

# SELLING BLUE ELEPHANTS

HOW TO MAKE GREAT PRODUCTS THAT PEOPLE WANT BEFORE THEY EVEN KNOW THEY WANT THEM

HOWARD R. MOSKOWITZ, PH.D. AND ALEX GOFMAN, PH.D.

## PRAISE FOR SELLING BLUE FLEPHANTS

#### **ACADEMIA**

"Selling Blue Elephants promises to change the way we think about developing products. Over the years there have been a lot of books that deal with what the business person faces—most written from 20,000 feet. They're big on perspective but not on real 'how to do it.' Moskowitz and Gofman have written a book that tells the business person, anywhere in the world, how to compete effectively, no matter how small (or how large) the enterprise."

—Professor Eugene Galanter, Director, Psychophysics Laboratory, Columbia University

"The title of Howard Moskowitz's and Alex Gofman's engaging book, *Selling Blue Elephants:* How to Make Great Products That People Want BEFORE They Even Know They Want Them, almost says it all. *Selling Blue Elephants* lays out for the reader the ways that the general approach, dubbed Rule Developing Experimentation or RDE, makes it possible to design and test products, packages, messages, and services in ways that will appeal to consumers—even when the consumers are not able to articulate what it is that appeals to them. RDE is largely grounded in Moskowitz's formal training in the quantitative discipline of psychophysics, and in *Selling Blue Elephants* the authors lucidly and brilliantly give many examples of the ways they have applied this sophisticated psychophysical approach to the marketplace. Read, enjoy, and learn!"

—Professor Lawrence E. Marks, Ph.D., Professor of Epidemiology and Psychology, Director, John B. Pierce Laboratory, Yale University

"Selling Blue Elephants convincingly demonstrates the value of systematic experimentation in the design of new and improved products, be they coffee, pickles, or graphic designs. It also shows how it pays to focus on individual differences in consumers when optimizing many of these products. And it does all this with an engaging and entertaining set of real-world examples from the authors' own extensive experience.

It is as fun to read as it is educational."

—Gary Beauchamp, Ph.D., Director and President, Monell Chemical Senses Center

"Selling Blue Elephants will indubitably appeal to the global community of marketers and product developers. Moskowitz and Gofman have clearly laid out a set of knowledge-building techniques for discerning consumer minds that may change the way companies do business. Traditionally and all too frequently, business decisions are made using methods that are powerful but time consuming and cumbersome. Selling Blue Elephants solidly paves the way to change that by providing reliable, easy-to-use, affordable techniques and tools. In the hands of business practitioners, these methods might be of a tremendous value to the corporations and delight the customers by meeting their 'wants and needs' better and faster."

—Professor Vijay Mahajan, Professor of Marketing, The University of Texas at Austin

"This book is indeed an excellent masterpiece from two prominent authors and practitioners. It is an absolute 'must read item.' It provides practical insight to business leaders who wish to create the oft-wished 'thinking society and organization' among their fellow employees. The book provides a way to deal with new opportunities in a risk-conscious culture. Even more important and enjoyably so, the book shows how the organization can become far more efficient in its tasks. As a professor specializing in financial services and risk management, I am delighted to see these issues taken up, approached solidly, and solved to the corporation's benefit."

—Professor Hj Mohd Rasid Hussin, Department of Financial Services and Risk Management, MARA University of Technology, Malaysia "Whether you are an optimist or a pessimist, Moskowitz and Gofman demonstrate how the use of a technique called Rule Developing Experimentation (RDE) can turn average products into amazing products!

This book is well written with plenty of interesting stories and case studies from pickles to politics! We are introduced to Allison-the-Entrepreneur, the Lara Croft of the business world, who adopts RDE and uses it to develop a successful business. Following her adventure is a fun way to learn about the benefits of RDE.

Selling Blue Elephants is a must for any marketer or product developer who wants to learn the art of success!"

—Iain Bitran, President, The International Society for Professional Innovation Management, UK

#### CORPORATIONS

"Selling Blue Elephants is a must read for anyone wanting to understand the DNA of a consumer's mind—how to create products that people must have even before they know it."

—Mark Thompson, co-author of the international bestseller Success Built to Last (Wall Street Journal and BusinessWeek bestseller, the Top 3 of Amazon's Best Books of 2006 Editors' Picks: Business)

"Selling Blue Elephants is a must-read for anyone in business—whether you are an entrepreneur, an employee of a privately held company, or a member of a billion-dollar multinational corporation. Moskowitz and Gofman introduce readers to the world of Rule Developing Experimentation (RDE) and illustrate its applicability and value through a number of beautifully explained real-world examples ranging from pickles, pretzels, and pasta to credit cards, magazines, and presidential elections!

I can't imagine that there will be a single reader who does not get something of value out of this book."

—Phil Perkins, Senior Vice President and Director of Research, Development and Innovation, Bush Brothers & Company

"Moskowitz and Gofman have opened up to the business world a new dimension for creating innovation from the consumer's perspective. Up to now, consumers often told us their feelings about innovations *after the fact*, when it was already too late. Now we can implement the consumer's ideas early in the innovation process in order to create new products that have a greater chance of succeeding. It looks like Moskowitz and Gofman's powerful development tool can be a welcome addition to your innovation portfolio.

It can provide a blueprint for the future success of your product. Essentially the tools make the consumer your invention partner."

-Sven Gohla, Vice President, R&D, The La Prairie Group, Switzerland

"You will know (and use to your benefit) more about your competitor than he knows about himself. More about his advertising, his brochures, and the flaws in his marketing. What you do need is the breakthrough called Rule Developing Experimentation (RDE).

Read this book. Experiment. And discover the biggest competitive advantage you've ever had."

-Jerry Lee, owner, WBEB Radio Philadelphia

"Again, Howard Moskowitz has manifested with this book that he is truly the leading personality in the consumer research world. It is one thing to write a meaningful book for the market research community—it is quite another thing to write it in such a fascinating and comprehensive style as he and Alex Gofman have done. The reader will get more than just an intellectually appealing learning experience. He will enjoy the journey, discovering how wonderfully this book has been written."

-Johannes Hartmann, Vice President Consumer Insight Foods, Unilever, Netherlands

"Engaging and powerful product success stories. Not for the fainthearted or the linear minded. The Prego story is particularly close to my heart as I lived the intensity of the planning and design sessions, the various tastings, and the logistics of getting the product, the pots, the pans, and the ladles to the right cities. The rich results from this study provided 'focus' for new product development, and 'broke the paradigm' by looking beyond 'texture' and 'color' as key drivers of consumer liking.

Bravo to the authors for bringing this story and their approach to the business world, and to readers in general."

—Cecille Feliciano, former Gravies and Sauces Research Manager, Campbell Soup Company

"RDE is an intuitively compelling, powerful concept, but somehow that simple powerful elegance was lost in the academic treatment of the subject. Finally, there's a book that explains how RDE can be applied to marketing and product development in simple, clear, and (dare I say) entertaining terms.

A breath of fresh air!"

—Jeff Ewald, founder, Optimization Group, Inc.

"Moskowitz and Gofman take us through the commercial beginnings of RDE with a series of case studies in consumer packaged goods that are still exciting today. They then lead us through later applications in the area of services, communications, design, and packaging. But where the rubber really meets the road is when they lead us into the 'algebra of the consumer mind' and Mind Genomics. RDE comes alive as a powerful social, political, and commercial tool as it is applied to the construction of  $\mathrm{It}^{1}\mathrm{TM}$  databases that have the capacity to become an amazing library of insight into the consumer mind for marketers, politicians, and social engineers alike.

One of the most original marketing books in decades."

—Simon Chadwick, partner, Cambiar LLC

"Selling Blue Elephants is a refreshing, user-friendly approach to explaining to business and marketing folks something they need to know but find hard to understand: how consumers really make choices. We are creatures who communicate most about our inner preferences when we can just compare options or select alternatives, rather than attempting to analyze and explain our own behavior or beliefs. Selling Blue Elephants helps us see how apparently complex questions can be scientifically resolved through a mixture of everyday examples and light stories. I both enjoyed and learned from the read."

—Tony Cowling, President, TNS, UK

"This book is both deep in content and surprisingly easy to read. The book's ability to convey scientific information in a down-to-earth and even enjoyable medium is a tribute to the authors' enthusiasm and vision. I cannot wait to give a copy to my co-workers and friends so they can appreciate the role and contribution of market research to business success."

-Roseanne Luth, President and CEO, Luth Research

"I have seen firsthand the dramatic impact that the creative use of RDE/IdeaMap can have on a business. Beyond this incredible technique to which Moskowitz and Gofman have dedicated their professional career, they personally bring unparalleled experience and insight into the realm of accurately predicting human behavior and preference. Anyone who believes that marketing research is limited by the current imagination of the consumer—that it cannot be helpful in divining emerging or completely new categories of consumer or business products or services—is sadly mistaken.

Those who use RDE wisely will not only leave their competitors in the dust, but will get to the future much more quickly and profitably, and enjoy lasting competitive advantage."

—Don Lowry, Vice President, SEI Wealth Network (former Marketing Executive, Campbell Soup Company) "Using RDE, Howard helped us grow the Prego brand to twice its size. The optimization and category assessment methods of RDE led to the launch of the highly successful Prego Extra Chunky line and the double-digit growth of the base Prego business. In the spaghetti sauce market, we did a category audit. RDE uncovered a huge untapped niche that existed in the marketplace. We developed products for this niche and grew our market share to twice its original size by following the insights identified in the RDE-based category audit and optimization. This brilliant identification of a food segment was largely responsible for the success of the Prego brand in the market."

—Monica Wood, Vice President, Global Marketing Research Head, Novartis OTC (former Director, Market Research, Campbell Soup Company)

"Moskowitz and Gofman managed to give a twist of storytelling to methodologies, crafting their highly informative case histories into good stories that cover a wide array of industries, from food to electronics, from advertising to stock markets. Beyond the unequivocal value of their actionable Rule Developing Experimentation, this book is in itself an enjoyable opportunity to read and learn."

—Marco Bevolo, Director, Foresight and Trends at Philips Design, Royal Philips Electronics, Netherlands

"Howard and Alex don't beat around the bush. *Selling Blue Elephants* gets to the heart of the matter by Page 2, and never lets up. Executives will appreciate the accessible discussions. Analysts will love the plethora of actual examples and their lucid conceptualization. Five stars from me for this punchy, thought-provoking read for anyone in R&D, brand management, new market strategy, or just plain old marketing research."

—Shashank Tripathi, Regional Director, Asia Pacific, Universal McCann, Singapore

### **MFDIA**

"Seldom does a book come along from exceptional minds that combines whit, whimsy, savvy, and intellectual rigor, while at the same time being extraordinarily useful. *Selling Blue Elephants* is such a book. Having coached some 12 thousand people over the last three decades, I have learned that people can seldom accurately articulate the reasons for their preferences and choices. This book tells you how to solve this problem and develop profitable products.

If marketing matters to you, you have to read this book!"

—Stewart Emery, co-author of international bestseller Success Built to Last (Wall Street Journal and BusinessWeek bestseller, the Top 3 of Amazon's Best Books of 2006 Editors' Picks: Business)

"Intellectually rigorous, hugely entertaining, always thought-provoking: this is one great book."

-Roger Tredre, Editor-In-Chief, Worth Global Style Network, UK

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I lovingly dedicate our book to the lights of my life.

Thank you, Arlene, for being you and for all that you have done for me over these many years. Also to my children,

Daniel and Yaffa Moskowitz, and David and Chavi

Moskowitz. Finally, to Temima, Yosef, Ahuva, Hadassah,

Shira, Meirah, and Noach. You are our seeds of the future.

—Howard Moskowitz

To my late father, to whom I owe my gratifying life-long pursuit in search of the answers to "why?" and "how?" about the surrounding world, and to my children, Alli and Matt, and my wife, Irene, who make this guest meaningful.

—Alex Gofman



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# **Foreword**

Welcome to the brave new world, where science and knowledge meet, and perhaps give the *status quo* a run for its money.

This book is about Rule Developing Experimentation (RDE)—a business process with which a company can know more about customers than many think even possible. That information sheds light on what the company has to do to ride the wave, get the next set of customers, and then anticipate the future. Armed with these new information-gathering tools, a company can find out what turns on their current and potential new customers, insightfully create new products, successfully launch them, and happily grab market share from the competitors. Imagine this as the world for generations to come—where what you *are* means less than what you *can be* tomorrow, and what you can be tomorrow becomes increasingly simpler to achieve for a company so determined.

So with this vision of what the world's going to be like, let's return to *Selling Blue Elephants*. Moskowitz and Gofman are experienced in this world where in order to survive, businesses must understand the customers' needs, both current and not yet thought of. Translating them into successful business rules virtually overnight—and at the same time doing it inexpensively—is something that was unimaginable just a few years ago.

The authors have managed to systematize the approach so any business person can take advantage of it whenever needed. This is not one of those dreary handbooks or over-simplified manuals for people feeling challenged in marketing, product development, and so on. Howard and Alex have struck a beautiful balance; a readable scientific foundation free from mind-numbing and deep statistical excursions; a balance of hands-on experience without making the reader feel boot-camped or even coached; and principles plus case histories that are downright entertaining, informative, and educational. The book leads you on a captivating journey with each chapter introducing gradually more and more useful details about RDE widely applied from food product development to political campaigns, from advertisements to stock market predictions, from driving innovation to package and magazine cover design. And the list goes on. By the end of the book you realize you are ready to try it yourself. It is deep enough in details to let the reader jump-start RDE immediately, and at the same time general enough to stimulate a search for new applications.

When I started reading their work, I was amazed that companies could actually learn so much by systematic variation. It was surprising to me, who had grown up in a world of smart and systematic thinkers. We used some of these approaches when I worked closely with the founder of Schwab.com, but not to the extent, nor with the same rigor that our authors have done. We survived and grew, but we could have done things far faster and better than we did had we had the blueprint from experimentation. When it came time to apply this approach in our study and book, *Success Built to Last: Creating a Life that Matters*, we got a chance to use the systematic experimentation that our authors promote. It worked like a charm, and confirmed in two weeks of "scientific work" those insights that we had found in a couple of years of interviews. We authors were convinced, and in fact so convinced that we wrote up the chapter about RDE as the final "methods" chapter in our book.

One of the traditional questions of any foreword is *who is this book written* for? With Selling Blue Elephants, this is a tricky question. On one hand, brand managers, advertising specialists, product developers, marketers and market researchers, designers, communications professionals, and of course students will clearly benefit from reading this book and applying RDE to their respective fields. The general reading public will find much of this book fascinating. On the other hand, even the authors seem to be uncertain where the limits of the approach are. Who knows, maybe the biggest RDE success will come out of the areas only hinted at or not even touched in this book.

So, again, why is RDE so important? Quite simply, none of us in the business world really knows all the answers all the time. Oh, certainly there are some of us who can ride a winning streak, who may be connected to "what's going on right now." But as an investor and business builder, I think it's important to take a longer view. It's good to be right. And, I've learned over the years that nothing is better than knowledge. *Selling Blue Elephants* gives us the way to gain that knowledge about the customers' mind easily, anywhere, anytime, and for virtually any topic. The authors have, in effect, created a manifesto for change that will be equally powerful in the hands of the small business and the large corporations anywhere in the world.

Spending a big portion of my professional life trying to understand and explain to others what it entails to become successful, I feel that this book and RDE may be the most useful tools on the road to success for motivated businesspeople.

Howard and Alex have put together a really captivating book. They've woven together stories about business successes in a way that I as a businessman and investor find fascinating.

#### -Mark Thompson

Executive coach and management advisor, and co-author of the international bestseller Success Built to Last

# About the Authors

**Howard Moskowitz** is president and CEO of Moskowitz Jacobs Inc., a firm he founded in 1981.

Dr. Moskowitz is both a well-known experimental psychologist in the field of psychophysics and an inventor of world-class market research technologies. Dr. Moskowitz graduated Harvard University in 1969 with a Ph.D. in experimental psychology. Prior to that, he graduated Queens College (New York), Phi Beta Kappa, with degrees in mathematics and psychology. He has written/edited 16 books, has published well over 300 articles, and serves on the editorial board of major journals. His extensive speaking engagements span both scientific and market research conferences, as well as guest lectures at leading business schools and food science departments of universities.

Dr. Moskowitz has been the recipient of numerous awards, including the David R. Peryam lifetime achievement award by the American Society for Testing and Materials; the Charles Coolidge Parlin Award from the American Marketing Association, considered to be the Nobel Prize of market research, for his lifetime contributions to the field, ranging from product work to the optimization of consumer concept and package designs; and the 2006 ARF Innovation Award for the development of the most innovative research idea. For the past two years, Dr. Moskowitz appeared weekly as the Food Doctor on ABC NewsNow, where he anchored a 10-minute spot featuring young food and beverage entrepreneurs.

Alex Gofman is vice president and CTO of Moskowitz Jacobs Inc. Alex is well known as a co-inventor of world-class marketing and market research technologies as well as for his work in cross-science development in experimental psychology and computer science, and as the architect of the award-winning Ideamap® family of products. He has been leading the development of new technologies, algorithms, and software applications since he joined the company in 1992.

Mr. Gofman previously worked with international high-tech and software development companies in the U.S. and Eastern Europe. He authored and co-authored more than 30 papers, holds 18 patents, contributed to a concept

research book, and presented papers at multiple international conferences around the world that earned him several awards nominations. Born in an industrial region of the Ukraine, Mr. Gofman has an MS degree in Computer Science from Donetsk National Technical University, where he graduated summa cum laude in 1981.

# Acknowledgments

No writers complete a book, or even an article, by themselves. It's just not possible. We have been blessed by the wonderful people who really deserve our thanks and acknowledgment.

At Moskowitz Jacobs, we are grateful to our very talented technology group—Madhu Manchaiah, John Ma, and Prasad Tungaturthy—who created the IdeaMap.Net tool for RDE and made sure, time after time, that the RDE programs could be accessed and used by anyone, anywhere in the world. This book really paints the flowering of your contributions.

We greatly appreciate our capable research team who consistently ensured that the RDE technology and application turned into actionable business information. Their efforts have helped hundreds of corporations around the world achieve development, marketing, and sales goals.

Our marketing support team helped us through the process. Suzanne Gabrione proofread the book, ably assisted by Joyce Mitchell. This dynamic duo found many errors that we made, and all through the editing process offered many 'reader-oriented' suggestions for style and language that we gratefully incorporated.

We are thankful to our friend and colleague, Marco Bevolo of Philips Design in Eindhoven, who was a continuing source of inspiration. Marco provided a unique, artistic, and often refreshingly different point of view for many of our business ideas. He is a wonderful and precious colleague.

We save our greatest acknowledgment for the Prentice Hall team with whom we worked for two good, quite enlightening years. They offered a continuing source of ideas, inspiration, direction, education, and occasionally great fun in conversation.

Our grateful thanks go to three individuals in particular.

Dr. Jerry Wind, Lauder Professor at Wharton, was and continues to be our mentor, guiding us in both writing and indeed thinking of new applications. Jerry, we thank you for inspiration we could have received nowhere else.

Tim Moore of Prentice Hall provided ongoing encouragement, direction, and most of all a warm shoulder to lean on. You motivated us again and again as we struggled with the right language, balance, and direction. Thank you very much, Tim, for your never-failing guidance.

Martha Cooley of Prentice Hall became our guide, our vade mecum, through the intricacies of publishing. We could always turn to her for guidance, for a point of view, and for direction in this world of business. Martha, thank you for being there for us.

Of course, no acknowledgments would be complete without recognizing the people who actually put the book together, managed the publicity, and essentially kept us eager authors "in line" with their direction during editing and production. Our thanks go to Pam Boland, assistant to the publisher; Russ Hall, development editor; Amy Neidlinger, marketing director; Amy Fandrei, publicist; Megan Colvin, marketing coordinator; Michael Thurston, production editor; Alan Clements, cover designer; Bill Camarda, cover copy writer; copy editor Krista Hansing; and proofreader Sarah Kearns of Water Crest Publishing. Thank you all.

## IN MEMORIUM

Kathleen MacDonnell (1949-2007) friend, colleague, early proponent, and staunch patron of RDE. It was Kathleen more than anyone who was responsible for giving us the chance at The Campbell Soup Company to create the success of Prego, which in turn inspired us to further evolve RDE to where it is today. Kathleen, we will miss you greatly.

# INTRODUCTION

# BUSINESS WISDOM FROM THE MOUTH OF DR SFUSS

One of the most publicized stories of extremely aggressive development and marketing for a "revolutionary" food product is Dr. Seuss's *Green Eggs and Ham.*<sup>1</sup>

Like any good salesman, Sam-I-am, the marketer and indefatigable creator of the new product, is full of energy and passion. The story starts with a grumpy "customer" who leisurely reads his newspaper. Using stratagem after stratagem, Sam tries to get his customer to try his revolutionary product: green eggs and ham. The customer repeatedly refuses, claiming he simply does not like it. Sam tries multiple tactics to win the customer, but without success, which, in the end, lead to frustrating trial-and-error iterations, not particularly productive, always painful, and sometimes costly.

Sound familiar?

Sam randomly tests different ideas: a train meal ("on a train"), fast food ("in a car"), even an outdoor picnic ("in a tree"). None works. Then Sam tries a "home-made" message ("in a house"). Different packaging options still do not produce expected results ("not in a box"). Sam's emotional messages, playing on the appeal of friendly dinner situations ("with a mouse...with a fox") still fail to increase purchase intent. All those messages fall on deaf ears. Sam's clever insight was to manipulate color ("in the dark"), but by then, it was too late; his customer had already formed new and unwanted preferences, so Sam simply ran out of luck.

Although successful (the product was finally sold, with an eestatically happy customer as a result), Sam's nonsystematic "trial-and-error" approach was simply too inefficient. Even worse, Sam might well have antagonized his customer during his pursuit, leading to the customer's complete rejection of the product—and possibly the rejection of Sam's whole brand.

What was wrong? Sam felt that he was doing his best. He was sincerely following a typical strategy: seemingly haphazard, random experiments to find a selling formula for his product. Sam wasn't particularly successful, expending lots of energy and going far out of the way to achieve his marketing goal. The missing critical part was the systematic nature of the experiments—or, more correctly, its absence.

Fast-forward. Meet Allison-the-Entrepreneur, a very ambitious and entrepreneurial recent MBA graduate fascinated with Sam's work. Armed with Sam's experience, as limited as it is, and dedication, Allison decided to put an even more revolutionary product, blue eggs, on the market. How would she design and promote her innovative food item in today's highly competitive market of egg-based products? Instead of random, haphazard efforts, we will see how Allison grabs hold of the full power of Rule Developing Experimentation (RDE). Allison-the-Entrepreneur will show how today's new development tools take her far beyond Sam, into a competitive world, with a lot less effort and a lot more success. Indeed, she will soon discover that RDE can help her create, market, and sell virtually any product better and faster. Even selling blue elephants will not be a particularly far-fetched business proposition for Allison!

## WHAT IS RDE?

RDE is a systematized solution-oriented business process of experimentation that designs, tests, and modifies alternative ideas, packages, products, or services in a disciplined way so that the developer and marketer discover what appeals to the customer, even if the customer can't articulate the need, much less the solution!

You got an assignment to launch a new credit card for your bank. How do you make consumers pick your offer out of hundreds and hundreds of lookalikes? The marketing department suggested conducting a survey of a targeted group of consumers. What should customers read in a credit card offer to convince them to apply? Well, what if we just *ask them* what kind of APR, rewards, annual fees, appearance, name, and so on they'd like? Sounds like a very prudent way to obtain consumer insights to innovate. In fact, a very big chunk of consumer research is still done this way.

As you can guess, the results of this market research exercise turn out to be quite predictable. The consumers want 0% APR, no annual or transaction fees, and, of course, a bunch of meaningful, expensive benefits that are easy for them to earn and to redeem.

Wow! How "insightful" these findings are! But are they feasible? Can you act on them? Did you solve the problem or just identify it? Have you discovered rules as a result of this research, the way the world operates, so you can do far better? Can you even afford the solution?

The challenge is that, in many cases, consumers cannot articulate exactly what they need, want, or like. Is there a way to solve the problem? In focus group after focus group, developers and marketers are often stymied, despite their best efforts. However, the solution comes quickly, often blindingly so, when the developers and marketers take their time to identify and experimentally explore the factors that could drive consumer interest—whether features of a credit card, sweetener for a soft drink, color and picture for a package, or a specific message for an advertisement. Show the customers (or let them try) several systematically designed prototypes, and they will tell what they like, what they do not, and what does not make any difference to them. The experimental design used for the prototypes creation will "magically"

return to you what each individual feature (option or ingredient) "brings" to the party. Now you have a clear way to create rules for winning offerings or new best-selling products by combining those features into the best possible combinations—even if no consumer ever tested these specific combinations. You will see this simple, structured process in many examples later in this book.

Different types of RDE are surprisingly similar to each other. You follow these straightforward steps:

Think about the problem and identify groups of features that comprise the target product (offering, etc.). For example, in the case of a soft drink formulation, the variables could be Amount of Sugar, Acid, and so on. In credit card RDE, the variables (categories of features) could be Annual Fees, APRs, Rewards Options, and so on. Every such variable (or a "bucket" of ideas) comprises several alternatives. For example, when you work with a beverage, sugar content may be 6, 8, or 10 units; when you work with a credit card, APR may be 0%, 4.00%, 9.99%, 15%, and 21.99%. So the first step is to do your homework and structure the problem. This is the most difficult part of your job. Here is where your expertise comes in. Be aware of the GIGO (Garbage In, Garbage Out) principle to appreciate the importance of the first step. The good news is that you can throw many ideas into the buckets for customers to test. The rest of the process is highly automated, virtually painless.

Mix and match the elements according to a special experimental design (a schema of putting together elements)<sup>2</sup> to create a set of prototypes. The second step is usually done automatically by a tool that creates a unique individual design plan for each respondent, resulting in individual models of utilities for each respondent.

Show the prototypes to consumers (or let the respondents taste them, in the case of products) and obtain their reaction (usually, purchase intent, liking, or interest in the idea). The third step is typically an automated Web survey or a taste exercise in a facility.

Analyze results<sup>3</sup> (build individual models) using a regression module. The magic of experimental design estimates the contribution of each individual element to the liking scores that a consumer would assign, whether the contribution is positive (so the liking is higher) or negative (so the liking is lower). Colloquially, analysis shows what everything brings to the party. This analysis is automated. Shortly after completing the survey, RDE tools provide a table of utilities (individual scores of elements), the building blocks of your new products.

**Optimize.** To uncover your *optimal product* or ideas, you just need to find (usually an automatic process as well) the best, or optimal, combination that has the highest sum of utilities. It is that simple!

Identify naturally occurring attitudinal segments of the population that show similar patterns of the utilities. The segments span demographically and socially among different groups of people. By creating rules for the new products or services using the attitudinal segments, it's possible to increase the acceptance by 10–50% or even more. You don't have to worry about creating modestly better products averaged for everyone when you can create superb products for selected people. The good part of the process is that it is (as you can guess by now) also an automated procedure.

Apply the generated rules to create new products, offerings, and so on. Want to have a credit card optimized for value-oriented middle-aged customers? Just "dial in" the parameters in the tool, and voilà! Here is the best possible offering! Want to offer a credit card for young professionals? You have the data already—just "dial in" what you want, and the rules are immediately generated.<sup>4</sup> This step is the most fun to use.

RDE *breeds* market success through knowledge by clearly and dramatically revealing how specific factors drive consumer acceptance and rejection. Best of all, RDE prescribes for business what to do, rather than just leaving the suggestions as hypotheses. RDE produces actionable rules (directions), even if there was no inkling or iota of direction about what to do at the start of the RDE process. And best of all, these rules can be the powerhouse for sustained competitive advantage because they show how the world works.

### THE ROOTS OF RDE

Let's trace the origins of RDE. It has an interesting history, filled with dollops of experimental psychology, a healthy dose of business pragmatism, and the vision of a new branch of social science.

First, the tools of experimental psychology. RDE is founded on the realization that perception and behavior are linked in a two-way exchange. If you increase the level of sweetener in Pepsi Cola, it will taste sweeter. Liking can change as well—consumers can grow to prefer the sweeter cola. In fact, if you want to create an optimum Pepsi, one strategy changes sweetener level, measures sweetness, measures liking, and finds where liking reaches the highest or optimum level. This is a simple example of RDE. You change the stimulus, you measure the response, you find the pattern or the rule, you make the product, and, hopefully, you succeed in the marketplace more than you did before. So RDE is, in part, a branch of experimental psychology.

**Second, the driving power of business.** Businesses make products, offer services, and, for the most part, try to do so with some profit. With increasing competition, you are better off when your offering is "new" (at least, perceived to be a fresh idea), "better" (according to the people buying it), and "profitable" (at the end of the day, after all the costs have been factored in). You may be lucky to guess correctly about the product or message in business, if you are the so-called golden tongue, a maverick executive, one of the truly talented. For the other 99% of people, it's good to know how the world works and the rules by which to make the offering better and cheaper—of course, all the time doing it faster. Unless you are in that 1% of incredibly gifted or lucky predictors, business works better with rules. These rules will tell you how to create winning formulations that taste great. better messaging that grabs customers, better packages, or magazines that fly off the shelf. RDE is about how best to perform each of these tasks. RDE produces results every time you use it. The process takes just days, not years. In some cases, the results were obtained in just a few hours. That speed and accuracy are good for business.

Third, the world-view of social science. Formal, scientific experimentation in social science with the express objective of generating rules is just beginning. Not much has been done yet in the way psychologists and business-people do experiments. However, RDE is related to a field called adaptive experimentation (AE),<sup>5</sup> or adaptive management. AE tries to find answers to ecological or social problems through trial and error, using feedback to drive the next steps. At each step in this process, the researcher looks at the data, tries to discern a pattern that might exist, and adjusts the conditions. The most publicized cases of AE are very lengthy, large-scale, even monumental projects in ecology, theoretical science, or the sociology/environmental area. However, AE doesn't generate rules. Instead, AE searches for workable solutions using the process of experimentation. AE is not defined by a simple experimental structure with finite steps, nor is it governed by limited time frames. RDE comes into social science by using experimental methods to understand the algebra of citizens' minds.

RDE is not a new idea. Parts of it have been around a long time, but it takes a while to sink in. In some respects, RDE is obvious, in the same way that two well-known platitudes are evident:

- Every parent realizes this simple truth, handed down from mother to child, from mother to child: Do your homework and you'll be promoted to second grade.
- Most people in agriculture realize that the following well-known Irish proverb contains a lot of truth: *The best fertilizer is the farmer's footsteps.*

# WHY RDE?

RDE evolved from other breeds of experimentation because companies recognized the nature of their competitive environment, knew that they had to be "better," and began to recognize the value of disciplined development. When a few years ago Hewlett-Packard faced a sustained erosion of its position in the market, despite the fact that its products were comparable or even superior to what its rivals offered, management decided to rethink the marketing strategy and build a decision-making structure based on evidence.

In a sense, RDE helped turn around Hewlett-Packard. (See Chapter 1, "Hewlett-Packard Shifts Gears," for details about the sustained use of RDE in high-tech companies such as HP.) When the goal was to create a better pasta sauce (as with Campbell Soup with its Prego), a good RDE strategy systematically explored the ingredient factors that made pasta sauce better, and soon afterward created a significantly better sauce. (Chapters 2, "Maxwell House's Calculus of Coffee," and 3, "Dialing Up Delicious: Major Discoveries from Vlasic and Prego," show several great examples of RDE use by major food companies.) When the very difficult goal was to create messaging for a better Playtex tampon so women would feel safe and discreet, that, too, was grist for RDE, which optimized the messages every bit as easily as it handled, say, the messaging for computers, credit cards, or cars. (Explore Chapter 4, "How to Make People Feel Good Even When They Pay More," for RDE use in message optimization.) When the goal was to create better package designs that jumped off the shelf for Swanson frozen dinners, RDE was beginning to be accepted in that world of design and did its job, again with a clear increase in sales. (Chapter 7, "Bridging Cool Design with Hot Science," demonstrates RDE use for package and magazine cover designs.) Of course, no one would ever claim that experimentation could replace artistry in design, in communication, or even in the technicalities of product creation. It was just that RDE systematized the process of discovery and development.

What about sustained innovation, political and social areas, and the stock market? RDE found its home there as well (see Chapters 6, "Rubik's Cube of Consumer Electronics Innovation"; 10, "RDE Defeats Murphy's Law and 'Bares' the Stock Markets"; and 11, "Asia Calling, Ltd.: The China Angle," correspondingly).

Sounds good, but shouldn't one have a triple Ph.D. in statistics, psychology, and social studies to use RDE? And be versed in long formulas with Greek letters? Perhaps, in the early days, but not recently. Now the answer is "Not at all."

At one time, to drive a car, you needed to intimately know the engine, transmission, and all those complex things under the hood and below the floorboards—and you were expected to fix your car yourself. With time, more people had to drive, and the cars evolved into something easy to use (albeit, much more technologically sophisticated). This, by itself, allowed even more people to drive. How many drivers on the road now even know where the transmission is located? The same is happening to RDE. Something invented and designed by the most educated people in the

industry is now ready to be used by any businessperson with the same ease that today's personal computer can be used. More companies have used RDE on a sustained basis to survive and overpower their brutal competition. This need for RDE enticed the development of new tools that made it easier. In turn, RDE became easier to use, and often with a lot of fun. Applying Malcolm Gladwell's metaphor, RDE is now reaching a tipping point.

### FOX HUNTING PRODUCT DESIGN WITH RDE

Let's go to a game called "finding a fox in the forest." Fox hunting, or transmitter hunting (also known as T-hunting or radio direction finding), is a popular activity among amateur radio operators. We think that the skills acquired in the game might be very useful for the astute business leader or product developer. A skilled fox hunter can find the "fox"—a hidden transmitter—quickly, easily. Can the brand manager, product developer, or corporate C-suite executive learn to find his or her product "fox" as readily? Our quest takes us to the Albuquerque Transmitter Hunters competition.<sup>7</sup>

The transmitters—the "foxes"—are deliberately hidden somewhere and are "hunted" by participants using radio direction–finding techniques. The technique is quite simple. The hunter has a receiver with the large antenna and needs to experiment with the direction of the antenna. Even the smallest tilt of the antenna changes the strength of the signal (the antenna is very selective and has a very narrow angle of vision). Therefore, it is crucial to keep experimenting with the position of the antenna and adjust movements accordingly. Each new adjustment and move ideally brings the hunter closer to the target. Made a wrong step—and the victory is lost to a competitor who found the direction faster.

Sound eerily familiar to what you've experienced recently? Think of the last product, the last advertisement, the last package, and what it took to get there. In one variant of the hunt, five transmitters send out the signals in sequence, each of them on for just a minute. The objective: to discover all the transmitters as quickly as possible before time runs out. Hunters need to adopt a working strategy and make a sequence of tactical decisions, not much different from what a developer or marketer does, but rather than competing for customers, the hunters are simply playing a game to discover the transmitters.

It's clear that the game of fox hunting parallels the game of business.

- Firms create new products or services, and, in many cases, they do so in completely new areas (our "wild" forest with hidden transmitters).
- There may be more than one opportunity, so a firm must create a priority list of ideas (a player's sequence of transmitter hunts).
- Little information is known about these new products or services (unknown location of the "foxes"). One has to listen carefully for weak signals from the customers, who might not even know that they are broadcasting a new opportunity (listen to the receiver).
- To find the new killer idea, the developer or marketer should try many new options, moving gingerly in measured steps to maximize learning and success (rotate the antenna in different directions).
- Sometimes the step is quite small but can produce huge results (the slightest tilt of the antenna can make a big difference in the assumed direction, so get it right).

If you think about this game, you might feel as if you've been hunting foxes your whole life. But, more important, how successful do you think you'd be in fox hunting if you were working with a badly tuned or outdated receiver or, even worse, playing the game without one? You'd see immediately that there would be little hope of winning.

The same applies to the business environment. Without the knowledge and power of RDE, it's likely that you—and just about any other businessperson—will wander around far longer in the search of the new product or message, and quite likely will miss the most valuable opportunities. In the best-case scenario, you will probably find one or a few good workable ideas, about the same time that your competition does. RDE changes those odds dramatically—and, of course, changes them in your favor.

# COMPANIES ARE USING RDE. WHETHER THEY KNOW IT OR NOT

You don't always find what you're looking for—but you rarely find what you're not looking for.

Skeptics might say, "Heck, RDE is just a scientific name for trial and error, right?" Actually, yes and no. No, because a trial-and-error approach is usually completely random, and RDE is all the way on the other end of the spectrum. Yes, because you set the scene for profitable learning by astutely designing and executing the trials, by keenly observing the reactions of the customers, by shrewdly detecting what part works and what does not ("errors"), and, finally, by making educated modifications to the trials and iterating the process, if needed. You've set up the scenario to learn from your successes and your mistakes. More than likely, you will succeed simply because you have thought through the problem, that inner game so necessary for winning, and you have followed the process, making measurements that quickly yield the rules.

It is difficult to ignore the power of being able to know the algebra of consumer minds before they can even articulate the need. Many companies already use RDE to their advantage, in one form or another. There is every reason for you to be up to speed, or even faster than them.

## TESTING NEW ELECTRONIC GADGETS WITH "OTAKU" IN JAPAN

Japan is the home of some well-known examples of product development experiments. Japanese society is less polarized in income compared to the West. People tend to buy products based not on their income, but on their taste. This variation in taste leads to a huge variety of products on the market, brutal competition, and, as you might expect, continual experimentation.

Tokyo is a vast market for testing new commercial ideas. Tokyo's great size, density, and diversity, and excellent transportation system make it an ideal setting for social experimentation. There are whole districts in Tokyo called antenna districts, where companies and consumers test out the newest product ideas, as well as deliberately start fashion trends.<sup>8</sup> These districts naturally attract otaku ("geeky fans") and professionals in fashions, electronic products, and so on.

Arguably, Japan's most dynamic sector is high-tech. In the Akihabara district of Tokyo, sometimes called the "Electric City," a visitor can buy virtually any product or gizmo that uses electricity. Just a few blocks of densely packed stores sell about 10% of the total electronics in Japan. Here otaku can find products that anticipate the market and that will not be available anywhere else in the world for months or perhaps even years to come.

Many products sold there will never find their way to the shelves of other stores because Akihabara, dubbed as Mecca for early adapters, is also the place for the marketers to test what "flies" with the consumers and what does not. One example is Seiko Corporation. Annually, Seiko develops more than 2,500 watch designs and introduces them in test markets. The winning designs are further improved, tested again, and only then launched in target markets. 9 Japan's icon, Sony, also develops, tests, and measures about 1,500 products annually. About 20% of them are completely new designs, and only a portion of those find their way to the global market.<sup>10</sup> Some believe that the global success of Japan's electronics manufacturers begins in Akihabara. In their race to be the first to market with the season's latest products, electronics manufacturers send prototypes of their new products to Akihabara to see if they will fly. The rivalry is fierce, with some product lifecycles reduced to a few months, turning Akihabara into a churning, self-renewing experimentation paradise. The sales and feedback are closely monitored by the companies for further modification and the ultimate launch decision. In a sense, it has been done at the expense of traditional market research. On the flip side of this Japanese innovation phenomenon is the fact that some of the most successful products in history, such as Sony PlayStation, have been developed against the corporate view.

# KEEPING CUSTOMERS DURING "DOWN TIMES" IN BRAZIL

Could RDE be applied the same way in developing countries as in the U.S., Europe, and Japan? This story<sup>11</sup> in Brazil is a wonderful example of retaining customers by RDE-inspired communications, in a way that shows the importance of a systematic approach in a challenging business environment, where Unilever Brazil was riding the storm of economic uncertainty and massive competition. The Brazilian political and economic climate, seldom calm, had turned volatile in 2002. Consumers

reacted by avoiding many premium brands, Unilever's brands among them. Times were tough in Brazil.

Unilever owned Brazil's market leaders in 14 product categories, distributed among foods, household cleaning, and personal care. These premium names in Brazil included Hellmann's, Knorr, Omo, Comfort, Lux, and the newly launched Dove. Despite the fame and admiration earned by its premium products, Unilever itself was not a well-known brand name in Brazil.

Unilever used RDE to drive messaging by having RDE reveal the "algebra of the consumer's mind." By doing so, Unilever discovered the hot buttons to keep the customers. RDE drove Unilever to create three alternative (versioned) executions of its newly developed customer magazine *DIVA*, and to distribute these to groups of high-value customers, the Unilever target. By monitoring the reactions of the customers, discerning what worked, and then modifying its communications, Unilever created new messages and tapped into the heart and soul of the Brazilian customer. This systematic approach, promoted by RDE, effectively *saved the Unilever business in Brazil*. The happy consequence was that, during a recession marked by heavy down-trading in virtually all consumer product categories (especially upscale ones), RDE-driven knowledge of the customer maintained and even increased market share of Unilever's premium products.

This book presents to you many other RDE case histories that have resulted in huge competitive benefits for their users. But the book does more than that. It also teaches you RDE. RDE successes are within reach of most companies and can be dramatic. Some examples that you will see later in this book range from the more than 200% increase in credit card acquisitions to the 42% increase in jewelry catalog response rate with a much higher average purchase at the same time, as well the creation of such iconic products as Vlasic pickles and Prego extra-chunky pasta sauce along with the aspects of the massive application of RDE in China and India. The examples abound.

# **BUYING IN AND GETTING STARTED**

In a natural world, mutation and sexual recombination allow a species to thrive. The same is true for innovation in any type of business: Permanent mindful experimentation enables companies to survive the competition and succeed. Read on—you will see for yourself that RDE is the easiest, most affordable, and most manageable way to innovate.

What are the key points of RDE to keep in mind when you read on? The bottom line is simple:

- You create a culture of disciplined experimentation and learning that is critical for the competitive market that faces you today.
- You learn while doing. The benefit is simple. You optimize your development and communication over time. This should bring substantially more market success because you are delivering what your customers want, even before they know it—and before your competitors discover it (unless they're reading this book right now).

We're not alone in promoting this disciplined experimentation. Two icons in the marketing world, Jerry Wind and Vijay Mahajan, consistently promote the benefits of experimentation because of its "ability to continuously learn, added incentive to develop and test innovative strategies, making it harder for the competition to figure out what your strategy is and creating a culture of experimentation and learning...even more critical in the changing and turbulent...environment."12

RDE is practical; in many cases, it can be easily handled by a small team or even one person in a very reasonable time with a modest budget. The beauty of the RDE process is that it does not require (nor even expect) deep knowledge in advanced statistical areas. 13 RDE generates knowledge and business results at the same time, with relatively little effort, but with enormous payouts for years to come.

So why do you want to read about RDE and use it in your everyday business life? It is quite simple because RDE

- Solves problems instead of just identifying them.
- Generates rules—it's actionable.
- Needs no advanced knowledge—it's accessible.
- Promotes logic and learning. No more guesswork is needed when you can be right and "hit the nail on the head" far more often.
- Applies to a wide range of real-life problems. It's not limited to products or advertising only.

Read on and enjoy this new field of Rule Developing Experimentation. There's a lot here, and the road beckons.

# **ENDNOTES**

- Dr. Seuss, *Green Eggs and Ham*, (Random House: New York, 1976). According to Luis Menand ("Cat People: What Dr. Seuss Really Taught Us," *The New Yorker*, 23 December 2002 and 30 December 2002), this book is the fourth-best-selling children's hardcover title of all time. The book originated with a wager between Theodore Geisel (Dr. Seuss's real name) and his publisher, Bennett Cerf. Dr. Seuss won the bet. Forty-nine of the words in *Green Eggs and Ham* are one-syllable words. Cerf made out even better than Menand realized: As Seuss himself noted 25 years later, "Bennett never paid!"
- <sup>2</sup> See Chapter 4 for more details.
- <sup>3</sup> In many cases (especially, more simple ones), Steps 4-6 are treated as one step.
- See, for example, Chapter 4 for Credit Card RDE that has increased new customers acquisition by more than 200%!
- <sup>5</sup> American Marketing Association Dictionary of Marketing Terms defines AE as "an approach (and philosophy) for management decisions, calling for continuous experimentation to establish empirically the market response functions. Most common in direct marketing, it can and has been applied to advertising and other marketing mix variables. The experiment should reflect the needed variation in stimuli, cost of measuring the results, lost opportunity cost in the non-optimal cells, and management confidence in the base strategy." (Source: www.marketingpower.com)
- <sup>6</sup> Malcom Gladwell, *The Tipping Point* (Little, Brown & Company: Boston, 2000).
- <sup>7</sup> "What Is T-Hunting and ARDF?"; www.home.att.net/~wb8wfk.html.
- <sup>8</sup> Kuniko Fujita and Richard Child Hill, "Innovative Tokyo," World Bank Policy Research Working Paper 3507, February 2005.
- Jerry Wind and Vijay Mahajan, Convergence Marketing: Strategies for Reaching the New Hybrid Consumer (Financial Times Prentice Hall: Upper Saddle River, NJ, 2001).
- <sup>10</sup> Ken Belson, "Sony Again Turns to Design to Lift Electronics," New York Times (2 February 2003).

- <sup>11</sup> K. Sapiro, M. Pezzotti, A. Grabowsky, A. Gofman, H. Moskowitz, "How Can Premium Brands Survive During an Economic Recession?" ESOMAR Latin America Conference 2005, Buenos Aires, 2005.
- <sup>12</sup> Jerry Wind and Vijay Mahajan, Convergence Marketing: Strategies for Reaching the New Hybrid Consumer, referenced earlier.
- A big proponent of this approach, Thomas Schelling (Nobel Prize in Economics, 2005), has been known to say, "I think math is used too much to show off. It's a lazy way to write...[the much harder thing is to] write clearly and use analogies that people can understand" (Kim Clark, "In Praise of Original Thought: Tipping Points and Nuclear Deterrence Lead to the Nobel in Economics," U.S. News & World Report [24 October 2005: p. 52]).

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