig. (2-tailed)	.000	.000
	<i>N</i>	102	102
Plans carefully	Pearson Correlation	.567**	-.610**
	Sig. (2-tailed)	.000	.000
	<i>N</i>	102	102
Is very exacting about plans being followed	Pearson Correlation	.277**	-.170
	Sig. (2-tailed)	.005	.089
	<i>N</i>	102	102
Defines and explains the work requirements clearly to the subordinates	Pearson Correlation	.689**	-.727**
	Sig. (2-tailed)	.000	.000
	<i>N</i>	102	102
Creates order	Pearson Correlation	.626**	-.643**
	Sig. (2-tailed)	.000	.000
	<i>N</i>	102	102

** Correlation is significant at the 0.01 level (2-tailed)

Appendix L

Phase 3 Participants' Industries

<u>Industry</u>	<u>Percent</u>	<u>Count</u>
Agriculture	0.0%	0
arts	13.2%	12
construction	1.1%	1
consulting	5.5%	5
education	44.0%	40
energy	0.0%	0
engineering	2.2%	2
entertainment/travel	3.3%	3
financial	5.5%	5
food/restaurant	4.4%	4
government	3.3%	3
insurance	8.8%	8
manufacturing	6.6%	6
medical/dental	2.2%	2
military	0.0%	0
publishing	1.1%	1
religious	0.0%	0
research	1.1%	1
retail	2.2%	2
services, professional general	5.5%	5

social services/human services	13.2%	12
Other (please specify)		21

highly technical/sophisticated software

fundraising

Non-profit agency of support service to women and child

technology

healthcare HMO

security

public health

Legal organization

Telecommunications

Non-Profit Theatre within a University

Environmental Health & Safety

Legal

Fortune 500 Entertainment company

Aerospace

HiTech

healthcare

computer/IT professional

Compliance

fundraising and advocacy

Higher education

Advertising Agency