

## CHAPTER 10

# The Evolutionary Corporation

*We are forced to choose, for the processes we have initiated in our lifetime cannot continue in the lifetime of our children. Whatever we do either creates the framework for continuing the supreme adventure of life and consciousness on this planet or sets the stage for its termination.*

*The choice before us is urgent and important:  
it can neither be postponed nor ignored.*

Ervin Laszlo — *The CHOICE: Evolution or Extinction*

**T**HE METAPHOR OF THE EVOLUTIONARY CORPORATION is grounded on the belief that real transformation at both the individual and the organizational level is possible. In fact, as Ralph Metzner points out in *The Unfolding Self*, it is said that human transformation was the only miracle that the Buddha recognized as such.<sup>1</sup> All of the great religions have at their heart the possibility of the transformation, that is to say, the evolution of the individual human being. The assumption of human evolution also is the foundation of much of modern psychotherapy. However, as our individual lives usually demonstrate, and world literature illustrates in many examples, while change may be possible, and most certainly desirable, it is rarely easy.

In the design of an effective program of either personal or corporate transformation, one of the factors most critical to success is to develop a positive vision of the new state that you are moving toward, rather than fixating on the familiar — even destructive — ways of the past. This is why visioning has become so important to organizational design praxis. It is also the essence of the back-casting process in The Natural Step framework, whereby first of all a desired future state is defined: then one steps back from the future to the present, creating one's future path in so doing. Collectively we owe an enormous debt of gratitude to the four companies featured in this book and to the many other companies on similar paths. They are actually in the process of designing

## THE NATURAL STEP FOR BUSINESS

and discovering the future of the industrial enterprise; or, as Interface puts it, they are in the process of becoming “the prototypical company of the 21st century.” Because of their pioneering steps, we can more easily create our own vision of what a sustainable enterprise would look like for us. Each will be different, just as all companies today are different. Yet to be fully sustainable, there will be core principles with which they are aligned. These include the four System Conditions of The Natural Step framework.

If there is to be a benign future for our grandchildren and their grandchildren as well as for the myriad other life forms on this planet, the future of the industrial enterprise must include ecological sustainability as surely as it now includes financial sustainability and growing social sustainability. Ecological factors will be integral to the business worldview of the 21st century. Men and women in business must become conscious of the evolutionary role that business plays in the future of this planet. They also need to take responsibility for that role. They need to help create the sustainable corporation — the evolutionary corporation. In fact, one of the great strengths of The Natural Step framework is the fact that it brings an evolutionary perspective to the sustainability discussion.

What are the characteristics of evolutionary corporations? They

- operate with a keen perception of the growing evolutionary force that human systems have become on a global scale
- take responsibility for the role industry plays as a major part of that evolutionary force
- engage in the purposeful design and redesign of products, services, processes, and systems to create a future that includes prosperity, a high quality of life, and the healthy co-evolution of human and natural systems
- work toward a positive future for shareholders, employees, customers, suppliers, communities, the global community, and the natural environment that provides the vital services which all these other systems need to survive
- extend the concept of a positive future to the well-being of future generations

*An evolutionary corporation consciously operates with a growing understanding of the dynamics of the natural systems within which it is embedded and aligns its actions with those systems.* It consciously chooses strategies consistent with vital evolutionary choices for all the systems with which it is connected and upon which it depends. Based on the case studies in Part Two, several characteristics of an evolutionary corporation can be identified: strong core values embracing sustainability, a commitment to learning, a whole systems worldview, an expanded sense of responsibility and accountability, robustness, evolutionary

consciousness and conscious evolution, and a recognition of the benefits of sustainability to business.

### **Strong Core Values Embracing Sustainability**

Values are the very foundation of corporate culture; they permeate the company's vision and guide decisions and actions from long-term planning to employees' day-to-day behavior. Core values can motivate people, engage them, and provide a source of self-esteem and pride in belonging to the company. They provide the rules of conduct and moral framework that guide a company's decisions and actions. They define that for which the company stands.

As John Elkington points out in *Cannibals With Forks*, the new agenda for business will increasingly revolve around values and ethics. Successful companies will need to become better at identifying, understanding, and responding to the values of those with whom they work and whom they serve. They will need to find out how they are viewed by stakeholders and to predict what those stakeholders' expectations are likely to be in the future. Scandic Hotels, with its understanding and practice of "interactive values creation," is a leading example of this. From an evolutionary perspective, strong core values provide the foundation of the world we want to create. Architect William McDonough reminds us that design is the manifestation of intention. Intention is built on our values. These four companies have core values of financial success and environmental sustainability. They also realize that although their commercial success must often come at the expense of their competitors, it cannot continue to come at the expense of the natural environment or future generations. In evolutionary terms, if short-term financial success leads to eventual extinction or severe diminishment of future development, it is no success at all.

### **A Commitment to Learning**

All four companies are learning organizations exhibiting

- shared vision, compelling aspirations, and a culture built on shared transcendent human values
- shared mental models about how the world works
- the capacity to embrace change and to be flexible, resilient, and inventive
- engagement, trust, and team learning, including practices that encourage generative and strategic conversation and coordinated action
- systems thinking, particularly an appreciation of whole systems thinking and acting.

### **A Whole Systems Perspective**

The challenge of complex human systems is that they are unbounded. That is, each complex problem tends to be related to every other problem. There are few

## THE NATURAL STEP FOR BUSINESS

clear boundaries of cause and effect. Factors that are assumed to be part of a problem tend to be inextricably linked to many other factors. Each apparent solution to a problem may aggravate or interfere with other problems. None of these problems can be addressed through the linear, bounded thinking of the past. To paraphrase Einstein, our current problems cannot be solved with the same system of thought that created them.

A whole systems perspective requires that corporations integrate the dynamics of natural systems into their decision-making and operations. A whole systems perspective reveals the connections between the company and all of the environments that influence it and that it influences, including the economic, social, and natural environment, whether the company's impact is immediate (such as hazardous emissions) or more remote (such as the ultimate disposal of its products at the end of their use). The whole systems perspective also implies an evolutionary time dimension as the company recognizes that its actions or its failures to act influence the possibilities for the interconnected systems to evolve and flourish over time.

Because every company is a system embedded in other systems, in order to consciously influence the trajectory of its individual, societal, or the natural/human systems evolution, it must work in coordination with other sub-systems to effect change in the larger systems. To do this, all of these companies are working with networks of other companies and organizations to achieve triple bottom line sustainability.

### **An Expanded Sense of Responsibility and Accountability**

Accountability to shareholders is a fundamental aspect of business and has traditionally been viewed as the primary measurement of corporate success. In recent years, this narrow scope of corporate responsibility and accountability has been questioned and expanded by law and public opinion to include a growing array of stakeholders, including employees, customers, suppliers, the communities affected by corporate operations, and the natural environment. The four companies studied are beginning to take what we call evolutionary and systemic responsibility, that is, responsibility for the damage they do or the contributions they make to the health and well-being of the various systems with which they interconnect. If we think back to The Natural Step perspective of the funnel (see Figure 2.2), this includes taking responsibility for the degree to which possibilities — societal and ecological — are being opened rather than more constrained for future generations.

### **Robustness**

Financial strength, competitiveness, employee loyalty and competence, and external recognition are key elements of robustness. As the case studies show, all

four companies are leaders in their fields with strong financial performances. All four are growing. They demonstrate high levels of employee loyalty, empowerment, and creativity. Each has received external recognition for their leadership both in the market and in their journeys to sustainability. They are focused on competitiveness and profitability today while positioning themselves to be competitive in the future.

In evolutionary terms, companies that are to influence their own evolution and that of their industries and societies must not only survive, they must prosper. Their prosperity provides them with the ability to experiment, innovate, and invest in new ways of doing business that are consistent with financial, social, and ecological sustainability. Their competitiveness gives them the strength to influence the way business is done in their industries. As they achieve environmental gains that others in their field still claim are impossible, the pressure to change increases on their competitors. Leadership and recognition enable the evolutionary corporation to influence the choices of consumers, policy makers, competitors, suppliers, and other businesses and organizations.

### **Evolutionary Consciousness and Conscious Evolution**

The four companies studied in this volume are developing an evolutionary consciousness. They are beginning to understand that the raw materials, energy, natural cycles, human resources, and other components of their success and wealth are based on billions of years of evolutionary processes. Their current activities, in turn, not only form the basis for the future evolution of their specific company, they also have the potential to influence the future evolution of societal and natural systems. Evolutionary consciousness demands that every human system, whether it is a corporation, a family, a community, or a nation, take responsibility for designing or redesigning its system to safeguard the ecological balance that took billions of years to create and that human systems are changing in the course of decades.

Evolutionary consciousness empowers us to engage in conscious evolution: using the creative power of our minds to collaborate consciously with the evolutionary process to guide our systems and our society toward the fulfillment of their potential. In business, conscious evolution begins with an understanding of the current impact on other systems that a company depends on or affects. It is operationalized particularly through the way key issues are defined within the organization, the framework used to guide decisions, and the way systems, products, processes, and services are designed. For most companies, this requires a new way of thinking and elevated creativity and innovation on all levels of the organization. That is the lifeblood of an evolutionary corporation. The Natural Step System Conditions and framework constitute useful conceptual tools to stimulate the process of creativity and evolutionary systems design.

### **A Recognition of the Benefits of Sustainability to Business**

Evolutionary corporations understand that society must become ecologically and socially as well as economically sustainable, and that business plays a major role in this evolutionary process. They further recognize that sustainable development — the path to a sustainable society — provides important benefits. Some of these benefits and rewards are discussed below (see also the “Final Reflections” sections at the end of each of the four case studies, which summarize many of the principal benefits each of those companies derives from engaging with The Natural Step).

#### **Ethics**

According to Mats Lederhausen, the CEO of McDonald’s of Sweden, a very unique franchise now considered to be one of the three most environmentally conscious companies in Sweden, the most compelling reason for any company to make sustainability a core corporate value is “because it’s the right thing to do.” When a 1997 survey of Canadian and American executives conducted by The Society of Management Accountants of Canada asked business leaders why their companies practised sustainable development, the most important reason given, after compliance with legal requirements, was “because it’s the right thing to do.” A report produced for the Ministry of the Environment of Canada declares: “Any business leader with a commitment to good corporate governance will recognize value in pursuing sustainable development because ‘it is the right thing to do.’”<sup>2</sup> Other reasons to support this moral imperative are cited in Table 10.1.

#### **The Bottom Line**

When costs are reduced, the benefit goes directly to the bottom line. The four companies in this study report significant cost savings as a result of sustainability initiatives. These savings derive from instituting reduced-waste or zero-waste programs as well as from reducing raw material used per unit of production and reducing operational resource needs such as energy and water. Interface, for example, has realized approximately \$75 million of savings in the first four years of its QUEST program. In addition, its innovative carpet designs, prompted by sustainability criteria, show real promise of significantly reducing the required quantity of input per unit of output. At Collins Pine, The Natural Step approach prompted an innovative alternative to burning sander dust by recycling the dust back into production. This saved an estimated \$500,000 to \$750,000 in replacement costs for just one burner and an estimated \$525,000 per year in raw material costs. Scandic Hotel’s Resource Hunt is reducing demand, and consequently costs, for energy, water, and handling of unsorted trash at a time when these resources and services are expected to increase in

Table 10.1

**Why Companies Practice Sustainable Development**

Issue and Stakeholders	Explanation
Better relations with residents of local communities	The cost of poor public relations with residents of local communities can be substantial if it results in resistance to new project start-ups, facility expansions, or ongoing developments.
Increase eco-efficiency of operations – Stakeholders: shareholders, customers, environment	The term “eco-efficiency” is a contraction of ecological and economic efficiency. It advocates <i>doing more with less</i> . Companies benefit from eco-efficiency by reducing the energy and material requirements of production.
Promote industry-wide self-regulation/affect legislation – Stakeholders: industry, government, the public	When industry and government combine expertise, practical and cost-effective self-regulatory programs and/or legislation will often emerge. It serves the public’s best interest when industry and government develop programs cooperatively.
Enhance due diligence protection – Stakeholders: corporate executives	During 1990-1995, a record number of Canadian corporate executives were convicted of environmental offenses (2.5 executives/year). Total annual environmental fines in excess of \$1 million are not uncommon in the resource sector.
Address value chain – Stakeholders: customers, suppliers, etc.	Customers are increasingly concerned about corporate practices harming the environment. ISO and the International Chamber of Commerce have developed objective criteria to assess environmental product claims.
Address media and activist pressures – Stakeholders: media and activists	Organizations such as American Rivers, Greenpeace, Friends of the Earth, Nature Conservancy, and the Sierra Club can affect public perceptions of business, thus affecting start-up of operations.
Corporate commitment to stewardship practices – Stakeholders: employees	Any corporate sustainable development program must have the support of all employees, from the boardroom to the shop floor. Employees who are “committed” to a corporate cause will work more diligently to “realize a vision.”
Lower insurance premiums – Stakeholders: insurance companies	Although few companies currently carry environmental insurance (i.e., many major companies are self-insured), insurance companies are including sustainable development initiatives in the underwriting process.
Lower bank loan rates – Stakeholders: banks	Most major banks employ senior environmental managers to assess the cumulative environmental risk associated with the lending of money for mortgage holdings, land acquisitions, etc. Interest rates are adjusted to reflect risk.
Facilitate inclusion in ethical mutual fund/investment portfolios – Stakeholders: shareholders	An increasing number of mutual funds and investment portfolios use “ethical” screens. Corporate sustainable development can facilitate a company’s inclusion in ethical portfolios, thus affecting a positive impact on share price.
Moral commitment to stewardship practices – Stakeholders: environment, economy, society	Although “traditional” business drivers (i.e., the creation of shareholder value) are central to the adoption of sustainable business practices, corporate leaders also reference a personal commitment to stewardship practices.
<b>Source:</b> Sustainable Systems Associates, Ltd.	

## THE NATURAL STEP FOR BUSINESS

cost, in some cases at a rate higher than inflation. IKEA North America has identified important energy savings in the Green Lights program. The expected annual savings from various components of just that single program are more than \$500,000.

These cost savings are only part of the story. As employees become engaged in sustainability efforts, they become more conscientious, creative, aware, and interested in how they use resources and thereby contribute to reducing the aggregate impact of the company on the environment. This creates leaner production and operations and often leads to innovations that improve both operational and environmental performance.

### Workforce Impact

The August 1998 issue of *Fast Company* magazine reports on a year-long survey conducted by a team from McKinsey & Co. involving 77 companies and almost 6,000 managers and executives. The article predicts that over the next 20 years the most important corporate resource will be talent: “smart, sophisticated business people who are technologically literate, globally astute, and operationally agile.”<sup>3</sup> The *Fast Company* article goes on to report that as the demand for this talent increases, the supply will be decreasing, setting the stage for a “talent war.” The most talented people will be looking for employers that are high performance companies, provide an environment in which they are challenged to excel, and have an inspiring vision.

A 1998 paper by Bob Willard of IBM Canada features a study done by Tom Terez entitled “Meaning At Work,” conducted in early 1997 through 15 focus groups and extensive one-on-one interviews. Terez was in contact with more than 100 people whose collective work experience exceeded 2,000 years. The study synthesized all the factors contributing to people’s meaningful work experience into “22 meaning keys” and synthesized that information further into six major themes. Some of the most interesting ones with respect to our findings are purpose — the sense that what a person does as an individual, and what the organization does collectively, truly make a difference; the lack of emphasis on money — people do not cite incentives or high pay as key ingredients of the meaningful workplace, even though they do distinguish between “fair pay” and “high pay;” and meaningfulness — there is almost a desperate eagerness to talk about meaning in the workplace.

Willard concludes: “Certainly fair compensation is an important dimension of ensuring people want to work for a particular company. However, given similar compensation plans, the McKinsey and Terez studies show that good people also want to work for a company whose values and purpose they respect.”<sup>4</sup>

An extremely high level of employee enthusiasm and morale, resulting in lower turnover of staff, is found at the four companies studied in this book. Both Interface and Scandic Hotels, for example, have been rated among the most desirable place to work in their respective countries; in each case, this occurred after sustainability become a core value. During confidential interviews at Interface, where we determined the location to be visited and the interview subjects, we were impressed by the number of people who made comments like “This is my dream job” or “I love this company” or “I really look forward to coming to work in the morning.” In every company, hourly employees and management alike expressed great pride that their company had a higher purpose than “just making money.” This translated into feelings that their jobs also had a higher purpose and that their contribution was important.

### Competitive advantages

Attracting and retaining the best employees clearly provides an important competitive advantage for companies. According to Charlie Eitel, the people and culture at Interface provide distinct advantages to that company over its competition. Eitel expressed it this way: “We’ll give our competitors our whole playbook — but they can’t execute it! I’ll tell you every play I’m going to run against you but you can’t beat me! Do you know why? You don’t have my people; you don’t have my process; you don’t have my discipline; and you don’t have my culture!”

In addition to being more attractive to talented employees, the companies studied showed improved competitiveness in several other areas as well.

**Product Innovation.** For the proactive company, the often rigorous new criteria that arise out of the challenge to produce and deliver goods and services more sustainably are powerful drivers of innovation. Interface, for example, is innovating new flooring designs at an extraordinary rate, and Interface Research Corporation is intent on discovering how to “close the loop” with respect to the entire lifecycle of its products. Among many other things, they are exploring the options for true recycling of carpet and for producing carpet with competitive qualities made from biodegradable materials such as cotton, flax, and hemp; also, they are producing the first “solar-made carpet,” made from all renewable, non-hydrocarbon based power sources. Interface knows that one of its most important markets, the commercial interiors architects, designers, and specifiers, are very interested in environmentally friendly interiors. The company is determined to innovate the products and services that respond to ecological interest *and* to exceed the competition in every other factor as well.

At Scandic Hotels, the ecological hotel room is an excellent example of an innovation that provides important financial savings in the long run and a superb “communication-of-values” function immediately. The message conveyed

## THE NATURAL STEP FOR BUSINESS

to guests is that Scandic cares about their well-beings, that these environmental rooms are both healthy and comfortable rooms to stay in, and that Scandic is contributing to safeguarding the natural environment. The competition is left with the task of catching up while Scandic forges ahead with new ideas and services.

IKEA is innovating both with respect to specific new products, such as the “a.i.r.” sofa and the children’s line of furniture which has strict environmental standards. Innovation at IKEA extends to the entire product line which is now being evaluated along environmental criteria. For example, IKEA is experimenting with the production of furniture that wastes less wood than conventional practices by using high-grade wood for surfaces that are visible, and lower grade wood, or wood previously discarded, for the portions of the product that are not visible. This both saves money and reduces environmental impact. As IKEA proceeds with its materials inventory on all its product lines, it will likely introduce numerous innovations that keep prices low for customers and reduce the environmental impacts of IKEA products — a combination that translates into real competitiveness in IKEA’s major markets.

Collins Pine is constantly innovating products in their CollinsWood line. They already produce certified sustainable plywood and particleboard. They are also innovating a service to their suppliers to help them achieve certification as well. Because Collins cannot increase the amount of fiber it takes from its forest lands and still log sustainably, it is important for them to ensure an adequate supply to build this market. This will further increase the overall market requirements for sustainably harvested timber.

**Low-Cost and High Efficiency Production.** When a company embarks upon the journey to sustainability, one of the first things it generally does is become aware of the true demands its operations make on the natural environment. This includes cataloging and analyzing its material and energy flows, the lifecycle environmental impacts of its products, and the resource requirements of its operations. This often includes everything from the kind of cups used for coffee in the office to major capital equipment and raw material requirements. The microscopic awareness this process brings to business operations from the shop floor to the executive suite generally leads to lower costs and higher efficiency with respect to resources used.

Over the long term, as these cost savings and efficiencies are realized, they can result in more competitive prices for the customer. This is particularly important to a company like IKEA where low cost to the customer for the value received is central to its business idea. As more IKEA suppliers take on the challenge of becoming more sustainable by moving up the environmental criteria stairs that IKEA sets, they are likely to experience cost savings associated with

more efficient resource use and dematerialization. These lower costs of operations will mean IKEA can maintain the lowest possible price for the consumer and remain highly competitive in the marketplace.

### **The Knowledge Base and Core Competencies for the Market of the Future.**

In *The Living Company*, Arie de Gues contends that sometime in the 20th century, the Western world moved out of the age of capital into the age of knowledge. According to de Gues, “*Knowledge displaced capital as the scarce production factor — the key to corporate success.* Those who had knowledge and knew how to apply it would henceforth be the wealthiest members of society: the technological specialists, investment bankers, creative artists, and facilitators of new understanding. This was not merely a function of the need for people to supply technical skills under the direction of their bosses. The growing complexity of work created a need for people to be a source of inventiveness, and to become distributors and evaluators of invention and knowledge through the whole work community.”<sup>5</sup>

Sustainable development is a knowledge-intensive endeavor. It requires new knowledge and new ways of thinking about every process, system, product, and operation of a business. It also requires that these be translated into specific competencies in design, production, distribution, and administration. De Gues points out that the successful company in this new age is one that can learn effectively — a trait of all four companies studied. To be competitive, a company’s products and services need to be congruent with demands and changes in the current market, to anticipate the market of the future, and to be proactive in serving its needs. If the future market is likely to become more sensitive to environmental issues because of the economic and social trends indicated in the The Natural Step funnel, then it behooves a company to learn what that market will require and to be the first, the least expensive, or the most qualified to provide it.

As the knowledge base increases within the company regarding the designs, technologies, production processes, recyclable characteristics, and other factors that a sustainable society will require, the proactive company can play an important role in sharing that knowledge with the customer. This can serve to accelerate the pace, and often the costs, for competitors who will have to catch up as market demand for sustainability-based products and services increases.

**Public Perceptions and Image.** How a company is perceived in society is vital to its continued success. Ask any company that has been the focus of negative press, justified or not, about the costs. On the other hand, the benefits of a positive image are inestimable. As companies vie for the best talent, strive for employee and customer loyalty, or seek new investors or business partners, their reputation is a vital asset. As Charlie Eitel notes, “without values, you have

## THE NATURAL STEP FOR BUSINESS

nothing.” We would add that a company also must be perceived to have those values. All the companies studied received considerable positive public recognition for their stand on sustainability. They have all received awards and positive print and television media attention for their actions.

As society moves more deeply into the funnel described by The Natural Step framework, the costs of not moving toward sustainability can only increase. Some companies will be put out of business by these costs. Others will spend a lot playing “catch up” — following as quickly as they can in the tracks of industry leaders or reacting to unexpected changes in public mood or legal requirements.

IKEA, Scandic Hotels, Interface, and Collins Pine demonstrate that the benefits of moving toward sustainability far outweigh the costs. Both Charlie Eitel of Interface and Roland Nilsson of Scandic say that although a company must make investments in the process, there has been no net cost associated with moving toward sustainability in their companies. In fact, the savings produced by increasing resource efficiency and reducing waste have provided the operating cash for launching other sustainable development initiatives. The result is a virtuous cycle, a positive feedback loop of benefits to the corporation.

### Conclusion: A Better Way

Although the future cannot be foreseen, its principles can. The role of The Natural Step framework is to focus on understanding those principles. The role of the evolutionary corporation is to apply that understanding and to become a force that moves society in the direction of sustainability.

When explaining why Interface has made the commitment to become the prototypical company of the 21st century, Ray Anderson often includes a poem written by Glenn Thomas, an Interface associate. The poem was written after Thomas heard Anderson speak about the company’s environmental mission. A few days after the speech, Anderson received an e-mail from Thomas which he describes as “one of the most encouraging moments of my life.” Thomas wrote this poem:

#### *Tomorrow’s Child*

*Without a name; an unseen face  
And knowing not the time or place  
Tomorrow’s Child, though yet unborn  
I saw you first last Tuesday morn.  
A wise friend introduced us two,  
And through his shining point of view  
I saw a day which you would see;  
A day for you, and not for me.  
Knowing you has changed my thinking,*

*Never having had an inkling  
That perhaps the things I do  
Might someday, somewhere, threaten you  
Tomorrow's Child, my daughter-son  
I'm afraid I've just begun  
To think of you and of your good,  
Though always having known I should.  
Begin I will to weigh the cost  
Of what I squander; what is lost  
If ever I forget that you  
Will someday come to live here too.*

We cannot foresee the future. We don't know whether the consequences of the current unsustainable direction of society will be ours to experience directly, or whether they will be the legacy we leave to our descendants, tomorrow's children. What we can know are the first order principles — the rules of the game — of the natural/human systems we live in and that are described by The Natural Step framework. Guided by that knowledge, we can choose to design our future in ways that are ecologically, socially, and economically sustainable.

There is a better way. We can take responsibility, individually and collectively, for the conscious evolution of our human systems. We can hold others — individuals, corporations, and governments — accountable as well. It no longer matters “who is to blame”; what matters is that we all take responsibility for the direction and impact of our society. In this generation, in our era, humans have become integral agents of evolution. More than that, we are evolution becoming conscious of itself. Will we treat these insights as just more interesting data to be filed? Or will we, in the spirit of Archimedes, use them as a lever with which to move the world? The choice is ours.