



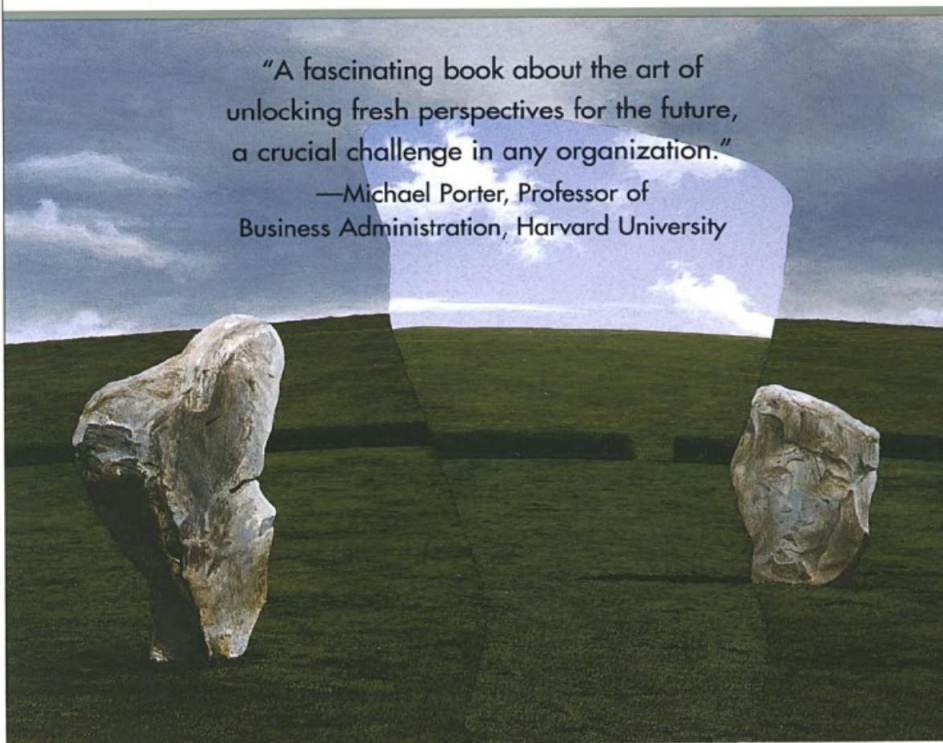
C
U
R
R
E
N
C
Y
▼
D
O
U
B
L
E
D
A
Y

The Art of the Long View

Planning for the Future in an Uncertain World

"A fascinating book about the art of
unlocking fresh perspectives for the future,
a crucial challenge in any organization."

—Michael Porter, Professor of
Business Administration, Harvard University



Peter Schwartz

PRESIDENT, GLOBAL BUSINESS NETWORK

**THE ART OF
THE LONG VIEW**
PATHS TO STRATEGIC INSIGHT
FOR YOURSELF AND YOUR COMPANY

PETER SCHWARTZ

CURRENCY



DOUBLEDAY

New York London Toronto Sydney Auckland

A CURRENCY PAPERBACK
PUBLISHED BY DOUBLEDAY
a division of Bantam Doubleday Dell
Publishing Group, Inc.
1540 Broadway, New York, New York 10036

CURRENCY and DOUBLEDAY are trademarks of
Doubleday, a division of Bantam Doubleday Dell
Publishing Group, Inc.

The Art of the Long View was originally published
in hardcover by Currency Doubleday, a division of
Bantam Doubleday Dell Publishing Group, Inc.,
in 1991.

Library of Congress Cataloging-in-Publication Data
Schwartz, Peter.

The art of the long view: paths to strategic insight
for yourself and your company / Peter Schwartz.
p. cm.

Includes bibliographical references and index.

ISBN 0-385-26732-0

1. Strategic planning.
2. Business forecasting.
3. Organizational change—Management. I. Title.

HD30.28.S316 1996

658.4'012—dc20 95-42080

CIP

Copyright © 1991, 1996 by Peter Schwartz
All Rights Reserved

Printed in the United States of America
First Currency Paperback Edition: May 1996

17 19 20 18 16

CONTENTS

<u>Introduction to the Paperback Edition:</u>	
<u>The Strategic Conversation—Broadening</u>	
<u>The Long View</u>	<u>xiii</u>
<u>The Pathfinder’s Tale</u>	3
<u>The Smith & Hawken Story:</u>	
<u>The Process of Scenario-Building</u>	16
<u>The Scenario-Building Animal</u>	29
<u>Uncovering the Decision</u>	44
<u>Information-Hunting and -Gathering</u>	60
<u>Creating Scenario Building Blocks</u>	100
<u>Anatomy of a New Driving Force:</u>	
<u>The Global Teenager</u>	118
Composing a Plot	135
The World in 2005: Three Scenarios	163
<u>Rehearsing the Future</u>	191
<u>Epilogue: To My Newborn Son</u>	211
<u>Afterword: The Value of a Strategic</u>	
<u>Conversation</u>	219
<u>User’s Guide: How to Hold a</u>	
<u>Strategic Conversation</u>	227
<u>Appendix: Steps to Developing Scenarios</u>	241
<u>Endnotes</u>	249
<u>Scenario Planning: Select Bibliography</u>	256
Index	259

ACKNOWLEDGMENTS

This book is my attempt to make available to others what I have learned in the course of the last two decades about *the art of the long view*. It is based on the opportunity I have had to work with many colleagues and friends in a variety of settings in research institutes, giant multinational companies, and most recently in a small company I helped to start. Along the way I had the privilege of having many fine teachers. Among the most important and inspiring have been Pierre Wack, Jay Ogilvy, Willis Harman, Arie de Geus, Napier Collyns, Kees van der Heijden, Don Michael, and Stewart Brand. Many others provided insight, guidance, and support. These include Arnold Mitchell, Peter Shoup, David Miller, Ted Newland, Bo Ekman, Peter Gabriel, Michael Porter, O. W. Markley, Duane Elgin, Tom Mandel, Rana Nanjappa, Mary Catherine Bateson, Francisco Varela, Peter Warshall, Alexander Singer, Johan Nic Vold, Danny Hillis, Dan Yergin, Amory Lovins, Lee Schipper, Paul Hawken, Rusty Schweickart, Lo van Wachem, Steve Barnett, Floyd Hauffe, and John Jennings. My colleagues and friends in Global Business Network have been especially helpful and patient, providing both

ACKNOWLEDGMENTS

insight and encouragement throughout the interminable process: Kay Swanson, Lawrence Wilkinson, Danica Remy, Jim Smith, Roberta Gelt, Karen Greenwood, Ken Hamik, Stephen Cass, Yana Valachovic, Nancy Murphy, Eric Best, and Lynn Carruthers.

The ideas and methods in this book owe a great deal to the senior management of the Royal Dutch/Shell Group. Our success in planning had much more to do with their exceptional capabilities as managers than with any "magic" from a new technique. They had the wisdom to develop these tools and the ability to use them with nuance and good judgment.

If this book is readable and useful it is due to the considerable talents, persistence, and support of three people: Harriet Rubin, my editor at Doubleday, whose consistent insights into the mind of the reader gave this book its form and guided its evolution, and Howard Rheingold and Art Kleiner, the two writers whose labors provided words for my often inarticulate ideas.

My most important teacher, my toughest critic, and my strongest supporter was my wife, Cathleen, who was remarkably patient during the seemingly endless gestation of this modest work while she had a briefer gestation of a far greater work, our son Benjamin.

*For my mother and father,
whose lives inspired mine.*

INTRODUCTION

TO THE PAPERBACK EDITION: THE STRATEGIC CONVERSATION —BROADENING THE LONG VIEW

The book in your hands presents the art of “taking the long view” of decisions that need to be made today. As you (or your organization, or your enterprise) prepare to invest or pull back investment, to engage yourself or disengage, to establish or close down a project, to move into new parts of the world or establish new relationships, how can you think best about the impact of your actions? How can you see, most clearly, the environment in which your actions will take place, and how those actions will fit with (or stand against) the prevailing forces, trends, attitudes and influences?

I wrote this book, initially, to show managers, business readers, and individuals how to begin using a method for investigating important decisions, a method that I and my close associates have found extremely useful for more than twenty years. And yet, this method is overlooked by most planning processes, usually because (although it includes analysis) it’s not “quantitative enough.” This method is the scenario—a vehicle, as my colleague Napier Collyns says, for an “imaginative leap into the future.”

In a scenario process, managers invent and then consider, in depth, several varied stories of equally plausible futures. The stories are carefully researched, full of relevant detail, oriented toward real-life decisions, and designed (one hopes) to bring forward surprises and unexpected leaps of understanding. Together, the scenarios comprise a tool for ordering one’s perceptions. The point is not to “pick one preferred future,” and hope for it to come to pass (or, even, work

to create it—though there are some situations where acting to create a better future is a useful function of scenarios). Nor is the point to find the most probable future and adapt to it or “bet the company” on it. Rather, the point is to make strategic decisions that will be sound for all plausible futures. No matter what future takes place, you are much more likely to be ready for it—and influential in it—if you have thought seriously about scenarios.

This book will take you through the scenario process from beginning to end. We’ll begin by learning how to articulate and isolate key decisions, those most relevant to your company. We’ll then look at timing—Are your concerns likely to be illuminated by scenarios set five years into the future? Or ten years, and even more? The next step is in-depth research, including research in places you might not ordinarily think of looking (such as “fringe” publications, conversations with “remarkable people,” and challenging environments). We will then look closely at driving forces, key factors that will determine (or “drive”) the outcome of the stories you are building. Some of these forces, you will decide, are predetermined: you already know how they will play out in your chosen time frame. Other forces are critical uncertainties, pivotal elements that will act unpredictably, and thus might influence your future. You will learn that as you talk, in depth, about the significance of each of the driving forces, plots develop into stories, and scenarios take shape. The most essential step in the process comes at the end: Rehearsing the implications. Act out your options in each of the future worlds and refine your understanding of all of them.

The scenario process provides a context for thinking clearly about the impossibly complex array of factors that affect any decision. It gives managers a common language for talking about these factors, starting

with a series of “what-if” stories, each with a different name. Then it encourages participants to think about each of them as if it had already come to pass. “What if our worst nightmare took place, and our primary business became obsolete?” Or, “What if our most desired future came to pass? What unexpected challenges would it present to us?” Or, “What if a completely unexpected series of events changed the structure of our industry? Would we be overwhelmed, or would we see the opportunities?” In the early 1980s oil companies ought to have asked themselves, “What if the price of oil collapses?” While movie studios ought to have asked themselves, “What if the VCR creates new video-rental markets rather than killing off the movie theater [as they feared]?”

Thinking through these stories, and talking in depth about their implications, brings each person’s unspoken assumptions about the future to the surface. Scenarios are thus the most powerful vehicles I know for challenging our “mental models” about the world, and lifting the “blindness” that limit our creativity and resourcefulness. Organizations that have instilled the scenario practice into their deliberations—including the Royal Dutch/Shell Group, Pacific Gas and Electric, Motorola, and my own company, Global Business Network—have managed to anticipate difficult times and opportunities that have caught managers of other organizations unawares.

In the chapters that lie ahead, you will find detailed discussions of these uses of the scenario method. Now that five years have passed since publication of *The Art of the Long View*, I realize that the scenario method also does much more. It can be used as a building block for designing *strategic conversations*—conversations that, in themselves, lead to continuous organizational learning about key decisions and priorities.

Thus, when Doubleday’s editors asked me to create

a “User’s Guide” for the paperback edition, I saw that invitation as an opportunity to expand “the art of the long view” to include the practice of strategic conversation. You’ll learn how to use the scenario method in the main text of the book, and you’ll find more information on the strategic conversation—and practical guidelines for starting a conversation—in the Afterword and User’s Guide. Once you understand the value of the strategic conversation’s balance between formality and informality, your scenario work will take on another dimension. It will no longer be project-specific, oriented to particular events. It will be part of an ongoing organizational learning process, robust and flexible enough to keep the organization from being blindsided by unexpected events, but intimately interwoven with the organization’s existing practices and relationships. Experience has shown that looking into the future is most useful when it is the beginning, not the end, of a significant conversation. The most successful managers, I believe, are those who will see their fundamental work not as making decisions, but as making mutual understanding.

All the notions we thought solid, all the values of civilized life, all that made for stability in international relations, all that made for regularity in the economy . . . in a word, all that tended happily to limit the uncertainty of the morrow, all that gave nations and individuals some confidence in the morrow . . . all this seems badly compromised. I have consulted all the augurs I could find, of every species, and I have heard only vague words, contradictory prophecies, curiously feeble assurances. Never has humanity combined so much power with so much disorder, so much anxiety with so many playthings, so much knowledge with so much uncertainty.

—Paul Valéry, “Historical Fact” (1932)

THE PATHFINDER'S TALE

This book is about freedom. In western societies, people are ostensibly free, but they feel constrained by the unpredictability of events. Every year, every decade, we are surprised by social or technological upheavals that appear suddenly, surprisingly. How can people, businesses, and institutions plan for the future when they do not know what tomorrow will bring? A deep and realistic confidence is built on insight into the possible outcomes of our choices. In this unpredictable context, freedom is the ability to act both with confidence and a full knowledge of uncertainty.

To act with confidence, one must be willing to look ahead and consider uncertainties: "What challenges could the world present me? How might others respond to my actions?" Rather than asking such questions, too many people react to uncertainty with denial. They take an unconsciously deterministic view of events. They take it for granted that some things just can't and won't happen; for example, "oil prices won't collapse," or "the Cold War can't ever end." Not having tried to foresee surprising events, they are at a loss for ways to act when upheaval continues. They create blind spots for themselves.

Scenarios are a tool for helping us to take a long view in a world of great uncertainty. The name comes from the theatrical term "scenario"—the script for a film or play. Scenarios are stories about the way the world might turn out tomorrow, stories that can help us recognize and adapt to changing aspects of our present environment. They form a method for articulating the different pathways that might exist for you tomor-

row, and finding your appropriate movements down each of those possible paths. Scenario planning is about making choices *today* with an understanding of how they might turn out.

In this context the precise definition of “scenario” is: a tool for ordering one’s perceptions about alternative future environments in which one’s decisions might be played out. Alternatively: a set of organized ways for us to dream effectively about our own future. Concretely, they resemble a set of stories, either written out or often spoken. However, these stories are built around carefully constructed “plots” that make the significant elements of the world scene stand out boldly. This approach is more a disciplined way of thinking than a formal methodology.

I’ve used scenarios with some of the world’s largest businesses and government institutions, in starting a small business, and I’ve used them to make personal decisions about my diet and health. You could use scenarios to plan a small business, to choose an education, to look for a job, to judge an investment, or even to contemplate marriage. Often, scenarios can help people make better decisions—usually difficult decisions—that they would otherwise miss or deny.

Consider, for example, the crisis overtaking the advertising industry. Beginning in the early 1980s, anyone could have looked ahead and seen the growing popularity of new communication technologies: cable TV, videocassettes, and computer-based media such as electronic mail and the Internet. This technological change was an irrevocable force, certain to shock the media industries by draining audiences—and then ad revenues—from traditional network television. No one could say exactly when the shock would come, or how it would play out, but it was clear that, within a matter of years, ad agencies would find their business either

radically changed, or severely diminished—as had the U.S. steel industry in the early eighties, for example.

While the changes were certain, their exact form was unclear. How strong would be the influence of companies such as Disney, which refused to allow advertising on prerecorded video tapes? Which consumers would be most willing to use new forms of media first? What regulatory pressures would prevent telephone companies from entering the business of distributing film and television by wire? What forms could advertising take ten years hence, and how could agencies make money at it? What would be the effect of suddenly popular new communications media, such as fax machines? A set of scenarios would have described the range of worlds that might emerge by looking carefully at important elements of the world in the early 1980s.

In 1987, the shock began to hit. Ad agency profits began to decline, people found themselves laid off, and more and more agencies had to haggle over fees with their clients. Most ad people assumed the crisis was temporary; that it would be followed by a new status quo. Today, ad agencies are in yet deeper economic trouble, still hoping for a turnaround, and still refusing to look at the opportunities—as well as the pitfalls—in the rise of new technology. I know this because, along with several other people, I began work in the late 1980s on a set of scenarios about the effects of new technologies on the media business. We found clients from every conceivable segment: a broadcast network, a telephone company, a movie production studio, and a consumer products company that places major advertisements. All but one of the advertising agencies we invited to join us in this study of its own future weren't interested. To judge from our conversations with them, they are afraid of what they might learn, as if the cost of ignorance were smaller.

Scenarios are *not* predictions. It is simply not possible to predict the future with certainty. An old Arab proverb says that, "he who predicts the future lies even if he tells the truth." Rather, scenarios are vehicles for helping people learn. Unlike traditional business forecasting or market research, they present alternative images of the future; they do not merely extrapolate the trends of the present. One common trend, for instance, is the U.S. birthrate. In the early 1970s, it hovered around 3 million births per year; forecasters at the U.S. Census Bureau projected that this "trend" would continue forever. Schools, which had been rushed into construction during the baby boom of the fifties and early sixties, were now closed down and sold. Policy-makers did not consider that the birthrate might rise again suddenly. But a scenario might have considered the likelihood that original baby boom children, reaching their late thirties, would suddenly have children of their own. In 1979, the U.S. birthrate began to rise; it is now over the 4 million per annum of the fifties. Demographers also failed to anticipate that immigration would accelerate. To keep up with demand, the state of California (which had been closing schools in the late 1970s) must build a classroom every day for the next seven years.

Often, managers prefer the illusion of certainty to understanding risks and realities. If the forecaster fails in his task, how can the manager be blamed? But in the long run, this denial of uncertainty sets the stage for surprises, shattering the manager's confidence in his or her ability to look ahead. Scenarios allow a manager to say, "I am prepared for whatever happens." *It is this ability to act with a knowledgeable sense of risk and reward that separates both the business executive and the wise individual from a bureaucrat or a gambler.*

emotionally for the change. The company's executives responded quickly. During the following years, Shell's fortunes rose. From one of the weaker of the "Seven Sisters," the seven largest global oil companies, it became one of the two largest and, arguably, the most profitable. Pierre was no longer concerned with prognostication; his concern was the mind-set of decision-makers. It was no accident that his 1985 articles on scenarios in the *Harvard Business Review* were titled, "The Gentle Art of Reperceiving," rather than "How to Predict the Future." To operate in an uncertain world, people needed to be able to *reperceive*—to question their assumptions about the way the world works, so that they could see the world more clearly. The purpose of scenarios is to help yourself change your view of reality—to match it up more closely with reality as it is, and reality as it is going to be.

The end result, however, is not an accurate picture of tomorrow, but better decisions about the future. The planner and the executive are partners in taking a long view. Thus, while Pierre Wack's seminal role is at the heart of this story, it is thoughtful and farsighted Shell executives who invited him into that role in the first place, provided him with the resources he needed, and paid him the compliment of listening to him and taking him seriously. Surrounding Pierre was an exceptionally able team, including Ted Newland and Napier Collyns, who were critical to the success of the scenario process. In this book I will focus more on the role of those whose day-to-day activities lead them to spend time taking a long view. The real value comes from the interaction with those who must decide and act.

Pierre Wack was not interested in predicting the future. His goal was the liberation of people's insights. His methods were the inspiration for the art of the long view.

The Personal Future

I have been a professional builder and user of scenarios since the early 1970s, when I began working as a futurist for a California think tank called Stanford Research Institute (now called SRI International). When Pierre Wack first came to visit SRI in 1975, I was a practitioner of the “Herman Kahn” school. I had not yet thought about changing mind-sets or re-perceiving the world. Nonetheless, I knew Pierre by reputation: he was the man who had anticipated the oil price crisis, when apparently nobody else had. He was in charge of thinking about the future at one of the largest companies in the world.

At Shell, Pierre had come to believe that if you wanted to see the future you could not go to conventional sources of information. Everyone else would know them as well and thus you would have no unique advantage. You had to seek out truly unusual people who had their finger on the pulse of change, who could see significant but surprising forces for change. These people would be found in very different walks of life, all over the world. He had come to SRI at the invitation of two such “remarkable” people—Willis Harman, who had started the futures group at SRI and had been pioneering more intuitive approaches to thinking ahead, and Arnold Mitchell, who was in the process of developing the SRI Values and Lifestyles Program, a project for classifying segments of the public according to deeper characteristics than simply age and location.

Pierre came into my office after Willis mentioned a study we had done for the Environmental Protection Agency—on the future of environmental issues. Pierre was a mysterious, elusive Frenchman, almost oriental

in appearance. I talked with him for about twenty minutes, describing my work with scenarios; we were still just describing possible futures and had not made the leap to influencing decision-makers' mind-sets. Nonetheless, a few days later, I received a telex from London: "Would you leave SRI for two years and join our team at Shell?" I demurred—one of the few decisions in my life that I've regretted. But I gradually began to work with him, performing studies for Shell, learning the art and method of Pierre's approach.

In 1982, I was offered another opportunity to join Royal Dutch/Shell's Group Planning—this time, as Pierre's replacement. He was retiring. I would be working instead with Arie de Geus, the coordinator of Group Planning, who was pursuing his own set of ideas about organizational learning. I spent five years at Shell; then, in 1987, I took the plunge as an entrepreneur starting, with a few friends, a new style of organization called Global Business Network, which brings together people from many different fields to help companies gain insight into the future. This book is based upon what I learned along the way about how to take the long view.

In the early 1970s, the most significant question a futurist could answer (I felt) involved a political vision: "What is a realistic goal for a better future?" The conventional political answers to this question when I first asked it, in the early 1970s, seemed implausible or undesirable. The right offered wealth at a high social price; a small proportion of the population could live at a very high standard, while the rest of the world's environment deteriorated. The left promised a future of forced equality, planned and managed by "experts." But even before communism collapsed in Eastern Europe, it was possible to see that central planning would

fail to meet human spiritual and psychological needs, let alone physical needs.

There is a hunger for another set of visions of a possible society. We know that prosperity is not inevitable: the economic mistakes of the late sixties and seventies led to the slow growth and volatility that followed. Moreover, as environmental problems have grown in seriousness, people have also become increasingly aware of the long-term costs of short-term wealth. Concerns about drugs and crime are the inevitable outcome of failing to meet the needs of society's most desperate people. The celebrated collapse of communism and the end of the post-war political order have left a void which could be filled, perhaps, by a major war.

I know many people who are deeply pessimistic about the future; even people who are well known and financially secure, people with loving families, people who live in the wealthiest countries in the world. To them, the future of the world has taken the image of Manila, a truly unlivable city today: crowded, poor, rife with crime and abandoned hope. But I am personally optimistic: I believe that a better political vision is emerging. Scenarios help make that possible; for one thing, they help people keep their visions of the future realistic. For another, they permit everyone to envision his or her own. I will not describe *my* future to you in this book; I will show you how to see yours.

For in the end, every scenario is personal. I have been mulling over the findings about a "human growth hormone"—a drug which, as reported in the *New York Times* on July 7, 1990, appears to reverse the effects of aging in people past middle age. The following day, the *Times* ran an editorial: "This is not the fountain of youth," it said, in effect. "It's not that big a deal." The *Times* had written a similar editorial back in October 1903, criticizing early efforts to build heavier-than-air

flying machines. The technology, they said, was theoretically impossible. Two months later, the Wright Brothers launched their plane at Kitty Hawk.

If this growth hormone works without major side effects, it could have dramatic global effects. Consider, for instance, the demographic effect: suppose the average United States life span changes from 72 to 100. We have already seen that amount of life span increase—30 years—since the turn of the twentieth century. Now the life span ceiling might rise to 150. There would be large numbers of people at 110, fewer at 120, and an equivalent number of 100-year-olds to those who are 70 today.

It sounds like science fiction, but I take the idea of the growth hormone seriously because I have followed news about genetic engineering since the early 1980s; this news report fits well with early intimations I saw that such a hormone could exist. Nonetheless, I do not say, even to myself, that such a hormone *will* exist. I am willing to admit only that it *could*—and that it would be wise to think about its ramifications in advance. The implications are profound. Population forecasts would be immediately made wrong; demographic projections depend on the birthrate and on average life spans (the death rate). If those assumptions are off by 30 percent, it could mean a population growth curve rising exponentially from previous projections. If the hormone extends the childbearing age for women, it could dramatically increase the birthrate as well.

If the hormone appears first in wealthy countries, those that use more natural resources, it could accelerate environmental disaster. Conversely, it could increase pressure for environmental quality. The long-term consequences of the greenhouse effect would be a problem not just for the next generation, but for ourselves. We would be our own posterity. People will want better health, because the hormone does not elim-

Smith & Hawken received the first container of tools, drew up a modest catalogue, and sold most everything. The second catalogue was bigger and more beautiful; the third won design awards. And the company took off. Smith & Hawken sold two hundred thousand dollars the first year, reached a million dollars in annual sales within three years, and grew to 10 million dollars annually within five years.

During the formative stages of Smith & Hawken, Paul and I were engaged in an intensive discussion on what the scenarios we were developing might tell us about the future of a small mail-order high-quality garden tool business. In the late seventies, a time of great economic turbulence, we were seeing a very high level of uncertainty. What would make sense for Smith & Hawken in any of the wide range of possibilities five or ten years in the future? Having begun the business it now became incumbent upon us to think more deeply about where we were really headed.

We had one main thing to investigate: the likeliest human needs during the 1980s and 1990s. Just gathering the background data for such a question would have required exhaustive amounts of reading: everything from economic market projections to daily newspaper reports. Fortunately, I had asked some of the same questions a few years earlier, in scenarios for the Weyerhaeuser lumber company. They, too, were thinking about entering potential new businesses. We had noticed several intriguing trends: for one thing, more consumers were demanding higher-quality goods and services. Products with planned obsolescence built in—American-made appliances, for instance—were suffering from rapidly dropping sales.

These new customers were, by and large, baby boom customers—Americans who had come of age in the late 1960s and early 1970s. In the mid-seventies Paul and I could be sure of their numbers because all

the adults of the eighties and nineties had already been born (allowing for some uncertainty due to immigration). We, of course, were members of the same group. We had an intuitive feel for their needs and desires. We assumed that the uniqueness of that group's tastes would remain, only grow and mature. It would be the major factor behind the success of any business we started. But there were many things we couldn't know for sure. For instance, we did not know what policies a Republican presidential administration would institute. Nor did we know the future of the global economy.

The Smith & Hawken Scenarios

Scenarios often (but not always) seem to fall into three groups: more of the same, but better; worse (decay and depression); and different but better (fundamental change). The Weyerhaeuser scenarios had fit that pattern. There were three very different possible images of the American economy in the 1980s:

- One image was a world of high economic growth and increasing wealth, in which young people (the maturing baby boom) made a lot of money, bought houses, and spent money on those houses. It was a world in which consumption and materialism were driving forces. Social problems would emerge, but governments and businesses would always be able to hire experts with the right technologies to solve them; meanwhile, individuals would act primarily for themselves. We called this the "Official Future." Instinctively, we felt it was unlikely. Back then, our friends assumed that some form of collapse was imminent. They saw Volkswagen Beetles as the cars of the imme-

critical question to ask was whether there would be a large enough number of people willing to pay that much for a product that was not a fancy power tool.

It was clear right away that in all three scenarios the baby boom was more of a factor than ever. A large number of people were entering the right age group to buy homes and set up households. Many would become amateur gardeners. We also began to realize that the other significant age group, those people reaching retirement age, would be natural customers for such a product, because gardening has traditionally been a popular retirement activity. Their numbers, like those of the baby boom members, were predetermined. We knew they would be plentiful.

In the first scenario—a prosperous economy—many people in the baby boom would indeed have the money. But would they buy houses? We guessed that life in the city would become increasingly difficult, businesses might leave urban areas, a second wave of babies would begin, and many people would be likely to buy suburban, semi-urban, or small-town property—the kinds of places where people have gardens. Even if the prosperity remained urban, its beneficiaries would be able to afford second homes in the country. All of which suggested a substantial increase in gardening, especially status gardening—having a beautiful garden to go along with a beautiful home. This phenomenon resonated with a trend we had been tracking, and which Paul would later describe in his book *The Next Economy*: the Europeanization of the American consumer. Paul meant that as the American economy developed and became more affluent the tastes of customers would become more sophisticated and demanding. Indeed the economy as a whole was moving from a grounding in massive industry and energy to a basis in information, skills, and efficiency; people would buy fewer things, but of higher quality.

In the depression scenario, in a world where there were a lot of potential customers who were not making much money, it was reasonable to expect many of them to practice a more serious kind of gardening. They would garden to escape from a dreary world. If they used Jeavons's double-digging methods, they could produce very high yields in their backyards. Their gardens would recall Depression homesteads and the Victory gardens of World War II. Flannel shirts, overalls, and workboots rather than designer jeans characterized the market in this world.

But why would people buy expensive tools in hard times? We reached the conclusion that they could not afford the luxury of bad tools. A carpenter can't afford a shoddy hammer; a high-quality drill is no longer a luxury, but a necessity. If you are trying to bring a crop in, you don't want to go out and buy a new shovel every couple of months when the old one breaks. The imported garden tool business, while it would not do as well as it would under a prosperity scenario, was robust enough to survive even in a depression.

In the social transformation scenario, the society would not be fabulously wealthy, but a large number of people would be fairly well off. It would become important to find pastimes which were pleasant and contributed to a better world. People would literally seek to "cultivate their gardens," as Voltaire's *Candide* had put it. In this more contemplative world, gardening would again be an important activity. It would be an act of contemplation and healing. The garden would be a place for meditation, and a potential source of healthy food. Many people would grow their own produce because of concern about pesticides and they would use such organic methods as French Intensive. Again, good tools would be in order.

The new business would prosper the most, we felt, in the Official Future scenario. But in all the scenarios